WORLD BANK GROUP

wiiw
The Vienna Institute
for International Economic Studies

Western Balkans Labor Market Trends 2018

Western Balkans Labor Market Trends 2018 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, FYR Macedonia, Montenegro, Kosovo and Serbia – between the second quarter of 2016 and the second quarter of 2017.
- During this period, Western Balkan countries created 231,000 new jobs and employment rose 3.9 percent, with increases ranging from 1.9 percent in Serbia to 9.2 percent in Kosovo. The largest share of this increase, about 60 percent, was due to rising self-employment.
- Unemployment fell during this period by an estimated 169,000 people, from 18.6 to 16.2 percent, reaching historical lows in some countries. Despite the overall rise in employment and drop in unemployment, low activity rates (particularly among women and young people), a large share of long-term unemployment (close to 80 percent in some countries) and high informality (i.e., those self-employed in unregistered businesses, wage workers without written contracts and unpaid family workers) remain key challenges for the region.
- Youth unemployment fell faster than the overall unemployment rate, but remained high compared to EU countries. Almost one quarter 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.
- Improvements in the labor market were not sufficient to discourage young, educated people from continuing to emigrate. For decades, the region has been a net sender of migrants, with close to one third of the resident population of the Western Balkans living outside the region.
- Western Balkan emigrants tended to be young and had relatively high levels of education. In the long run, the loss of qualified workers and the shortage of skills may have adversely affected competitiveness, growth and economic convergence.

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, FYR Macedonia, Kosovo, Montenegro, and Serbia.
Additional information, including recordings of events, data, and blogs, is available at: http://SEEJobsGateway.net.

This report and the SEE Jobs Gateway are financially supported by

BMF
AUSTRIAN FEDERAL MINISTRY OF FINANCE

Western Balkans
Labor Market Trends 2018

March 2018

WORLD BANK GROUP
wiiw

Acknowledgements

This report is the result of collaboration between the World Bank and the Vienna Institute for International Economic Studies (wiiw). The team comprised Hermine Vidovic (lead author, wiiw), Isilda Mara (wiiw), Stefanie Brodmann (task team leader, World Bank), Gonzalo Reyes (co-task team leader, World Bank), Mihail Arandarenko (University of Belgrade and World Bank), and Dragan Aleksic (University of Belgrade and World Bank). Monika Schwarzhappel (wiiw) compiled the regionally comparable database on labor market outcomes and was responsible for the statistical annex, together with Alexandra Bykova (wiiw), Goran Paunovic (wiiw), and Galina Vasaros (wiiw). Michaela Bönisch (wiiw) formatted the text and Carey Jett was responsible for final editing.

The team would like to thank Marco Hernandez (World Bank), Caglar Ozden (World Bank), and Indhira Santos (World Bank) for their valuable comments and Linda Van Gelder (Country Director, South Eastern Europe, World Bank), Cem Mete (Practice Manager, Social Protection and Jobs, World Bank), and Robert Stehrer (Scientific Director, wiiw) for overall guidance.

The team is also grateful to the Austrian Federal Ministry of Finance for its financial support of this report and of the SEE Jobs Gateway.

Content

Executive Summary XI
1. Introduction 1
2. Economic environment 1
3. Population 2
Working age population 2
Activity Rates 4
4. Employment 5
Employment rates 9
Self-employment 10
Temporary and part-time work 12
Informal employment 14
5. Unemployment 16
Long-term unemployment 17
Youth unemployment 20
Young people not in employment, education, or training 21
6. Wages 23
7. Sub-regional labor market developments 27
Employment rates 27
Unemployment rates 28
References 30
Annex 1: Wage data and wage statistics in the Western Balkans 32
The importance of high-quality and comparable data on wages 32
Concepts and definitions 33
Sources of wage data – advantages and limitations 34
Wage data in the Western Balkans – overview of sources and comparability issues 36
Conclusion and suggestions for further research 38
References 39
Special topic: Improving data on labor mobility in the Western Balkans 41
1. Introduction 42
2. The current state of evidence 47
Motivations for migration and duration of stay 47
Labor market integration of migrants 48
3. Main implications of persistent migration 50

4. Western Balkan labor mobility data gaps 53
Suggested indicators for analyzing labor mobility 53
Data challenges and gaps 55
Further steps for addressing data gaps 58
5. Labor mobility data, knowledge gaps, and policy implications 60
References 63
Annex 2 67
Statistical Annex 73
SEE Jobs Gateway Database 74
Sources and definitions 76
Key economic indicators 78
EU peer countries 79
Albania: Labor market indicators 80
Bosnia and Herzegovina: Labor market indicators 82
Kosovo: Labor market indicators 84
FYR Macedonia: Labor market indicators 86
Montenegro: Labor market indicators 88
Serbia: Labor market indicators 90
Western Balkans-6: Labor market indicators 92
Austria: Labor market indicators 94
Bulgaria: Labor market indicators 96
Croatia: Labor market indicators 98
Hungary: Labor market indicators 100

TABLES AND FIGURES

Table 1 / Employment change by sector, 2016 Q2–2017 Q2, thousand persons 6
Table 2 / Employment growth, 2016 Q2–2017 Q2 7
Table 3 / Self-employed by educational attainment, in %, 2016 11
Table 4 / Average monthly gross wages, total 24

Figure 1 / GDP growth, real change in % 2
Figure 2 / Working-age population (15–64 years), 2016 Q2–2017 Q2, change in % 3
Figure 3 / Structure of the working-age population (15+ years), 2016 Q2–2017 Q2, in % 3
Figure 4 / Activity rates (15–64 years), in % 4
Figure 5 / Employment structure 2017 Q2, shares in % 8
Figure 6 / Employment rates (15-64 years), in % 9
Figure 7 / Self-employment, share of total employment (15–64 years), in % 11
Figure 8 / Temporary employees, share of total employees (15–64 years), in % 12
Figure 9 / Part-time employment, share of total employment (15–64 years), in % 13
Figure 10 / Informal employment 14
Figure 11 / Informal employment as a percentage of total employment of the respective gender and age group, 2016 Q2 and 2017 Q2 15
Figure 12 / Educational attainment of persons employed in the informal sector, share in % 16
Figure 13 / Unemployment rates, in % 17
Figure 14 / Long-term unemployment rates (15+ years), percentage of labor force, quarterly 18
Figure 15 / Long-term unemployed as a share of total unemployed, in % 18
Figure 16 / Structure of long-term unemployment 2017 Q2, shares in % 19
Figure 17 / Long-term unemployment rate by educational attainment, in %, 2016 19
Figure 18 / Youth unemployment rates (15–24 years), in % 20
Figure 19 / Educational attainment of unemployed youth, 2017 Q2, in % 21
Figure 20 / NEET rates (15–24 years), in % of the repective population 22
Figure 21 / Average monthly gross wages, Austria=100 (PPP EUR based) 23

Box Figure 1 / Mean to Median Wage Ratio, in %, 2014 25
Box Figure 2 / Share of low wage earners, in %, 2014 25
Box Figure 3 / Age structure of low wage earners in Montenegro, FYR Macedonia and Serbia, in %, 2014 26

Annex Table 1 / Overview of data sources on wages in the Western Balkans 37
Annex Table 2 / Gross wages in current EUR, 2014 38

Map 1 / Employment rates (15+ years), in % 28
Map 2 / Unemployment rates (15+ years), in % 29

SPECIAL TOPIC - TABLES, FIGURES, AND BOXES

Table 1 / Labor migration: What we know and what is missing 57

Figure 1 / Stock of emigrants from the Western Balkan region, million persons, 1990–2017 41
Figure 2 / Emigration-share-to-resident population, 1990-2015 42
Figure 3 / Main destination countries for Western Balkan emigrants, share in %, 2015 43
Figure 4 / Age structure of emigrants to selected EU countries, persons, 2015 43
Figure 5 / Emigration: Breakdown by gender, in %, 1990 and 2017 44
Figure 6 /Emigration rates by education level, in %, 2010 44
Figure 7 / Emigration rates by gender and education level, in %, 2010 45
Figure 8 / GDP per capita, Western Balkan countries versus other countries, 1990–2016, in thousand US dollars 46
Figure 9 / First permits issued in the six Western Balkan countries, by reason, share in %, 2008-2016 47
Figure 10 / First permits issued in the six Western Balkan countries, by length of validity, share in %, 2008-2016 48
Figure 11 / Labor force status of emigrants in the OECD countries, share in %, 2011 49
Figure 12 / Employed emigrants by occupational skill level, share in %, 2011 49
Figure 13 / Immigrants by gender and education level in USA, Canada and the UK, share in %, 2010 50

Box 1 / Standards for data collection on labor migration 54
Box 2 / Current institutional setting 59

ANNEX, TABLES, AND FIGURES

Table A1 / Stock of migrants from the Western Balkan region, 2015 67
Table A2 / Intra – regional mobility, in thousands, 2015 67
Table A3 / Individual and household Labor Force Survey: migration and labor mobility related questions 69
Table A4 / Matrix with definitions, methodologies and national data sources 71

BOX A1 / Definition of international migration 68

Abbreviations, country classification, and country codes

Abbreviations

CPI	Consumer price index
EFTA	European Free Trade Association
EU	European Union
EUR	Euro
GDP	Gross domestic product
HBS	Household budget survey
ILO	International Labor Organization
IOM	International Organization for Migration
ISCED	International Standard Classification of Education
ISCO	International Standard Classification of Occupations
LFS	Labor force survey
LSMA	Living standard measurement survey
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	Neither in employment nor in education and training
OECD	Organization for Economic Cooperation and Development
PPP	Purchasing power parity
RCC	Regional Cooperation Council
SEE	South Eastern Europe
SES	Structure of Earnings Survey
SILC	Survey on income and living Conditions
ULC	Unit labor costs
UN	United Nations
UNDP	United Nations Development Program
UNSD	United Nations Statistics Division

Country classification

EU-CEE countries	Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia
EU peer countries	Austria, Bulgaria, Croatia, Hungary
EU-15	Austria, Belgium, Denmark, Finland, France, Germany, Greece, Italy, Ireland, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom
Western Balkans-6	Albania, Bosnia and Herzegovina, FYR Macedonia, Kosovo, Montenegro, Serbia

Country codes

AL	Albania
AT	Austria
BA	Bosnia and Herzegovina
BG	Bulgaria
HR	Croatia
HU	Hungary
ME	Montenegro
MK	FYR Macedonia
RO	Romania
RS	Serbia
SI	Slovenia
XK	Kosovo

Executive Summary

This second report on the Western Balkan labor market trends presents an analysis of key labor market indicators for the six Western Balkan countries (Albania, Bosnia and Herzegovina, FYR Macedonia, Montenegro, Kosovo and Serbia) and selected EU countries (Austria, Bulgaria, Croatia and Hungary) between the second quarter of 2016 and the second quarter of 2017. 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 improving data quality and increasing knowledge of labor mobility in the Western Balkans.

The Western Balkan countries made great strides in improving labor market outcomes between the second quarter of 2016 and the second quarter of 2017. On average, regional labor markets recorded improvements in activity rates (up 1.2 percentage points to 62 percent), employment rates (up 2.5 percentage points to 51.9 percent), unemployment rates (down 2.4 percentage points to 16.2 percent), and youth unemployment rates (down 5.3 percentage points to 37.6 percent). In some countries – Bosnia and Herzegovina, the FYR Macedonia, and Serbia – unemployment reached historical lows.

Over the period, roughly 231,000 jobs were created in this region, and self-employment accounted for almost 60 percent of the total employment increase. Job growth was particularly strong in Kosovo (9.2 percent) and Serbia (4.3 percent), where growth was driven primarily by construction, health, and manufacturing (Kosovo), and industry and services (Serbia). In Serbia and Bosnia and Herzegovina, women gained disproportionately from recent employment growth (an increase of 75,000 or 6.2 percent in Serbia and an increase of 19,000 or 6.8 percent in Bosnia and Herzegovina, compared with an increase of 45,000 or 2.9 percent for men in Serbia and a decrease of 4,500 or -0.9 percent for men in Bosnia and Herzegovina). On average, those who benefited most from the recent job growth were older (55-64 years of age) and younger (15-24 years of age) workers, and the highly educated with tertiary education.

Despite promising labor market developments in this region, key challenges include low activity rates (particularly among women), a large share of long-term unemployment (over 80 percent in some countries) and a high degree of informality. Although unemployment overall and youth unemployment in particular reached record lows in some countries, they remained high compared with EU countries. All six Western Balkan countries reported that large percentages (23.5 percent on average) of the youth population were not in employment, education or training (NEET), with the highest rates between 26 and 30 percent for Kosovo, Albania, and Bosnia and Herzegovina.

Wage levels differed both within the Western Balkans countries, and between the Western Balkan-6 countries and the EU peer countries, and the high concentration of low wage earners, appears to be the primary driver of wage inequality in the region. Montenegro and Bosnia and Herzegovina reported the highest wage levels, with Albania reporting the lowest. Differences in wage levels compared to Austria decreased over time in Albania and Kosovo in the Western Balkans, and in Bulgaria in the peer countries. In all other countries, gaps in wage levels relative to Austria widened. Overall, the Western Balkan countries reported high levels of growth in real wages prior to the crisis of 2007/2008, followed by a sharp decline in all countries. Following the crisis, growth accelerated in the peer countries but not in the Western Balkan countries. The share of low-wage

earners (defined as employees who make less than two-thirds of the median wage) was 27.3 percent in Montenegro (which was higher than in any EU country), 25.1 percent in the FYR Macedonia (the third highest), and 22.9 percent in Serbia, compared with an EU average of 17.2 percent. The share of low-wage earners was highest among younger workers (above 40 percent in Montenegro and above 30 percent in the FYR Macedonia and Serbia).

Promoting the labor market integration of females is a key challenge for the region, especially in light of the shrinking working-age population. Policies aimed at addressing the issue should include the provision of care facilities for children and the elderly, increased flexibility in work schedules, and greater part-time employment opportunities. Perhaps most important are measures that raise the education levels of females and promote positive societal and cultural attitudes toward working women.

Recent advances in the labor market have done little to discourage young, educated people from continuing to emigrate. The region has remained a net sender of migrants for decades, with close to one third of resident Western Balkans living outside the region. Emigration has played a key role in mitigating the incidence of unemployment and, as a result, remittances represent an important source of income that reduces poverty and funds investment. Conversely, remittances may contribute to the inactivity of females and informality. The relatively high gaps in income levels in comparison with developed countries as well as with peer countries continue to drive elevated levels of emigration. Consequently, emigration from the region has not lost momentum and shows few signs of decelerating or reversing.

In the long run high levels of emigration have the potential to negatively impact human capital formation, competitiveness, growth and economic convergence. Net emigration, especially of the highly skilled, could contribute to shortages in skilled workers. The underutilization of skills, especially among the highly educated, can also occur if migrants fail to secure jobs that match their education level. Further, the discrepancy between the skills acquired in the education system and those demanded by the labor market continues to be problematic for sending countries. To address these issues, policy makers and educators must work quickly to reform the education system. The promotion of return migration and the transfer of skills learned abroad are also key to generate the so called “brain gain”. Finally, channeling remittances into capital-intensive sectors or sectors that generate further employment, higher quality, and better remunerated jobs is of utmost importance.

Data to increase understanding of labor migration and the extent to which it varies at the regional level are needed. Labor migration in the Westerns Balkans remains a rich area of research because of its intensity, size and complexity as well as its impact on the demography, economy and prosperity of the region. Nevertheless, large gaps remain in the literature, including information on migrants’ motives and characteristics, and on the impact of migration on economic growth in the region.

Higher levels of government involvement are necessary for maximizing the benefits of emigration and minimizing loss. Governments can take a bottom-up approach through utilization of pilot projects or programs which include systematic consultations with migrants, the diaspora, or returnees to gain a better understanding of migration dynamics prior to formulating policy. In the instances in which top-down approaches are enacted, a commitment to collecting high quality empirical data on the relationship between emigration and economic growth in the region is critical.

1. Introduction

In this second labor market trends report[1], labor market developments in the Western Balkan countries between the second quarter (Q2) of 2016 and the second quarter of 2017 are examined and compared with selected Member States of the European Union (EU), namely Austria, Bulgaria, Croatia and Hungary[2]. The report drew on the 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 were used and can be accessed online at the South-East Europe Jobs Gateway (http://SEEJobsGateway.net).[3] The objective of this report is to showcase these data for a general, non-technical audience, and offer a few insights into how labor markets in the Western Balkans have developed over the past year.

In addition to the key labor market trends (activity, employment, unemployment) presented in the report's first edition, this report examined non-standard types of employment (temporary and part-time employment), those not in employment, education, or training (NEET), wages, and sub-regional developments. The report is divided into two parts. The first part starts with a discussion of recent economic developments (Section 2), followed by an overview of demographic developments and levels of activity or labor force participation in the population (Section 3). Sections 4 and 5 focus on employment and unemployment. Section 6 elaborates on wages, and Section 7 discusses regional labor market aspects. The second part is devoted to a special topic on improving data quality and increasing knowledge about labor mobility in the Western Balkans. The report includes two annexes: A methodological annex on alternative sources and comparability issues for wage data in the region and a statistical annex on key labor market and economic indicators for each of the countries.

2. Economic environment

Following a 3 percent increase in 2016, the Western Balkan countries' GDP growth is estimated to have decelerated to 2.5 percent in 2017, and is primarily attributed to slower growth in Bosnia and Herzegovina, FYR Macedonia and Serbia, in particular (Figure 1). Albania, Montenegro, and Kosovo performed better in 2017 than in 2016, with GDP growth nearing 4 percent each. As for the four peer countries, the Eastern European EU Member States of Bulgaria, Croatia, and especially Hungary experienced robust accelerating economic growth. In Austria, too, there were signs of strengthening in 2016, and GDP growth continued to accelerate in 2017.

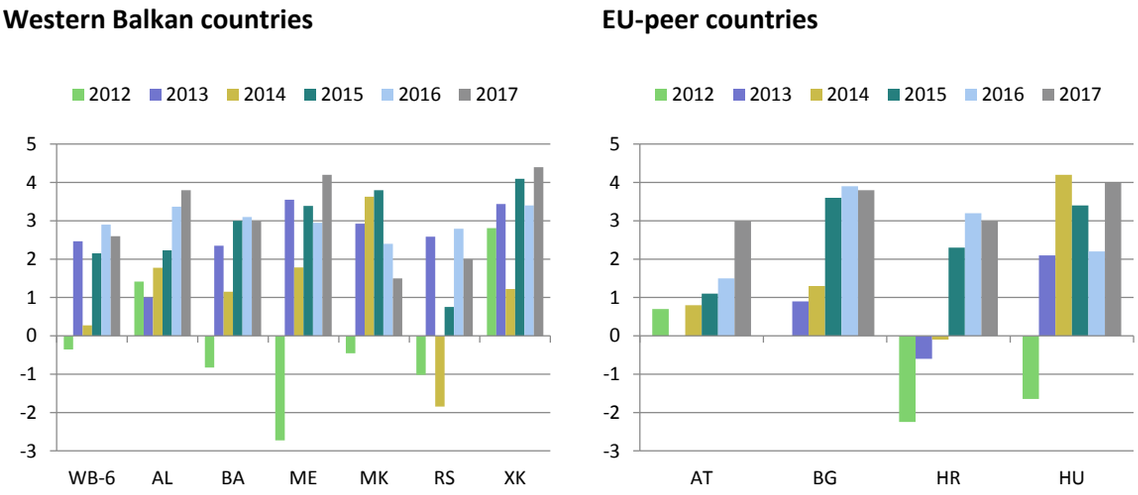
---

1 See World Bank (2017a) for a discussion of Western Balkan labor market trends between 2010 and 2016.

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

3 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 %



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

3. Population

WORKING AGE POPULATION

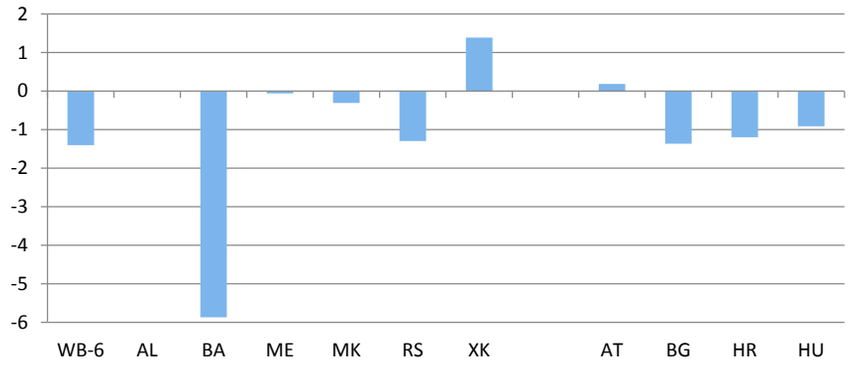
The working-age population (15–64 years) continued to decline in several Western Balkan countries in 2017. On average, the overall working-age population dropped by 1.4 percent[4] (Figure 2). Apart from Kosovo and Albania, all countries saw a decline compared to 2016. Notably Bosnia and Herzegovina (down 5.9 percent) reported the strongest outward migration in the region coupled with a rapid aging of the population.[5,6] In Kosovo, the working-age population increased by 1.4 percent, while it remained stagnant in Albania. Declines were also registered in the EU peer countries, with the exception of Austria where the working-age population continued to grow, mainly due to a rising influx of migrants. The drop in the working-age population due to the aging population and ongoing migration could, in the long run, lower GDP growth in the Western Balkans unless compensated by productivity growth. In addition, the negative impact of a shrinking working-age population could potentially be cushioned by an increase in the percentage of workers in employment (especially women) and an extension in the length of working lives (European Commission, 2017). Making better use of available human capital would also help mitigate the fiscal burden of higher pensions and increased health spending on an aging population.

4 By contrast, the decline in the workingage population (15+ years) was less pronounced at 0.6 percent.

5 For further details, see the special topic on improving data on labor mobility in the Western Balkans below.

6 This trend is expected to continue, especially because Germany, the major destination country of Bosnian migrants, has relaxed rules for Bosnian citizens seeking employment. Additionally, emigration has grown since the EU accession of Croatia in 2013, as many Bosnian Croats hold Croatian passports (double citizenship; see Heinrich Böll Stiftung 28 June 2016, https://ba.boell.org/bs/2016/06/28/odlazak-iz-bih).

Figure 2 / Working-age population (15–64 years), 2016 Q2–2017 Q2, change in %



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

Figure 3 / Structure of the working-age population (15+ years), 2016 Q2–2017 Q2, in %

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

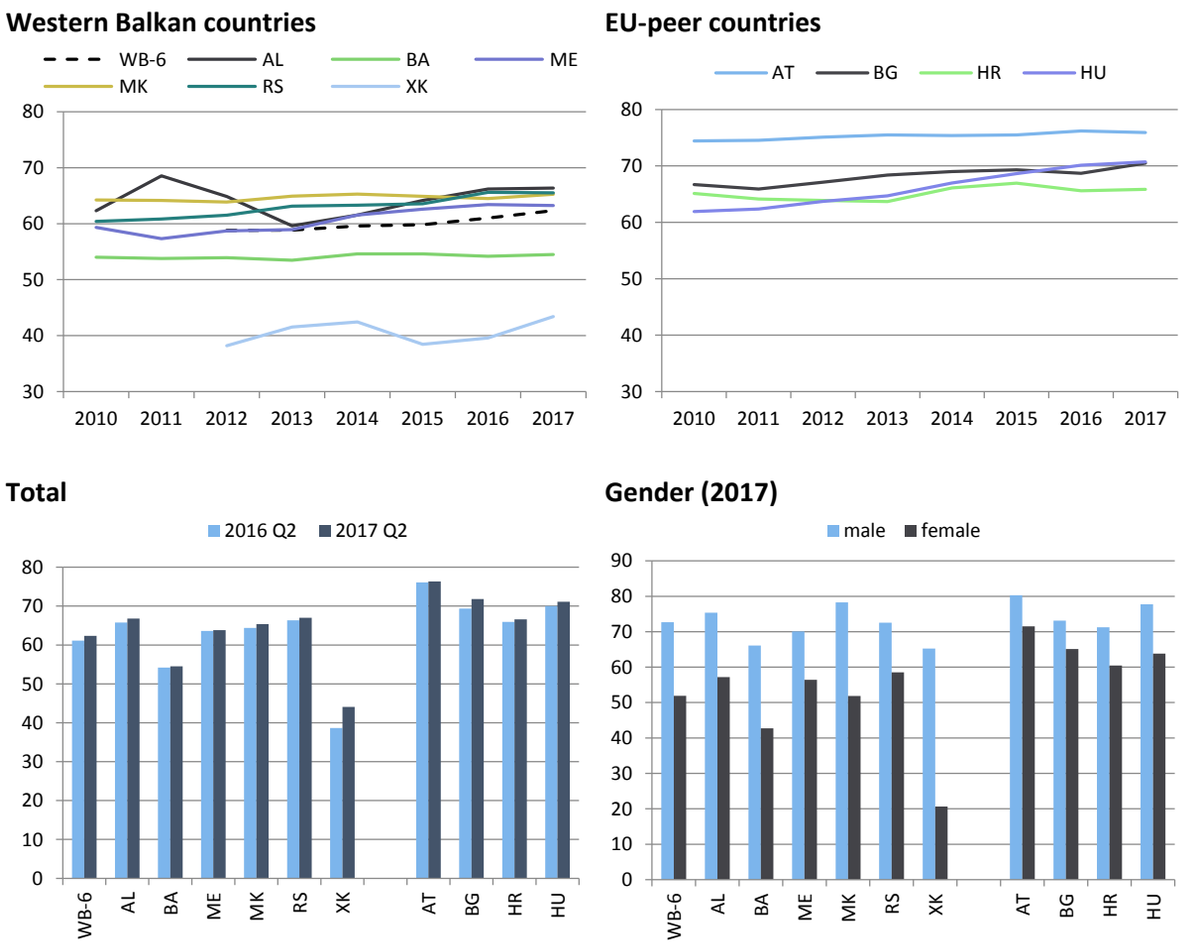
Between the second quarter of 2016 and the second quarter of 2017, unemployment and inactivity declined as a share of the working age population (15+ years) in the Western Balkan-6, while employment (self-employment in particular) went up. As depicted in Figure 3, Albania, the FYR Macedonia, Montenegro and Serbia reflected the overall pattern, with Serbia reported a strong increase in self-employment. Bosnia and Herzegovina was the only country in the region with a

decrease in self-employment. Kosovo reported both the strongest increase in employment (self-employment in particular) and in unemployment, but also a decline in inactivity. For comparison, the number of workers increased in all peer countries along with declining inactivity and unemployment (except Croatia). Self-employment fell in all peer countries with the exception of Bulgaria.

ACTIVITY RATES

Activity rates in the Western Balkan countries were suppressed, mainly due to low female labor force participation. The regional activity rate (15–64 years) increased by 1.2 percentage points to 62 percent in the second quarter of 2017. Increases were highest for the FYR Macedonia and Kosovo in particular, whereas activity rates stagnated elsewhere in the region. There were significant variations in levels across countries: activity rates, though rising, were low in Kosovo (44.1 percent) and Bosnia and Herzegovina (54.5 percent), whereas they reached about 67 percent in Albania, the FYR Macedonia, and Serbia; this was similar to Croatia, but the levels were far below Austria's (Figure 4).

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



Note: Data for 2017 refer to 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.

With the exceptions of Bosnia and Herzegovina and Kosovo, male activity rates were comparable to those of the EU peer countries, but the participation of females in the labor market was among the lowest in Europe.

The gender gap in activity rates (i.e., the difference between male and female labor market participation) ranged from 13.5 percentage points in Serbia to 45.5 percentage points in Kosovo, where only about 21 percent of women participated in the labor market. This gap narrowed in Albania and Serbia, but widened in all other countries. Gender gaps also widened in the EU peer countries, with the exception of Austria, and ranged from 9.4 percentage points in Austria to 14.2 percentage points in Hungary.

Explanations for the low activity rates of females are multiple: cultural and religious reasons, family responsibilities, lack of affordable childcare services, family leave policies, and the large-scale emigration of males. The reliance on remittances is considered to decrease employment incentives, resulting in low labor force participation, especially among women (Atoyan and Rahman, 2017; UNDP, 2016a; Petreski et al., 2017). In addition, the low levels of education among working-age females appeared to be a significant barrier to labor force participation. In 2016, about half of working-age women in Albania and Kosovo and approximately 37 percent in Bosnia and Herzegovina and the FYR Macedonia had primary education only. In the peer countries, by contrast, more than three quarters of the population had at least some secondary education. The level of female labor force participation also depended heavily on whether they lived in rural or urban areas.

4. Employment

Despite slowing GDP growth, employment levels through 2017 continued to increase in all Western Balkan countries. After the second quarter of 2016, about 231,000 new jobs were generated, with men and women contributing equally to this increase. Employment rose by 3.9 percent on average. Growth was strongest in Kosovo (9.2 percent), where employment was primarily generated in construction, health, and manufacturing industries (Table 1). Serbia, too, reported above-average employment growth (4.3 percent), led primarily by industry and services. In Montenegro (3.5 percent), employment gains stemmed largely from tourism and construction, while in the FYR Macedonia (2.7 percent), employment growth occurred most in wholesale trade, transport, and manufacturing. In Bosnia and Herzegovina, which reported the lowest rate of employment growth (1.9 percent), services and agriculture were the main drivers. By comparison, in EU peer countries, employment gains were between 1.2 percent (Austria) and 4.5 percent (Bulgaria). The highest rate of job growth was in financial activities in Austria, manufacturing in Hungary, and wholesale trade and transport in Bulgaria and Croatia.

Female and male employment changes were similar in magnitude in 2017, increasing by about 115,000 each. The employment of women in 2017 increased at a higher rate than male employment in Bosnia and Herzegovina (plus 6.8 percent), Serbia (6.2 percent), and FYR Macedonia (4.7 percent). The remaining Western Balkan countries experienced modest growth in female employment. Male employment on the other hand increased by 11 percent in Kosovo, 5.6 percent in Albania, and 4.8 percent in Montenegro. In the peer countries, female employment growth was slightly higher than that of males in Austria but lower in Bulgaria and in Hungary in particular. The sole exception was Croatia which experienced a drop in female employment.

Table 1 / Employment change by sector, 2016 Q2–2017 Q2, thousand persons

Western Balkan countries

	2017 Q2, thousand persons					changes to 2016 Q2, thousand persons				
	BA	**ME**	**MK**	**RS**	**XK**	**BA**	**ME**	**MK**	**RS**	**XK**
Total - all NACE activities	816.0	232.5	739.9	2881.0	361.0	14.9	7.9	19.2	119.5	30.4
Agriculture, forestry and fishing	154.0	18.3	120.3	513.8	15.8		0.8	2.9		1.0
Industry	241.0	41.3	226.2	713.6	114.5	-10.0	1.5	3.0	55.2	14.9
Mining and quarrying	.	1.9	6.6	.	4.3	.	0.4	0.4	.	-0.1
Manufacturing	.	11.2	**143.7**	.	**50.3**	.	-2.4	**3.9**	.	**4.9**
Electricity, gas, steam and air conditioning supply	.	2.2	10.4	.	7.1	.	-0.3	-0.3	.	2.7
Water supply; sewage, waste management	.	5.5	13.8	.	3.8	.	0.6	0.1	.	-3.1
Construction	.	**20.5**	51.7	.	**49.0**	.	**3.2**	-1.1	.	**10.5**
Services	421.0	171.7	392.1	1653.6	230.9	14.9	6.3	14.0	72.9	14.5
Wholesale and retail trade; repair of motor vehicles	.	47.5	**106.8**	.	52.2	.	0.9	**4.4**	.	2.7
Transportation and storage	.	12.0	**38.9**	.	9.3	.	-0.3	**4.3**	.	-1.7
Accommodation and food service activities	.	**22.6**	30.2	.	24.3	.	**4.9**	3.6	.	2.8
Information and communication	.	**7.1**	14.6	.	9.6	.	**2.2**	1.8	.	2.5
Financial and insurance activities	.	3.9	13.1	.	5.8	.	-0.3	2.0	.	-0.2
Real estate activities	.	.	1.8	.	0.3	.	.	.	.	0.0
Professional, scientific and technical activities	.	9.1	13.0	.	7.4	.	-2.2	0.8	.	0.5
Administrative and support service activities	.	10.6	14.1	.	12.9	.	1.4	-2.0	.	2.4
Public administration and defense	.	20.5	51.6	.	20.8	.	-0.1	-2.8	.	-4.2
Education	.	13.7	43.8	.	32.3	.	-0.4	1.8	.	-2.7
Human health and social work activities	.	14.1	40.7	.	**23.9**	.	1.8	2.0	.	**7.2**
Arts, entertainment and recreation	.	4.0	13.3	.	5.1	.	-2.3	0.5	.	0.3
Other activities	.	6.6	10.2	.	27.0	.	0.7	-2.1	.	5.1

EU peer countries

	2017 Q2, thousand persons				changes to 2016 Q2, thousand persons			
	AT	**BG**	**HR**	**HU**	**AT**	**BG**	**HR**	**HU**
Total - all NACE activities	4260.4	3171.7	1632.8	4419.6	48.0	138.3	25.7	76.9
Agriculture, forestry and fishing	163.3	236.1	110.9	221.4	-21.3	12.7	-6.8	-5.9
Industry	1059.2	933.9	434.1	1377.7	-24.4	40.2	-6.5	74.9
Mining and quarrying	6.4	32.1	11.3	11.1	-2.2	7.3	5.0	1.5
Manufacturing	656.3	598.9	270.3	**987.8**	-9.9	8.0	-5.5	**63.4**
Electricity, gas, steam and air conditioning supply	30.4	34.5	12.1	29.1	-0.4	-3.3	-1.2	-4.2
Water supply; sewerage, waste management	16.8	34.4	35.2	52.0	-2.5	6.8	2.5	-7.6
Construction	349.3	**234.0**	105.2	**297.7**	-9.4	**21.4**	-7.3	**21.8**
Services	3037.9	2000.9	1083.4	2818.7	93.7	91.9	38.3	8.6
Wholesale and retail trade; repair of motor vehicles	606.1	**547.9**	**231.5**	538.7	-4.5	**34.3**	**20.6**	-14.3
Transportation and storage	212.6	**212.3**	**122.0**	**297.6**	4.4	**19.5**	**21.3**	**20.0**
Accommodation and food service activities	265.2	176.7	126.2	201.7	13.0	7.9	11.4	7.6
Information and communication	133.6	96.0	39.4	106.0	1.5	7.1	-8.8	-16.8
Financial and insurance activities	**145.6**	63.4	**49.5**	94.4	**20.8**	6.6	**12.7**	-1.1
Real estate activities	38.3	11.1	6.0	27.8	-2.2	0.6	-3.8	10.4
Professional, scientific and technical activities	232.1	115.3	75.7	163.0	-1.7	3.5	4.2	13.8
Administrative and support service activities	145.6	111.5	37.5	159.2	13.0	7.3	-17.4	-6.3
Public administration and defense	**284.0**	212.0	110.3	445.1	**18.4**	-12.3	6.9	-8.0
Education	**305.0**	171.0	110.2	324.2	**16.9**	0.1	-9.2	8.2
Human health and social work activities	455.0	164.6	107.0	293.2	12.4	7.2	-0.7	8.5
Arts, entertainment and recreation	69.5	56.0	28.9	72.6	-6.6	3.6	5.7	-7.9
Other activities	145.3	63.1	39.2	95.2	8.3	-3.6	-4.6	-2.3

Note: For Bosnia and Herzegovina and Serbia no detailed breakdown by NACE classification possible. The three fastest-growing sectors are marked in bold.

Source: National Statistical Offices based on LFS of the respective countries.

Employment increased for all age groups in the Western Balkans and in the EU peer countries (except Austria), but job creation was mainly concentrated in the prime age (25-54 years) and older (55-64 years) age groups (Table 2). The number of jobs among those aged 25-54 years increased by 119,000 in the entire region, with the largest increases reported in Serbia (59,000), Albania (25,000) and the FYR Macedonia (18,000). Among the older age group, the highest number of jobs was created in Serbia (41,000). In all peer countries (except Austria), the largest employment increases were recorded for the prime age group. In Austria the increased number of jobs was greater among the older age group.

Table 2 / Employment growth, 2016 Q2–2017 Q2

Table 2.1 / Employment growth in thousands

	Gender			Age			Education		
	Total	Male	Female	15-24	25-54	55-64	Low	Medium	High
Albania	39.5	35.6	3.9	11.2	24.6	2.8	12.7	5.0	21.8
Bosnia and Herzegovina	14.9	-4.5	19.4	8.8	.	.	7.5	13.3	-5.9
Kosovo	30.2	28.2	2.0	6.4	14.3	8.1	2.1	18.2	9.8
Montenegro	7.9	6.0	1.9	0.9	3.2	3.0	4.2	4.4	-0.7
FYR Macedonia	19.2	6.1	13.1	5.5	17.9	0.1	-8.3	15.4	12.1
Serbia	119.4	44.9	74.6	4.5	58.8	40.8	6.4	77.0	36.0
Austria	50.3	24.4	25.9	-6.5	24.4	34.8	-12.0	2.8	59.5
Bulgaria	137.0	72.2	64.7	7.4	82.5	30.9	29.1	78.8	29.1
Croatia	27.9	29.5	-1.6	8.8	16.2	5.7	-30.4	51.8	6.4
Hungary	76.9	58.6	18.3	8.9	53.4	4.2	6.1	40.6	30.0
Western Balkans[1)]	230.8	116.1	114.7	28.5	118.8	54.8	24.7	133.4	73.1

Table 2.2 / Employment growth in %

	Gender			Age			Education		
	Total	Male	Female	15–24	25–54	55–64	Low	Medium	High
Albania	3.4	5.6	0.8	13.4	3.0	1.4	2.4	1.2	10.8
Bosnia and Herzegovina	1.9	-0.9	6.8	17.2	.	.	5.7	2.5	-4.1
Kosovo	9.2	11.0	2.8	18.2	5.7	18.7	3.5	9.4	13.1
Montenegro	3.5	4.8	1.9	4.9	1.9	9.5	20.1	3.2	-1.0
FYR Macedonia	2.7	1.4	4.7	13.2	3.2	0.1	-6.0	3.9	6.5
Serbia	4.3	2.9	6.2	3.0	2.9	8.9	1.2	4.9	5.4
Austria	1.2	1.1	1.3	-1.3	0.8	6.5	-2.2	0.1	4.2
Bulgaria	4.5	4.5	4.5	5.1	3.6	5.7	8.8	4.5	3.0
Croatia	1.7	3.4	-0.2	7.2	1.3	2.4	-18.5	5.2	1.4
Hungary	1.8	2.5	0.9	3.0	1.6	0.6	1.2	1.5	2.6
Western Balkans	3.9	3.3	4.7	9.8	.	.	1.8	4.1	5.4

Note: 1) Employment data by age excluding Bosnia and Herzegovina for lack of data.
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.

In terms of education, overall, employment rose across all education groups but most among those with medium levels of education in all countries of the region except Albania. There was variation, however, among the countries with respect to the highly educated. Albania reported the largest increase in employment in the high-education segment, whereas Bosnia and Herzegovina and Montenegro reported the largest decrease in employment among the highly educated. Employment grew for those with the highest levels of education in all other countries. The FYR Macedonia was the only country in the region to report a decline among the least educated. In the peer countries, employment fell considerably among the low education group in Austria and especially in Croatia. Similar to the Western Balkan countries, employment gains in the peer

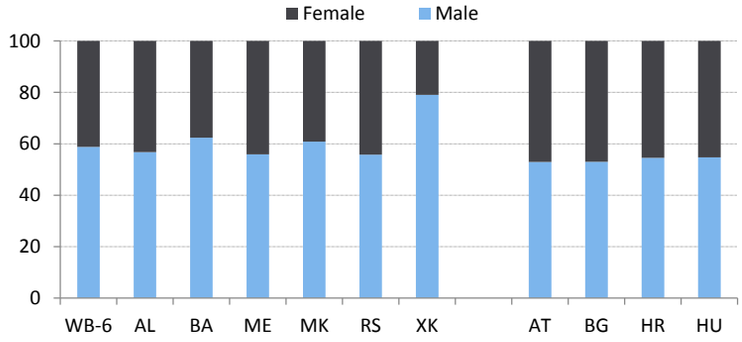
countries were most significant among those with medium levels of education; in Austria only were the most jobs created in the high-education segment.

Men represented about 60 percent of total employment in the Western Balkan-6 (Figure 5). In Kosovo this share was much higher than the average, accounting for 79 percent. In the peer countries, male employment exceeded that of females, accounting for 53 percent of total employment in Austria and Bulgaria and for 55 percent in Croatia and Hungary.

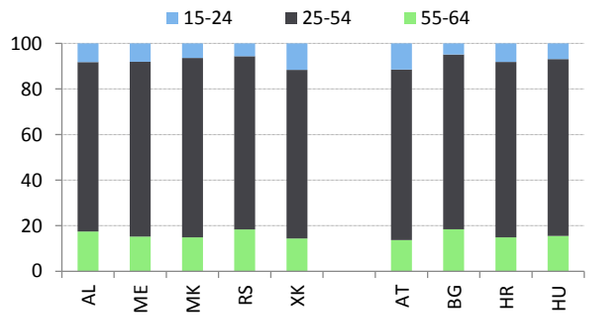
Prime age workers (25-54 years) represented the majority of employed ranging from 74 percent in Albania and Kosovo to 79 percent in the FYR Macedonia. The share of young people was highest in Kosovo (12 percent) and lowest in Serbia and the FYR Macedonia (6 percent each), while the share of the older age group in employment varied between 14 percent in Kosovo and 18 percent in Serbia. For comparison, in the EU peer countries the share of the prime age group was somewhat lower than in the Western Balkan countries representing between 75 percent in Austria and 78 percent in Hungary.

Figure 5 / Employment structure 2017 Q2, shares in %

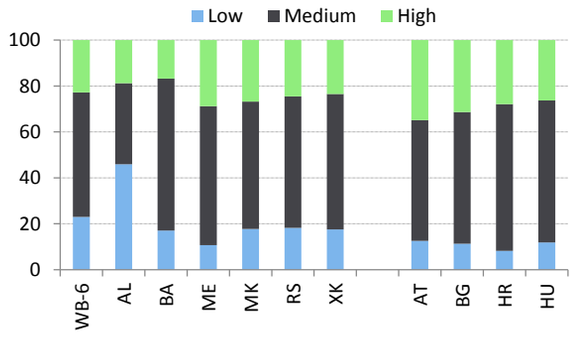
By gender



By age



By education



Note: In terms of age, missing data for Bosnia and Herzegovina.
Source: SEE Job Gateway Database, based on data provided by national statistical offices and Eurostat.

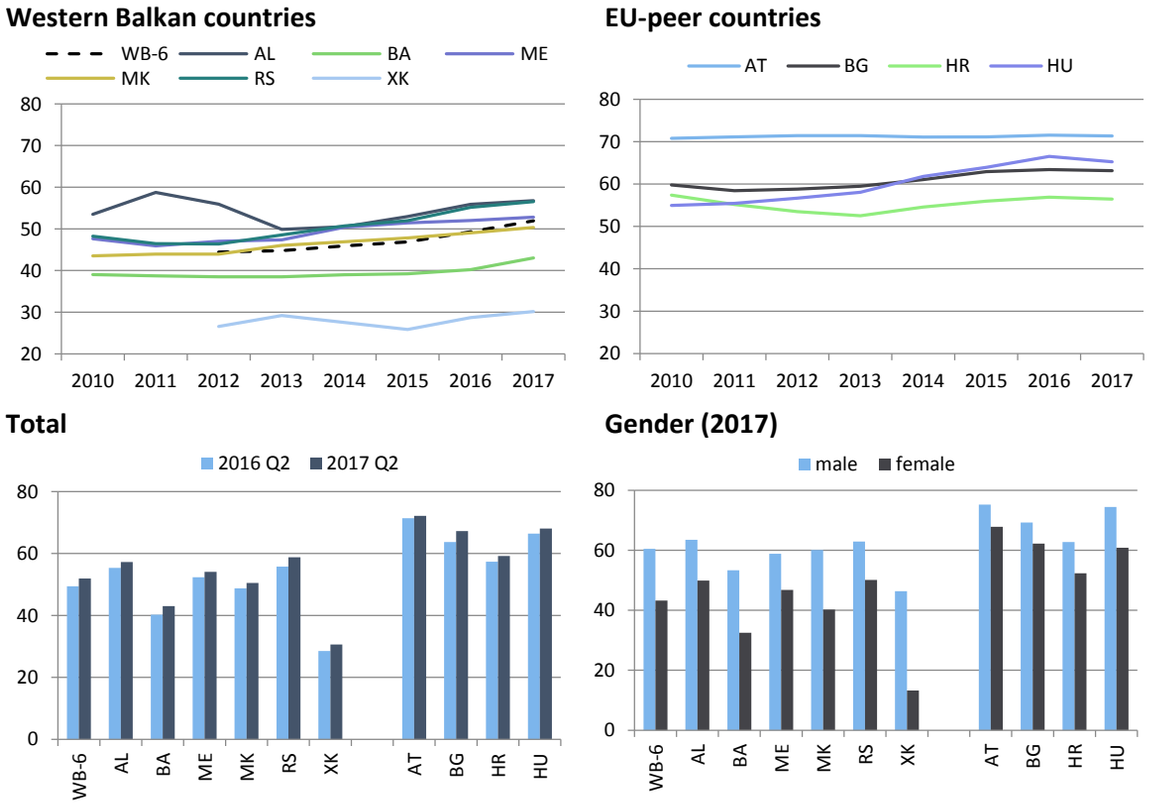
Those with medium levels of education were the largest educational group in the Western Balkan-6, accounting for more than half of total employment, while those with low and high levels of education reported shares of 23 percent each. There were, however, substantial differences across countries. Albania stands out, with the highest share of the low-educated (46 percent) and the smallest portion of medium-educated (35 percent). Bosnia and Hercegovina reported the highest share of the medium-educated (two thirds of total employment), while Montenegro had the largest portion of high-educated (28.7 percent). For comparison, in the peer countries the share of the

medium-educated – representing also the largest educational group - ranged between 52 percent in Austria and 63 percent in Croatia, while the employment share of the high-educated varied between 26.3 percent in Hungary and almost 35 percent in Austria.

EMPLOYMENT RATES

Employment rates went up in all Western Balkan countries, but still lagged far behind the EU peer countries (Figure 6). In 2017, the employment rate for the six Western Balkan countries averaged 51.9 percent, which was 2.5 percentage points higher than in the second quarter of 2016. There were, however, substantial differences across the region, ranging from 30.6 percent in Kosovo to 58.8 percent in Serbia. Employment rates between 2016 and 2017 grew fastest in Bosnia and Herzegovina, Kosovo, and Serbia. Since 2010, the strongest gains have been recorded in the FYR Macedonia and Serbia (about 7–8 percentage points). For the peer countries, the most significant improvement since 2010 has occurred in Hungary (10 percentage points)[7] and Bulgaria (3 percentage points); in Austria, the employment rate has remained almost stagnant (at a comparatively high level). In Croatia, the employment rate in 2017 was below that in 2010.

Figure 6 / Employment rates (15-64 years), in %



Note: Data for 2017 refer to the first two quarters. Data for Kosovo are from 2012 onwards. 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.

[7] 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 half of 2017, public works accounted for 4.6 percent of total employment. In addition, many people have left the country to work abroad.

Female employment rates increased throughout the region, but they remained low by European standards. In the second quarter of 2017, the employment rate for women averaged 43.2 percent, ranging from 13.1 percent in Kosovo to 52.3 percent in Serbia. Serbia was also the country with the biggest gain in the female employment rate (3.7 percentage points), followed by the FYR Macedonia (2.1 percentage points). The EU peer countries also showed increases in the employment rate of women, with the largest recorded for Bulgaria (3.2 percentage points).

Between 2010 and 2016, the gender employment gap narrowed in all Western Balkan countries, most notably in Albania and Montenegro. In 2017, the biggest gaps were reported for Kosovo and Bosnia and Herzegovina, with gender gaps as high as 28.9 percentage points and 20.8 percentage points, respectively. Montenegro, by contrast, witnessed the lowest gap (9.8 percentage points). In the peer countries, the difference between the male and the female employment rate was smaller, except for in Hungary.

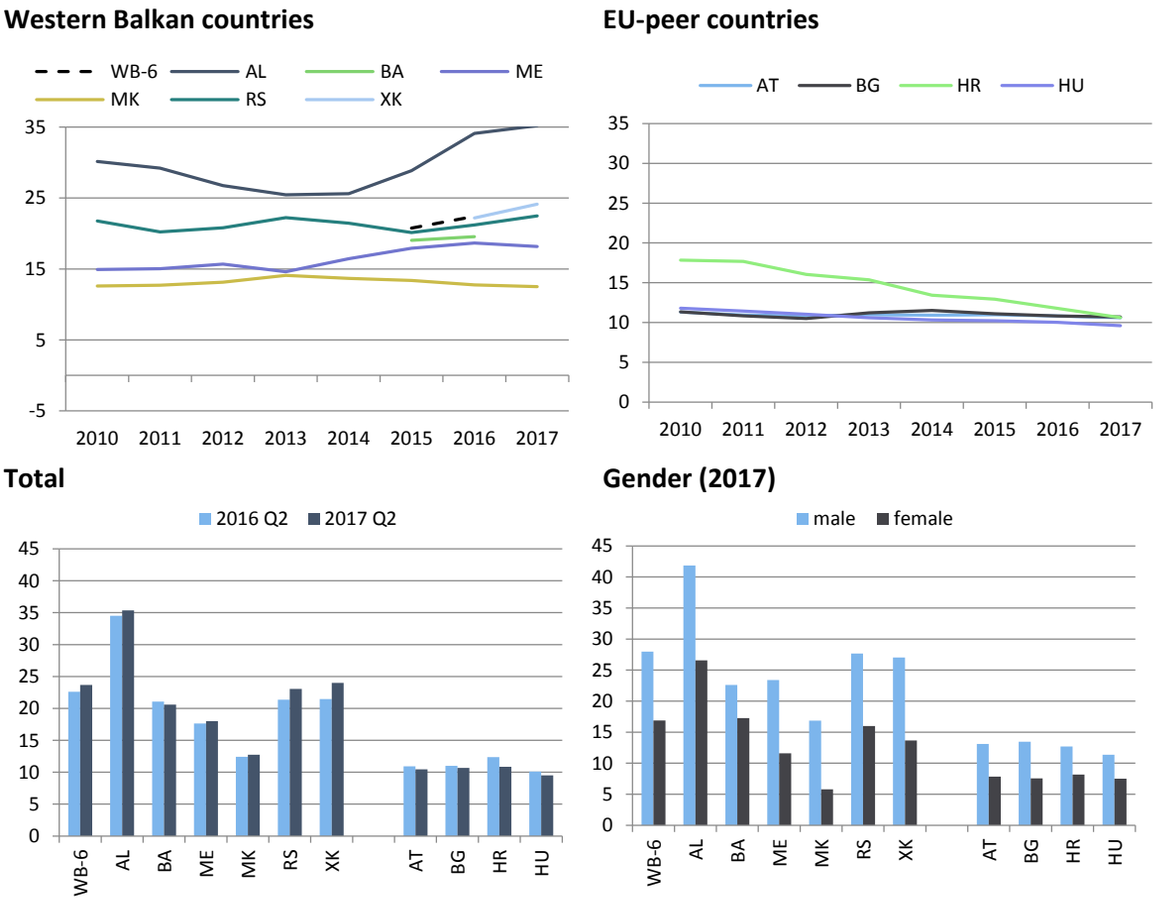
SELF-EMPLOYMENT

The number of self-employed rose by about 133,000 in the region between the second quarter of 2016 and the second quarter of 2017, accounting for almost 60 percent of the total employment increase over that period. The share of self-employed people in the Western Balkans was two to three times higher than in the peer countries, signaling a large informal sector. Across the region, self-employment increased slightly in 2017, averaging 23.7 percent. As Figure 7 shows, the highest incidence of self-employment was found in countries that still have a large share of people working in the agricultural sector: Albania (35.4 percent of total employment), Bosnia and Herzegovina, Serbia, and Kosovo (20–24 percent). In Montenegro, by contrast, the self-employed share was below 20 percent. The FYR Macedonia recorded the lowest share of self-employed (12.7 percent). By comparison, in the peer countries self-employment accounted for around 11 percent in 2017. Among those employed, self-employed and part-time workers (often informally employed)[8] were most at risk for poverty, because of lower-than-average earnings and because they are often excluded from the social security system (Gerovska-Mitev, 2016; Pejin-Stokić and Bajec, 2017).

On average about half of the self-employed in the Western Balkans were medium-educated. In Bosnia and Herzegovina and in Kosovo greater than 60 percent had medium levels of education in 2016; the least educated group was the second largest among the self-employed, while high educated accounted for only about 11 percent on average (Table 3). By contrast, in Albania and in the FYR Macedonia most of the self-employed were those with the lowest levels of education. Montenegro and Serbia recorded the highest shares of high-educated among the self-employed, accounting for 26 percent and 15 percent respectively. In the peer countries, the medium-educated formed the largest group of the self-employed, followed by the high-educated.

[8] For the definition of informal employment, see section on informality below.

Figure 7 / Self-employment, share of total employment (15–64 years), in %



Note: Data for 2017 refer to the first two quarters. Data for BA refer to the working age population 15+. For country specific methodologies, see 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 much higher among men than among women, both across the Western Balkans (28 percent versus 16.9 percent) and in the peer countries.

Table 3 / Self-employed by educational attainment, in %, 2016

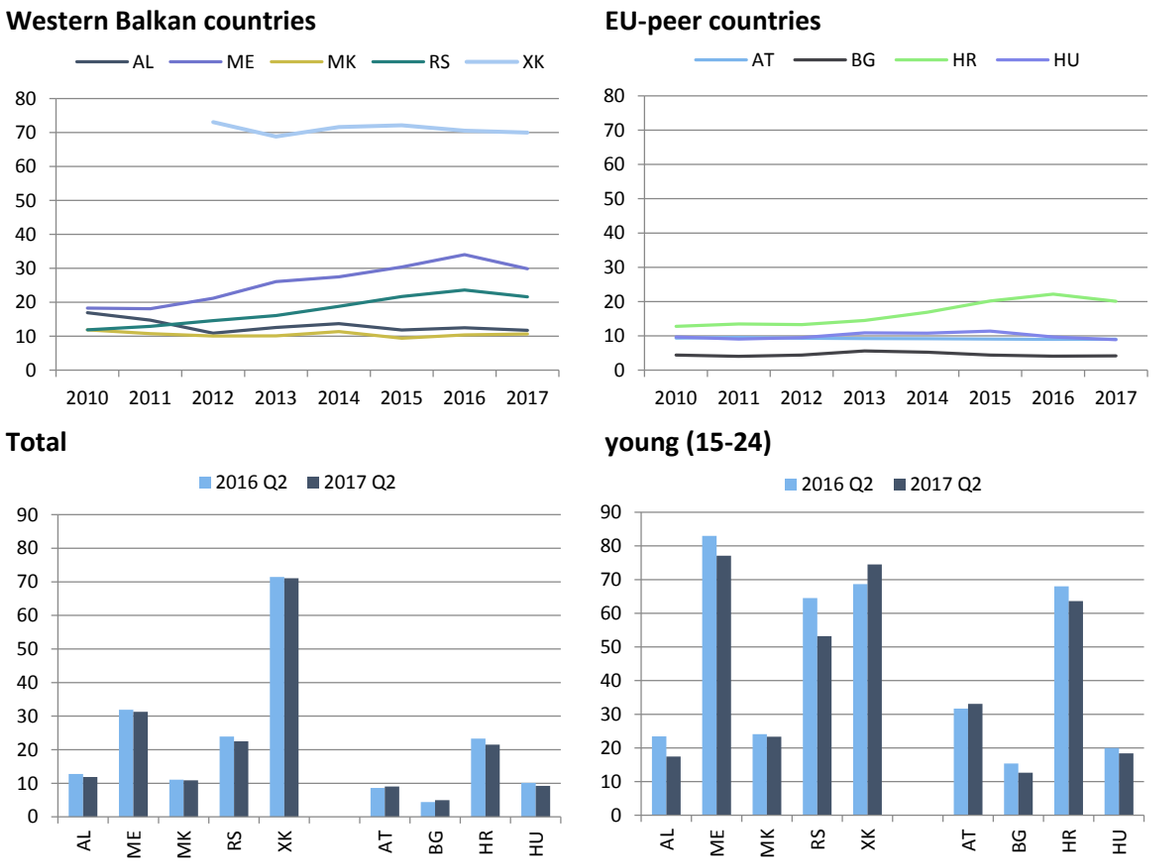
	Low	Medium	High
Western Balkan-6	37.7	51.4	10.9
Albania	56.0	37.8	6.2
Bosnia and Herzegovina	31.1	62.4	6.4
Montenegro	17.2	56.9	25.9
FYR Macedonia	47.9	45.2	6.8
Serbia	27.6	57.2	15.3
Kosovo	29.7	60.8	9.5
Austria	8.7	46.5	44.8
Bulgaria	15.7	52.3	32.0
Croatia	17.4	59.4	23.2
Hungary	4.2	63.3	32.5

Note: For 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 and part-time work – forms of work that are increasingly common in the EU countries – are not common in the Western Balkans, although their share has increased in recent years.

Figure 8 / Temporary employees, share of total employees (15–64 years), in %

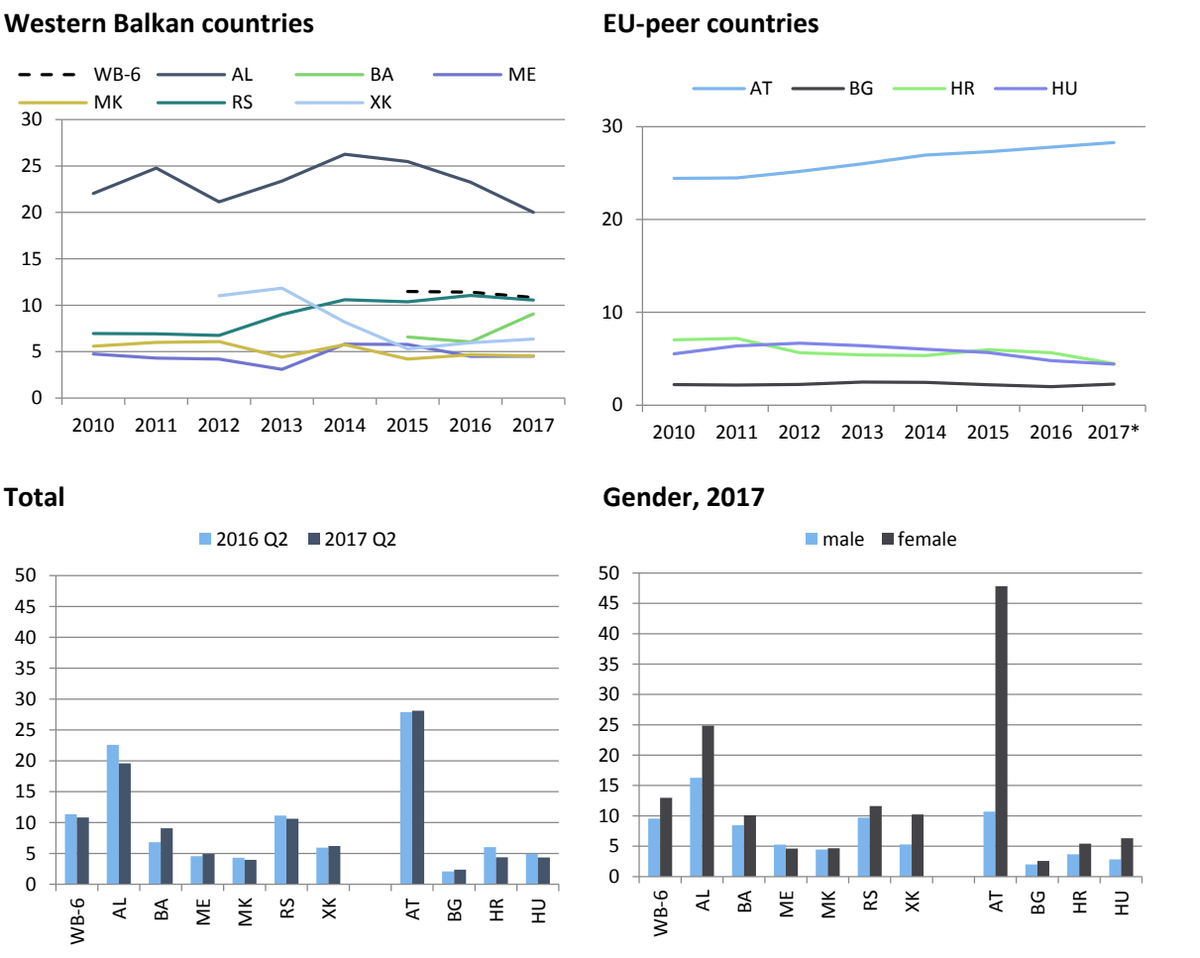


Note: Data for 2017 refer to the first two quarters. Data are not available for Bosnia and Herzegovina. For country-specific methodologies, see statistical annex of the respective country.
Source: SEE Jobs Gateway Database, based on data provided by national statistical offices and Eurostat.

Of all the countries under consideration – the Western Balkan and the EU peer countries alike – temporary employment was highest in Kosovo, especially among young people. The share of temporary employees varied widely across the Western Balkans, ranging from around 11 percent in Albania and the FYR Macedonia to 71 percent in Kosovo (Figure 8). Similar patterns were found in Serbia and Croatia, with temporary workers accounting for about 20 percent of all employees; meanwhile, patterns in the FYR Macedonia and Albania resembled those in Austria and Hungary (at around 10 percent). By contrast, temporary employment played a minor role in Bulgaria. Since 2010, the employment of workers on a temporary contract rose substantially in Montenegro and Serbia (by 11.6 and 9.7 percentage points, respectively). In the remaining Western Balkan countries changes remained small. In the EU peer countries, Croatia was the only country to report a large increase in temporary employment (7.3 percentage points). Throughout the region, temporary employment was higher for men than for women, with gender differences most significant in Kosovo and Albania. In the EU peer countries, women accounted for a higher share of temporary employment in Austria and in Hungary, but the gender differences were small.

Young people were more likely to work on temporary contracts than were older workers. The probability of temporary employment among the young was especially high in Montenegro and Kosovo, accounting for 77.1 percent and 74.5 percent, respectively, in 2017. Temporary contracts for young workers in Montenegro were primarily associated with occasional work, the probationary period, internships, and seasonal work (Djuric, 2016). In Albania and the FYR Macedonia, the use of temporary contracts for young people was much lower, at 17.5 percent and 23.3 percent, respectively. There was substantial variation across the peer countries – from 60 percent in Croatia to 10 percent in Bulgaria.

Figure 9 / Part-time employment, share of total employment (15–64 years), in %



Note: Data for 2017 refer to the first two quarters. Data for Bosnia and Herzegovina refer to the population aged 15+. 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.

Part-time employment was less common in the Western Balkans than in the EU, reaching about 11 percent in 2017. As Figure 9 shows, Albania only reported a high – though declining – share of persons working part-time (about 20 percent of total employment). Serbia and Bosnia and Herzegovina were next with shares of 10.6 percent and 9 percent. In the remaining countries of the region, part-time employment stood at 5–6 percent. This is similar to the EU peer countries that joined the EU between 2004 and 2013. Austria, by contrast, recorded a higher (and increasing) share of workers on part-time contracts (28 percent), which resembles the pattern for the EU-15. With regard to gender, the incidence of part-time work for females was higher than for males and for the

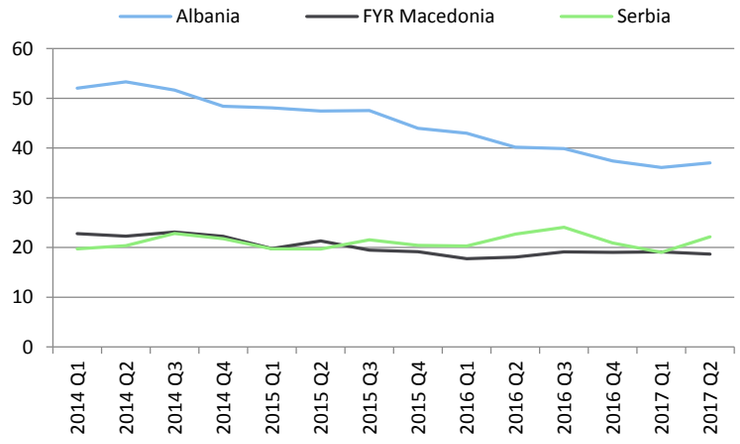
region as a whole, amounting to 13 percent in 2017. By comparison, in Austria the proportion of part-time workers was 47.8 percent for females and 10.7 percent for males.

INFORMAL EMPLOYMENT

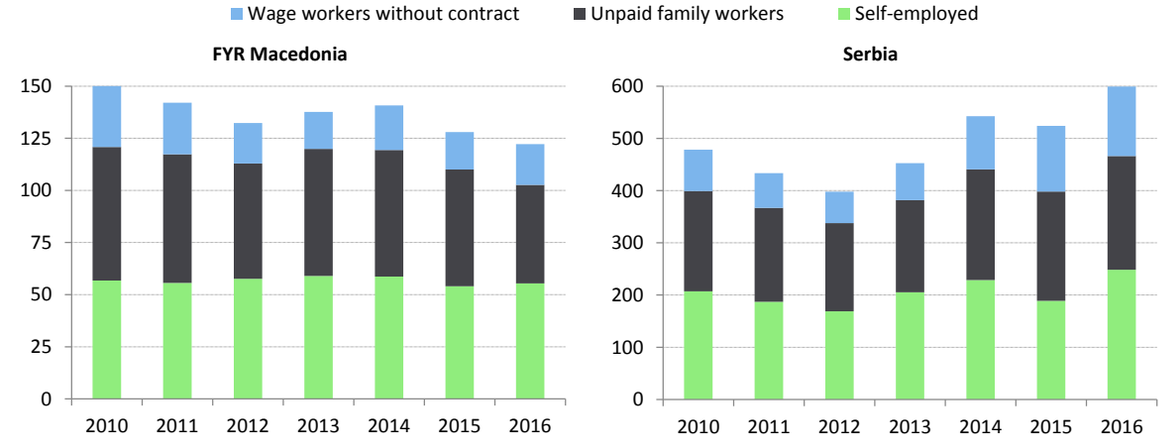
Informal employment is a key challenge in the Western Balkan labor markets. With a high proportion of long-term unemployment and youth unemployment, the informal economy worked as a social buffer for workers with few options (Hirose and Hettes, 2016). Data on informality are collected regularly by the labor force surveys of Albania, the FYR Macedonia, and Serbia only; all use the comprehensive International Labor Organization (ILO) definition for informal employment. Accordingly, informal employment covers (1) Self-employed in unregistered businesses, (2) Wage workers without written contract and, (3) Unpaid family workers.

Figure 10 / Informal employment

Share in total employment, in %



Informal employment by individual categories, in 1000 persons



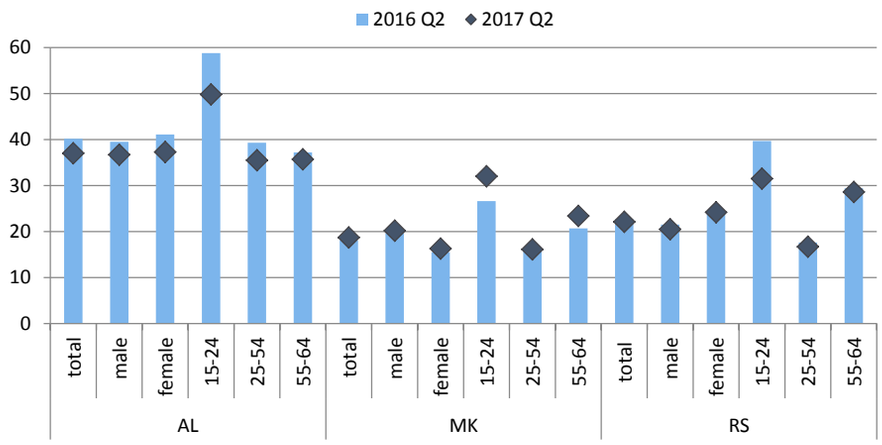
Source: SEE Jobs Gateway Database, based on data provided by national statistical offices and Eurostat.

Though on the decline, informal-sector employment was widespread and high by European standards. The share of informal-sector employment fell most in Albania, from over 50 percent at the beginning of 2014 to 37.4 percent in the last quarter of 2016 (Figure 10). By contrast, the decrease was moderate in the FYR Macedonia and Serbia, where the informal-sector employment

share remained almost constant, at about 20 percent. Estimates for the remaining countries (Gashi and Krstić, 2016) put the share of workers in the informal sector at close to 30 percent in Bosnia and Herzegovina and about 23 percent in Kosovo and Montenegro; by contrast, Cojocaru (2017) found a proportion of over a quarter in Kosovo.

Data for Serbia and the FYR Macedonia from 2016 provided a further breakdown of informal activities and showed that most people (45 and 42 percent) working in the informal sector were self-employed in unregistered businesses; about 39 and 36 percent were unpaid family workers; and 16 to 22 percent were wage workers without a written contract. In both countries close to two thirds of informal work was concentrated in the agricultural sector. Informality in Kosovo was particularly high in agriculture (mostly unpaid family workers) and in construction, where about half of the workers work without a labor contract (Cojocaru, 2017).

Figure 11 / Informal employment as a percentage of total employment of the respective gender and age group, 2016 Q2 and 2017 Q2

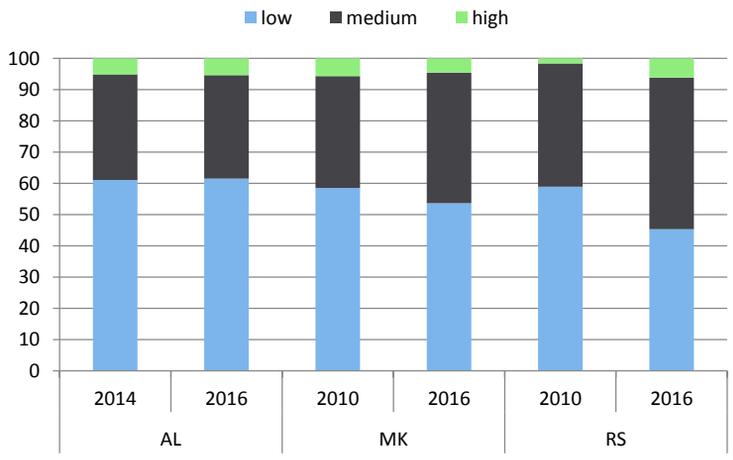


Source: SEE Jobs Gateway Database, based on data provided by national statistical offices and Eurostat.

Young people, men and the low educated are the groups most affected by informal employment. In the FYR Macedonia, the incidence of informal employment was higher for males, while in Serbia the proportion was higher for females (Figure 11); in Albania, both sexes were equally affected. For the remaining countries, Gashi and Krstić (2016) found that males were more likely to be employed in the informal sector than were females. With respect to age, young people (15–24 years), and especially young men, accounted for the highest share of informal employment in all three countries for which LFS data were available. In the prime-age group, men were again more likely than women to be in informal employment; by contrast, older women were more likely than older men to accept informal-sector employment.

In terms of education, the low-educated typically constituted the informal work force, although it was the medium-educated in Serbia in 2016 (Figure 12). In both the FYR Macedonia and Serbia, the proportion of those medium-educated people in informal employment has grown since 2010, and in Serbia, so has the share of the highly educated.

Figure 12 / Educational attainment of persons employed in the informal sector, share in %



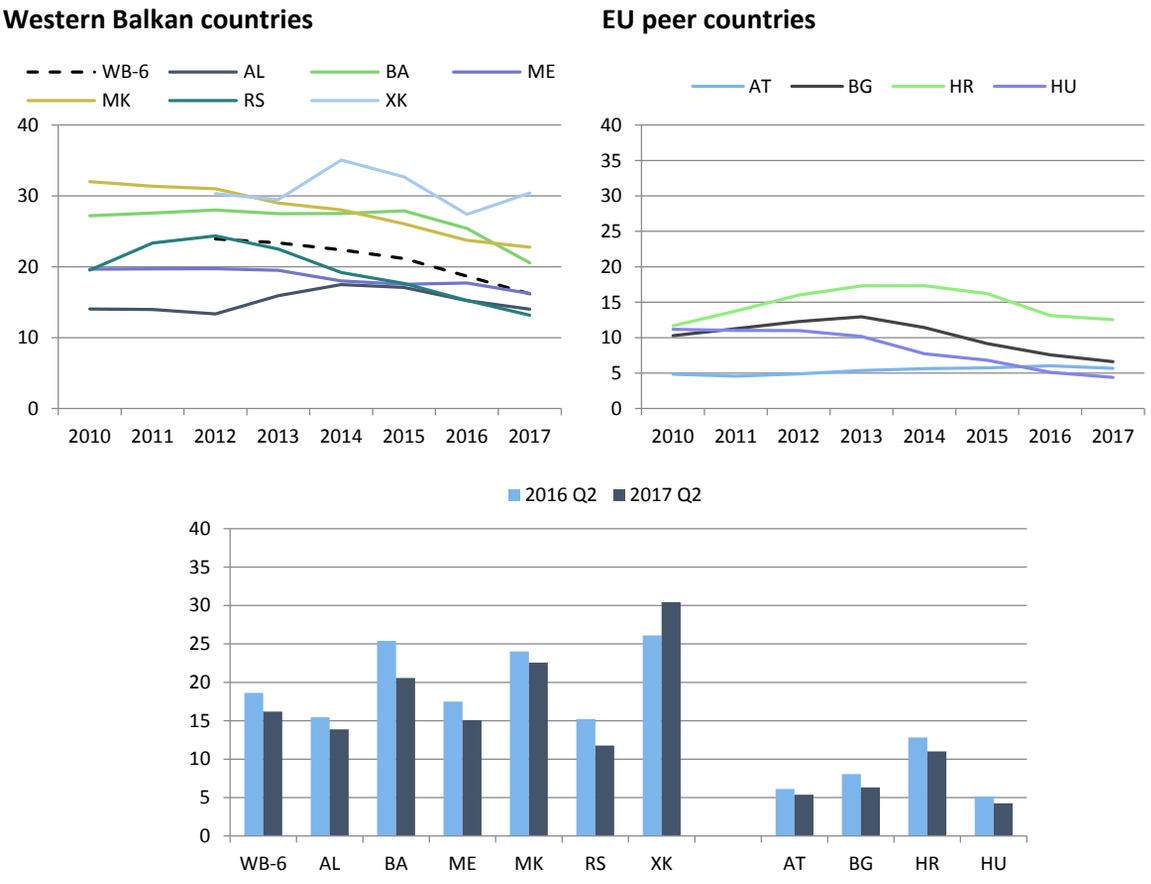
Source: SEE Jobs Gateway Database, based on data provided by national statistical offices and Eurostat.

High labor taxation and social security contributions are considered to be among the primary causes of high informality and inactivity in the region (Koettl, 2012; World Bank 2017b). Moreover, Petreski et al. (2017) found that individuals who received remittances from abroad were more likely to work informally than were those with similar characteristics who did not receive such remittances. Overall, research (UNDP, 2016b; Krstić and Sanfey, 2011) suggests that informal sector workers earn significantly less than those in the formal sector who are "concentrated in better paying industries and occupations and have more education and other favorable characteristics than informal sector workers" (Blunch, 2015).

5. Unemployment

With the exception of Kosovo, unemployment has decreased across the region, reaching an all-time low in some countries; and yet, the levels remain far above those found in the EU peer countries. Overall, between the second quarter of 2016 and the second quarter of 2017, the number of unemployed people fell by 169,000, and rose in Kosovo only. The average unemployment rate stood at 16.2 percent in 2017, down 2.4 percentage points from 2016 (Figure 13). This reduction was most pronounced in Bosnia and Herzegovina – a drop of 4.9 percentage points against the second quarter of 2016, with the unemployment rate reaching an all-time low of 20.5 percent. This fall was driven by a combination of rising employment and lower labor force participation; emigration may also have contributed to the decline (World Bank, 2017a). The drop in Serbia was significant too – down 3.4 percentage points to 11.8 percent (its lowest level since 2002) reflecting large gains in employment. Also in the FYR Macedonia, unemployment reached an all-time low of 22.6 percent in 2017. In Kosovo, by contrast, the unemployment rate increased by 3 percentage points over 2016, likely because employment creation could not keep up with rising labor force participation. Reductions in unemployment were also recorded in the EU peer countries. Despite considerable progress in reducing unemployment, Croatia still reported the highest unemployment rate (12.5 percent) in this group; meanwhile, Hungary's rate fell to 4.4 percent.

Figure 13 / Unemployment rates, in %



Note: Data for 2017 refer to 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.

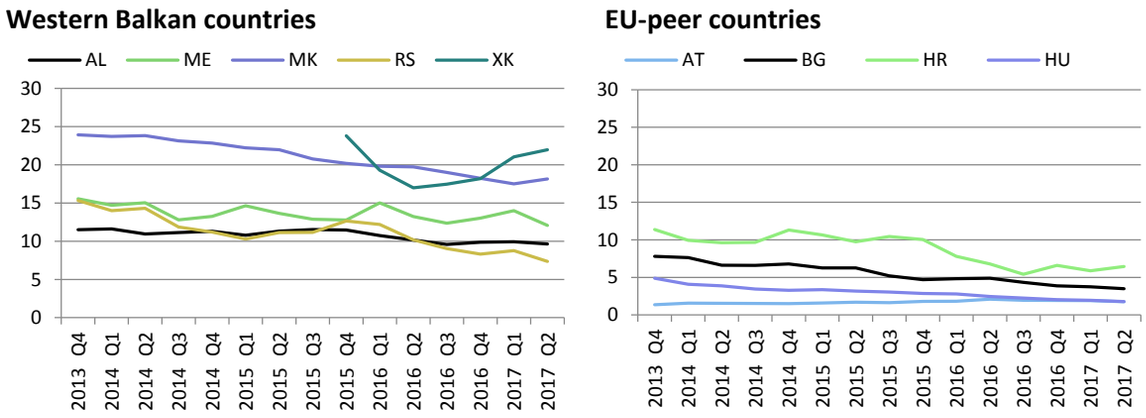
LONG-TERM UNEMPLOYMENT

Long-term unemployment[9] remained one of the most distinctive features of the Western Balkan labor markets. Despite declining in most countries, the long-term unemployment rate remained high throughout the region, ranging from 7.4 percent in Serbia to 22 percent in Kosovo in the second quarter of 2017 (Figure 14). Kosovo was the only country in which the long-term unemployment rate was on the rise (by 5 percentage point) in the 12 months through June 2017. In the EU peer countries, long-term unemployment was also on the decline (1.8 percent in both Austria and Hungary and 6.5 percent in Croatia).

Notwithstanding the declining trend in long-term unemployment, the share of those who were jobless for 12 months or more still amounted to about 80 percent in Bosnia and Herzegovina, Montenegro, and the FYR Macedonia (Figure 15). Only in Serbia was the proportion considerably lower (61 percent). Compared to the EU peer countries, however, where the share of long-term unemployment varied from 32.4 percent in Austria to 54.4 percent in Croatia, the values reported for the Western Balkan countries were high by international standards.

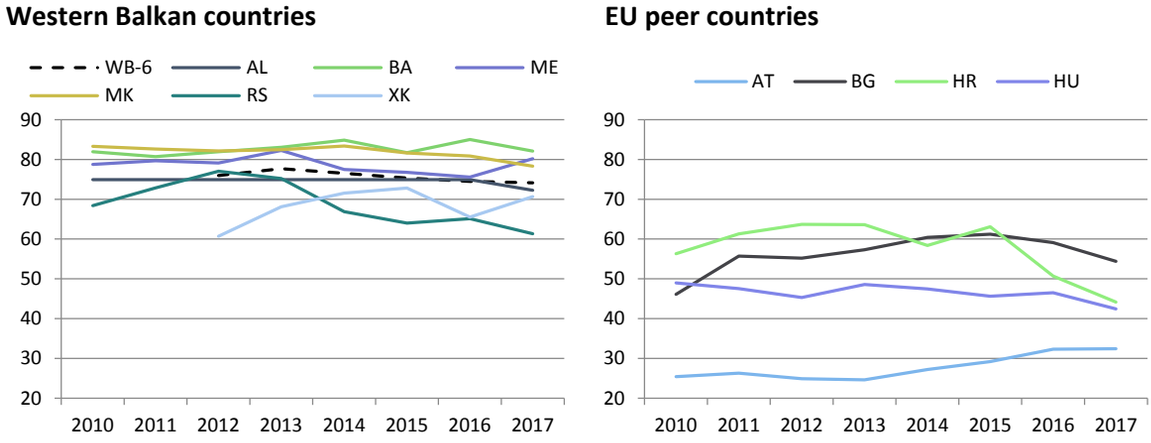
[9] Long-term unemployment refers to persons unemployed for 12 months or more.

Figure 14 / Long-term unemployment rates (15+ years), percentage of labor force, quarterly



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.

Figure 15 / Long-term unemployed as a share of total unemployed, in %

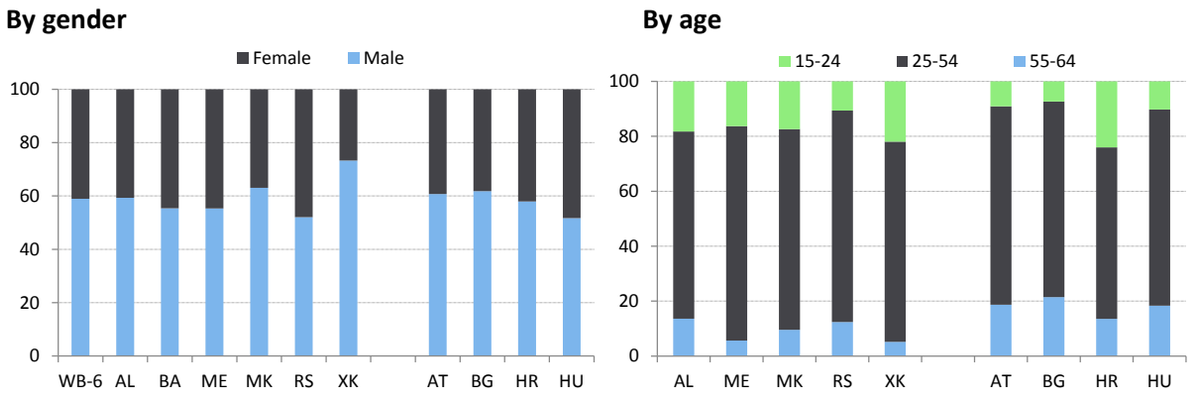


Note: Data for 2017 refer to the first two quarters. For country-specific methodologies, see the statistical annex of the respective country.
Source: SEE Jobs Gateway Database, based on data provided by national statistical offices and Eurostat.

In the Western Balkan countries during the second quarter of 2017, about 60 percent of the long-term unemployed were men. There were, however, large differences across countries: the highest shares of men among the long-term unemployed were found in Kosovo (73 percent) and the FYR Macedonia and the lowest were in Serbia (52 percent). In the peer countries, men were also more affected by long-term unemployment than women in Austria, Bulgaria and Croatia, while they were almost equally affected in Hungary.

In terms of age, prime aged people (25-54 years) accounted for the bulk of the long-term unemployed ranging between 68 percent in Albania and 78 percent in Montenegro (Figure 16). Young people were affected most in Kosovo (22 percent) and least in Serbia (11 percent). For comparison, in Austria, Bulgaria and Hungary, prime aged workers represented 71 percent of the long-term unemployed, while the older age groups accounted for around 20 percent which was more than double as high as in the Western Balkan countries. Croatia was the sole exception in this group with the share of young people accounting for almost a quarter of total long-term unemployed.

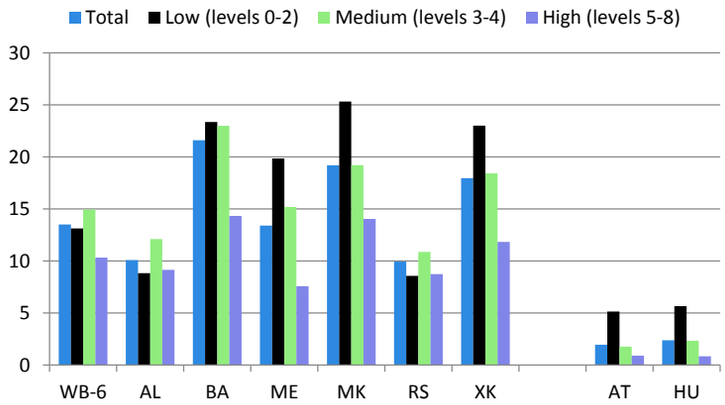
Figure 16 / Structure of long-term unemployment 2017 Q2, shares in %



Note: By age, missing data for Bosnia and Herzegovina.
Source: SEE Job Gateway Database, based on data provided by national statistical offices and Eurostat.

On average, the risk of long-term unemployment in the Western Balkan countries was lower for the high-educated than for the medium- or low-educated. In 2016, the long-term unemployment rate was considerably lower for the high-educated (10.3 percent) than for the medium-educated (14.9 percent) or the low-educated (13.1 percent), see Figure 17. Typically, also in the two peer countries where data is available, long-term unemployment was highest for the low-educated. This was not the case in Albania and Serbia, however, where the medium-educated had higher long-term unemployment rates than the low-educated; these two countries drove the regional average.

Figure 17 / Long-term unemployment rate by educational attainment, in %, 2016



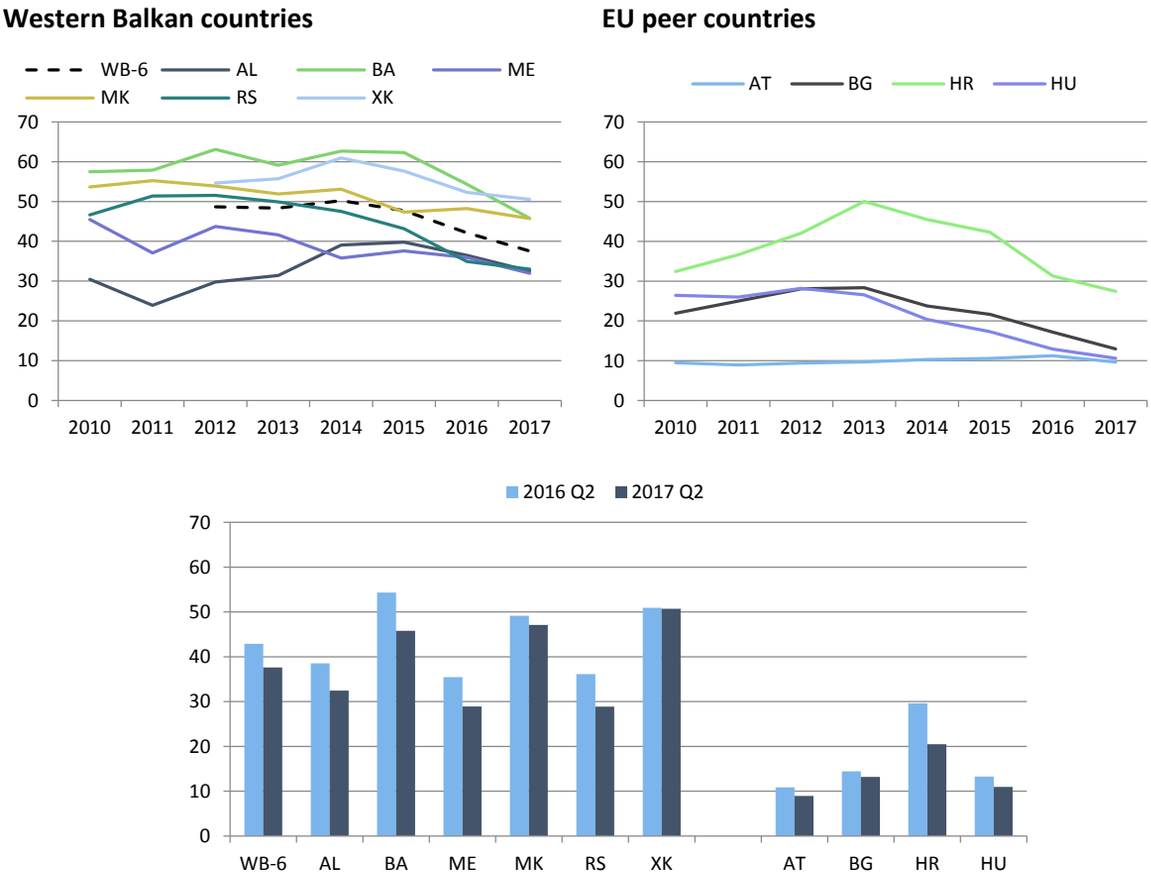
Note: For the educational structure, see Table 2. For country-specific methodologies, see the statistical annex of the respective country.
Source: SEE Jobs Gateway Database, based on data provided by national statistical offices and Eurostat.

The high and persistent share of long-term unemployment is an indication of the structural nature of unemployment in the Western Balkans. Those affected run the risk of skill loss, reduced motivation to search for employment, and possibly exiting the official labor market altogether. Kovtun et al. (2014) attributed the high proportion of the long-term unemployed to the large influx of remittances into the region. Remittances may have allowed their recipients extended periods of time to search for employment, in the sense that they potentially "increased reservation wages and thus reduced domestic workers' willingness to accept lower-paid jobs."

YOUTH UNEMPLOYMENT

As in the EU, youth unemployment rates were double the overall unemployment rates in most Western Balkan countries. However, young people were at a much greater disadvantage in the region than in the peer countries because the unemployment rate itself was much higher. In 2017, the youth unemployment rate averaged 37.6 percent, down 5.3 percentage points from the second quarter of 2016 (Figure 18). Since 2015, youth unemployment rates fell significantly throughout the region, but especially in Bosnia and Herzegovina and in Serbia. With the exception of Albania, in 2017, youth unemployment was below its 2010 level. Despite this decline, unemployment among young people remained high by European standards, ranging from 29 percent in Montenegro and Serbia to more than 50 percent in Kosovo. Youth unemployment also dropped in most peer countries since 2013/2014 and, in the second quarter of 2017, it ranged from 9 percent in Austria to 20 percent in Croatia.

Figure 18 / Youth unemployment rates (15–24 years), in %

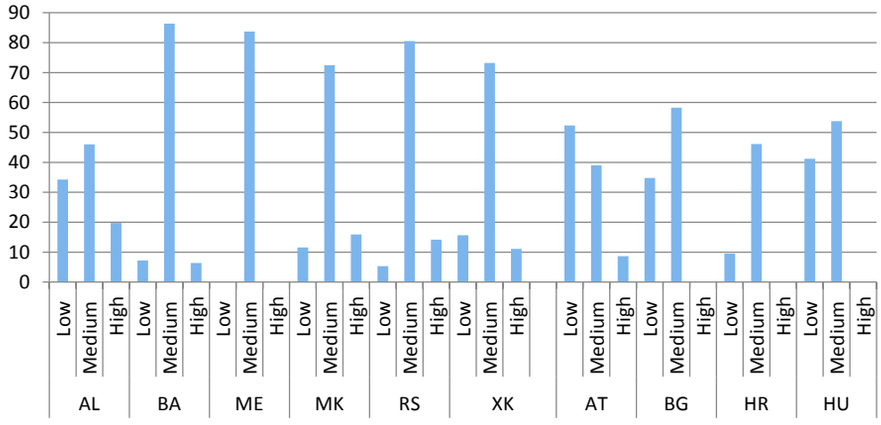


Note: Data for 2017 refer to the first two quarters. For country-specific methodologies, see the statistical annex of the respective country.
Source: SEE Jobs Gateway Database, based on data provided by national statistical offices and Eurostat.

In terms of education, the great majority of unemployed young people in the Western Balkan countries were medium-educated, which was also the case in all peer countries except Austria (Figure 19). The percentage of persons that were medium-educated ranged from 72.5 percent in the FYR Macedonia to 86 percent in Bosnia and Herzegovina; only in Albania was the proportion significantly lower, at 46 percent. In Albania and Kosovo, the low-educated were the next most likely

to be unemployed; in the FYR Macedonia and Serbia, it was the highly-educated. In the peer countries, too, the low-educated were second to the medium-educated, but there the respective shares were much higher than in the Western Balkans. In Austria, more than half of young unemployed people were low-educated, and close to 40 percent were medium-educated.

Figure 19 / Educational attainment of unemployed youth, 2017 Q2, in %



Note: Data for 2017 refer to the first two quarters. For country-specific methodologies, see 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.

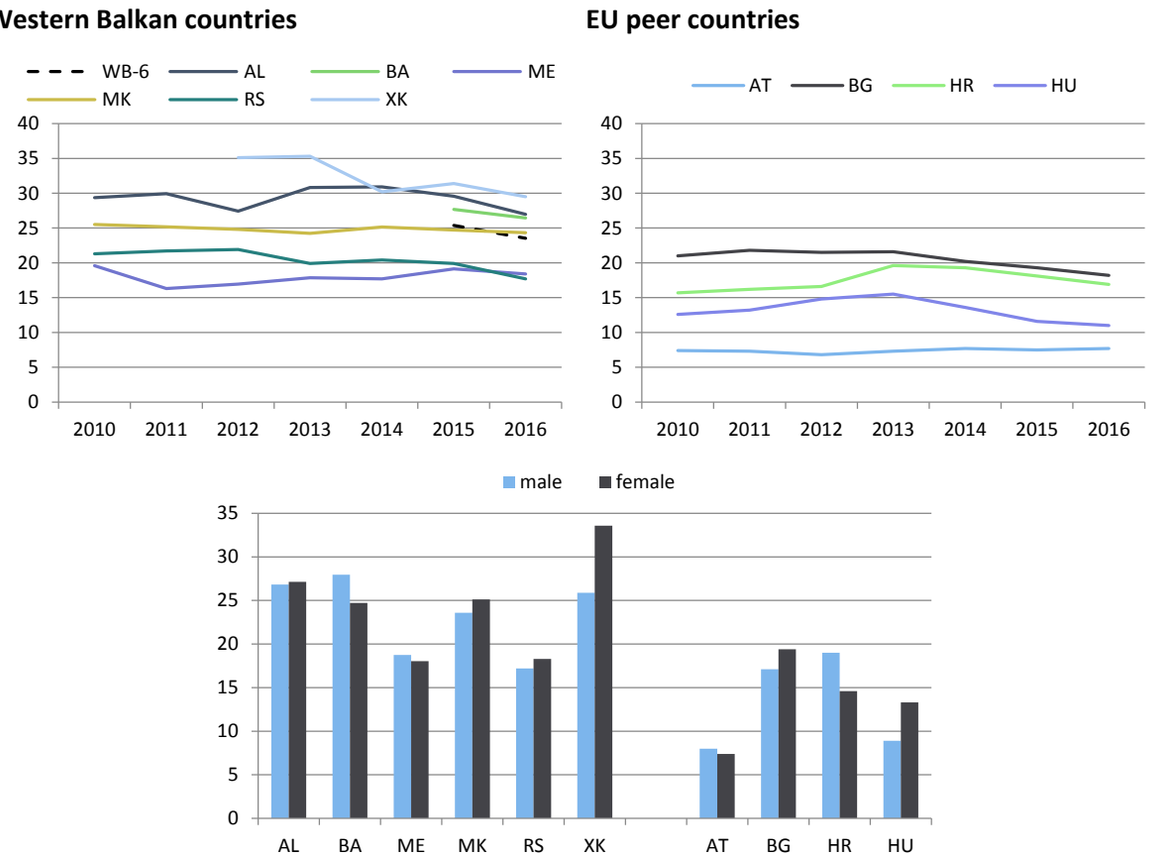
In recent years, high unemployment and a lack of job opportunities have made emigration from the region a viable option for young educated people, resulting in a significant brain drain in some sending countries.[10] For instance, young Albanians and Kosovans who emigrated had higher levels of education on average than the resident population, although that is less the case among Serbian and Macedonian emigrants (World Bank, 2016).

YOUNG PEOPLE NOT IN EMPLOYMENT, EDUCATION, OR TRAINING

The poor labor market situation of young people in the Western Balkans was reflected in high rates of youth population not in education, employment or training (NEET). In 2016, the NEET rate averaged 23.5 percent in the Western Balkans, with the highest rates reported for Kosovo, Albania, and Bosnia and Herzegovina, at between 26 percent and 30 percent (Figure 20). The lowest rates were found in Montenegro and Serbia (18 percent each), similar to those for the peer countries of Bulgaria and Croatia. However, these lower values were far above Austria's NEET rate (7.7 percent). Overall, NEET rates were lower in 2016 than in 2010 both in the Western Balkans and in the EU peer countries (except Croatia); the only exception was Austria, where it stagnated at a low level. With the exception of Bosnia and Herzegovina and Montenegro, NEET rates in the Western Balkans were higher for young women than for young men (especially in Kosovo), which is similar to Bulgaria and Hungary. By contrast, in Austria and Croatia men were more likely to be NEETs. For Albania, the ETF (2015) concluded that female NEETs were equally divided among the unemployed, family careers and inactive and discouraged workers. As for males, unemployment was the primary reason for becoming NEETs, followed by inactivity and discouragement.

[10] For further information, see Special Topic below.

Figure 20 / NEET rates (15–24 years), in % of the respective population



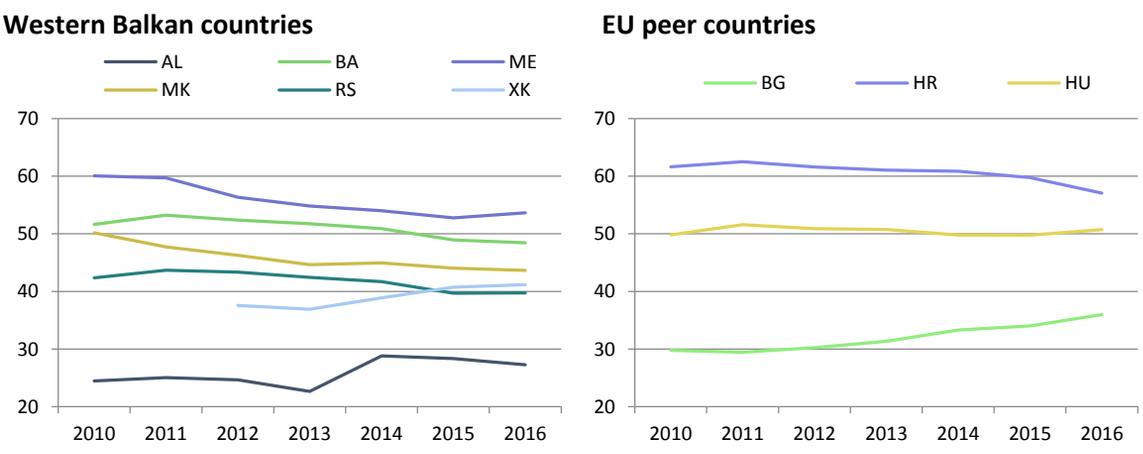
Note: For country-specific methodologies, see statistical annex of the respective country.
Source: SEE Jobs Gateway Database, based on data provided by national statistical offices and Eurostat.

There are major policy concerns related to NEETs. Young people who are detached from jobs or education for longer 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).

6. Wages

Wage levels differed within the region and in comparison to the peer countries. Measured in purchasing power parities (PPP) which accounted for price level differences among countries in 2016, the highest wage levels were found in Montenegro and in Bosnia and Herzegovina, whereas Albania lagged far behind and was at the lower end of the wage scale. By comparison, all Western Balkan countries (except Albania) reported higher wage levels than Bulgaria. Wages in Montenegro also exceeded Hungary's level. In all countries wage levels were significantly lower than in Austria (Figure 21 and Table 4.1). For example, the average wage measured in PPP was about 25 percent of the Austrian level in Albania and 54 percent in Montenegro. The figures also show that the difference in wage levels compared to Austria decreased over time only in Albania and Kosovo and in Bulgaria – starting from low levels. In all other countries, differences widened.[11]

Figure 21 / 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 and EU-28 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.

Most Western Balkan countries recorded high wage growth prior to the crisis of 2007/2008. The growth in real wages was, in some cases, double that found in the EU peer countries. As in the peer countries, growth then decelerated sharply in the Western Balkan countries. Post crisis, growth accelerated in the peer countries but this was not true for most of the Western Balkan countries (Table 4.2).

As in the EU peer countries (except Austria), wage setting in most Western Balkan countries occurred primarily at the company level (rather than in a centralized way, at the industry level, as in Austria). Montenegro was the only exception. There, collective bargaining took place at the national level, at the sector/branch level, and at the enterprise level (Simović-Zvicer, 2017).

[11] For further discussion on data sources and cross-country comparisons of wages in the Western Balkan region see Annex 1 of this report.

Table 4 / Average monthly gross wages, total

Table 4.1 / at Purchasing Power Parity (PPP – euro based)

	2010	2011	2012	2013	2014	2015	2016
Albania	602	627	650	605	784	807	774
Bosnia and Herzegovina	1271	1334	1381	1382	1385	1393	1375
Montenegro	1478	1497	1485	1465	1470	1502	1523
FYR Macedonia	1235	1197	1219	1193	1223	1254	1239
Serbia	1042	1095	1142	1134	1135	1130	1128
Kosovo	.	.	990	986	1059	1160	1169
Austria	2461	2507	2636	2671	2721	2847	2839
Bulgaria	732	738	797	837	906	969	1021
Croatia	1517	1567	1624	1631	1657	1702	1620
Hungary	1226	1293	1342	1356	1355	1417	1440

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

	2010	2011	2012	2013	2014	2015	2016
Albania	252	260	270	259	325	335	334
Bosnia and Herzegovina	622	650	660	660	659	659	665
Montenegro	715	722	727	726	723	725	751
FYR Macedonia	491	497	498	504	508	522	533
Serbia	460	517	508	537	524	506	516
Kosovo	.	.	431	444	482	510	519
Austria	2709	2763	2839	2899	2950	3013	3087
Bulgaria	331	351	374	396	420	449	492
Croatia	1053	1048	1047	1048	1042	1058	1029
Hungary	735	763	771	777	770	800	845

real change (gross) in national currency, in %

	2010	2011	2012	2013	2014	2015	2016
Albania	-7.0	1.5	0.9	-5.0	-0.7	0.9	-3.4
Bosnia and Herzegovina	-1.0	0.7	-0.5	0.2	0.8	1.0	2.0
Montenegro	10.6	-2.2	-3.2	-1.9	0.1	-1.1	3.1
FYR Macedonia	-0.6	-2.6	-3.0	-1.6	1.3	3.0	2.2
Serbia	0.6	0.1	1.0	-1.9	-1.7	-2.4	2.6
Kosovo	.	.	.	1.2	8.1	6.3	1.5
Austria	.	-1.5	0.2	0.0	0.3	1.3	1.5
Bulgaria	3.9	1.5	3.5	5.1	7.5	7.0	10.4
Croatia	-1.5	-0.8	-2.3	-1.4	0.4	1.8	3.0
Hungary	-3.4	1.3	-0.9	1.7	3.2	4.4	5.7

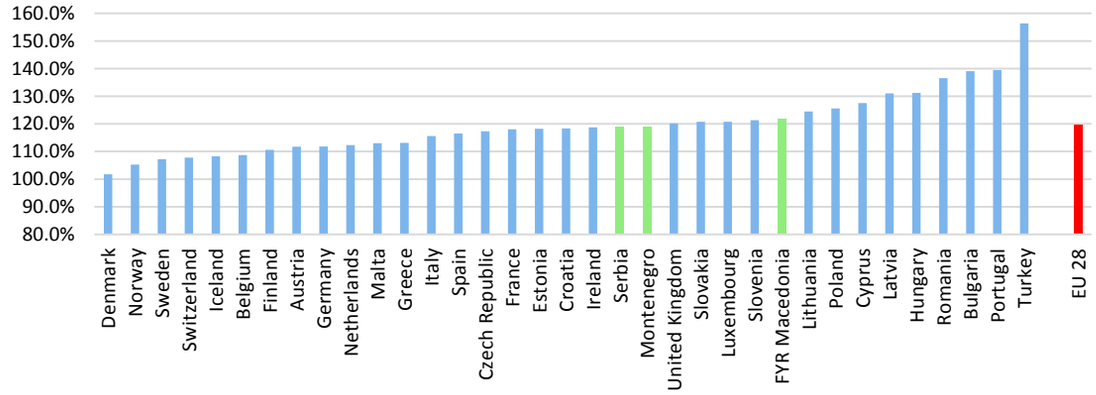
Note: Wage data refer to register-based survey data for the Western Balkans and peer countries, except Austria which is based on gross wages of National Accounts.
Source: SEE Jobs Gateway Database, based on data provided by national statistical offices and Eurostat.

Box / Distribution of wages from Structure of Earnings Survey data

The primary sources of wage statistics in the region do not provide information on how individual wages are dispersed. In countries using establishment surveys, this is because the unit of observation is an establishment, reporting on its number of employees and total wage bill, rather than an individual worker reporting on his/her own wage. In countries using tax data, it is possible to calculate distributional indicators but has not yet become standard practice. The results of the 2014 wave of Structure of Earnings Survey (SES) conducted in FYR Macedonia, Montenegro and Serbia thus offer a rare opportunity to examine distributional information in a comparative European perspective.

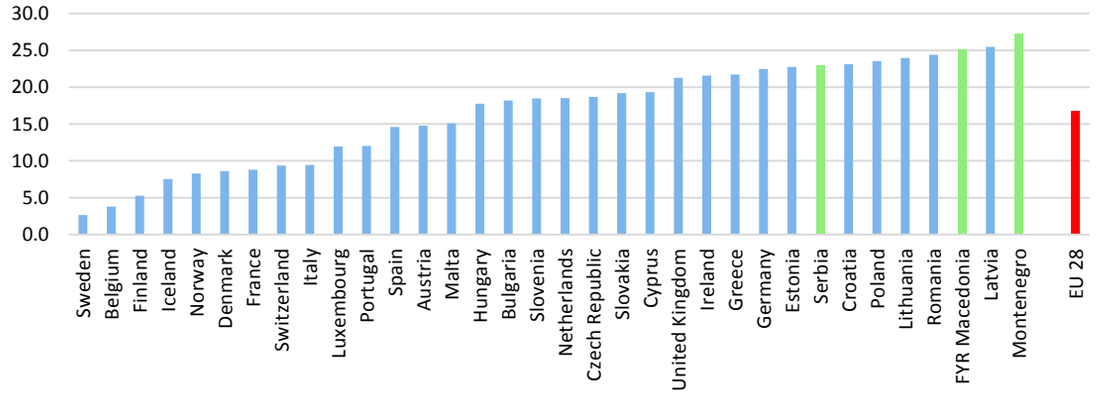
Data from SES point to an unequal distribution of wage incomes in FYR Macedonia, Montenegro and Serbia. Median rather than mean earnings provide a better basis for international comparisons because they account for differences in earnings dispersion across countries. In Box Figure 1, all three Western Balkan countries participating in the 2014 SES wave, had mean wages approximately 20 percent higher than the median wages, which were similar to the EU28 average. This indicates an unequal distribution of wage incomes, which is likely even more pronounced than observed in the 2014 SES data because the population of wage earners in the SES (i.e.,formal employees in firms with 10 and more employees) is less representative of the total wage earner population in the Western Balkans than in most other EU countries (see the discussion in Annex 1). Thus, the true wage dispersion measured by the mean to median wage ratio (taking into account wage employment in micro firms and unincorporated businesses) in the Western Balkans was likely above the EU average.

Box Figure 1 / Mean to Median Wage Ratio, in %, 2014



Source: Structure of Earnings Survey, 2014.

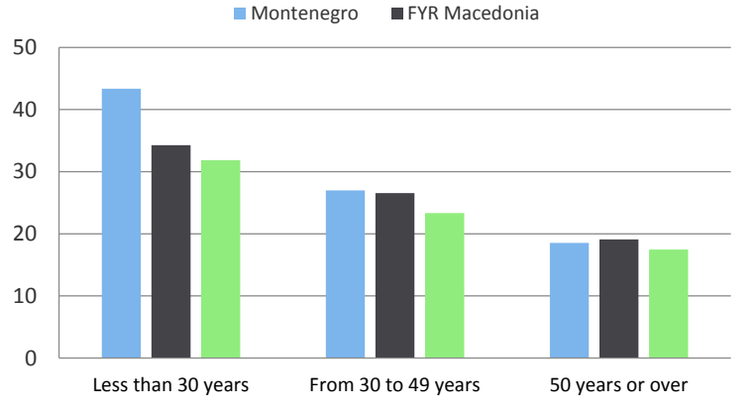
Box Figure 2 / Share of low wage earners, in %, 2014



Source: Structure of Earnings Survey, 2014.

The high concentration of low wage earners, appears to be the primary driver of wage inequality in the region. Low-wage earners are defined as employees who make less than two-thirds of the median wage. The share of low-wage earners in FYR Macedonia, Montenegro and Serbia was significantly higher than the EU average. The share of low-wage earners was 27.3 percent in Montenegro (which was higher than in any EU country), 25.1 percent in the FYR Macedonia (the third highest), and 22.9 percent in Serbia, compared with an EU average of 17.2 percent (Box Figure 2). The share of low-wage earners was highest among younger workers (above 40 percent in Montenegro and above 30 percent in the FYR Macedonia and Serbia) and considerably lower among employees 50 years and older (Box Figure 3). This is a particular feature of labor market regulation in former Yugoslav countries: a mandatory premium for work experience (regardless of length of service with the current employer). That premium was in force in all three countries in 2014, but was weakened in Serbia because of changes to the Labor Law effective from 2015. In Serbia and FYR Macedonia, the premium was 0.5 percent per year of work experience. In Montenegro, there was a progressive scale, beginning at 0.5 percent per year and then rising to a 1 percent annual premium after 20 years of experience.

Box Figure 3 / Age structure of low wage earners in Montenegro, FYR Macedonia and Serbia, in %, 2014



Source: Structure of Earnings Survey, 2014

Access to the SES micro data would allow to exploration of characteristics and consequences of wage inequality. For example, the most commonly used measure of income inequality, the Gini coefficient, is not routinely calculated and reported by the Eurostat from the SES data. Based on SES waves in 2002, 2006, and 2010, Stehrer et al. (2014) reported that the average Gini coefficient among the workers in European countries stayed roughly constant at around 0.3, hiding large differences between countries (but also changes in earnings dispersion within countries from one wave to another). For example the Gini stood at about 0.2 in the Scandinavian countries to over 0.4 in Romania and Turkey. With access to the SES micro data for the FYR Macedonia, Montenegro and Serbia, it is possible to calculate the Gini coefficient, the most comprehensive and the most popular measure of earnings inequality. SES micro data can also be used to analyze differences in earnings within and across countries by individual characteristics (e.g., education level, gender and age), job characteristics (e.g., type of contract, occupation, experience) and firm characteristics (e.g., sector and size). Of special interest would be an investigation of wage differentials between public and private sectors of employment, which have often been singled out as one of the primary sources of labor market distortions in the region (e.g. Vladisavljevic et al. 2017).

In the specific dual labor market context of the region, characterized by the sizeable, mostly vulnerable, employment outside of the wage earner sub-population covered by the SES (e.g., the self-employed, all informally employed workers including unpaid family helpers, employees in micro-firms and unincorporated businesses), it is important to also examine the dispersion of total employment income. In the short run, if universally conducted and reasonably harmonized within the region and despite the limitations explained in Annex 1, the LFS may serve as the best source of data for calculating generalized employment income differences. In the mid run, the SILC might better serve the purpose, with its greater potential for comparisons across and within European countries. Finally, administrative data from the tax directorates, with its reliable high frequency data on the distribution of all formal employees' wages, is a valuable resource for analyzing the distribution of wages of all formal employees.

7. Sub-regional labor market developments

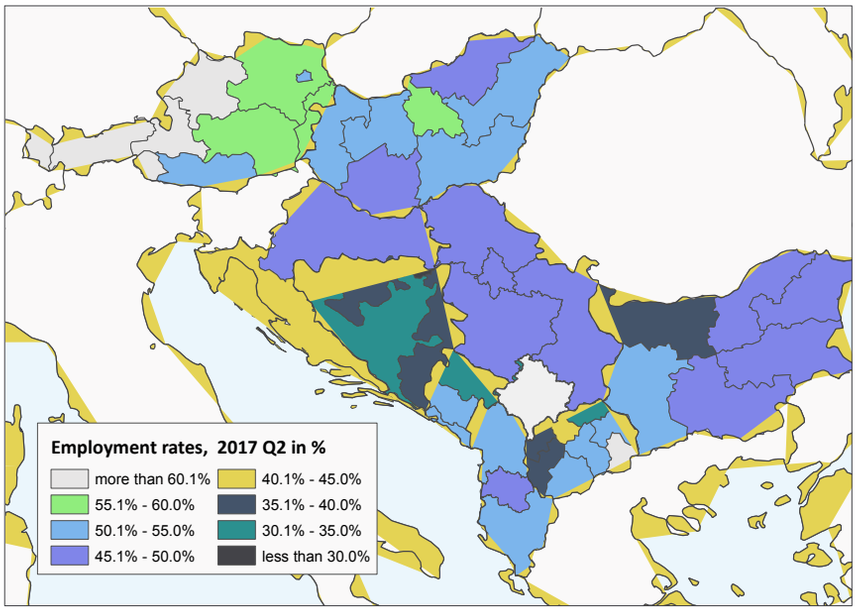
There were considerable variations in labor market outcomes across the Western Balkan countries, but also within some countries. For example, in Montenegro and the FYR Macedonia, the highest regional employment rate was 1.8 times greater than the lowest, while the highest regional unemployment rate was five times greater than the lowest in Montenegro and three times greater in the FYR Macedonia. By contrast, regional differences in Albania, Serbia, and Bosnia and Herzegovina (apart from the district of Brčko) were less pronounced. 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 (15 percentage points), and lowest in Croatia (3 percentage points). 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 marked in the FYR Macedonia and in Montenegro, but were low in Albania and Serbia. Map 1 shows the employment rates for the population aged 15 years and over for 21 NUTS-2 and NUTS-3 level regions (the latter applying to the FYR Macedonia).[12] The highest regional employment rates in the Western Balkans were recorded in the Southeastern region of the FYR Macedonia, where 60.3 percent of the population aged 15 years and over were employed. Rates above 50 percent were reported in the Eastern region and Pelagonia (FYR Macedonia) and in the Central region of Montenegro. The lowest employment rates, by contrast, were observed in the Brčko District of Bosnia and Herzegovina (26.5 percent), in Kosovo, the Federation of Bosnia and Herzegovina, and in the Northeastern region of the FYR Macedonia (at slightly over 30 percent each). Differences in the employment rates among regions were largest in the FYR Macedonia and in Montenegro, amounting to 27 and 21 percentage points, while variations in employment rates were negligible in Albania and in Serbia.

[12] 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).

Map 1 / Employment rates (15+ years), in %



Note: Data for BG, HR, and HU refer to 2016; data for BA refer to 2016 Q2. Data for MK are based on NUTS-3 level. For country-specific methodologies, see statistical annex of the respective country.
Source: SEE Jobs Gateway Database, based on data provided by national statistical offices and Eurostat.

UNEMPLOYMENT RATES

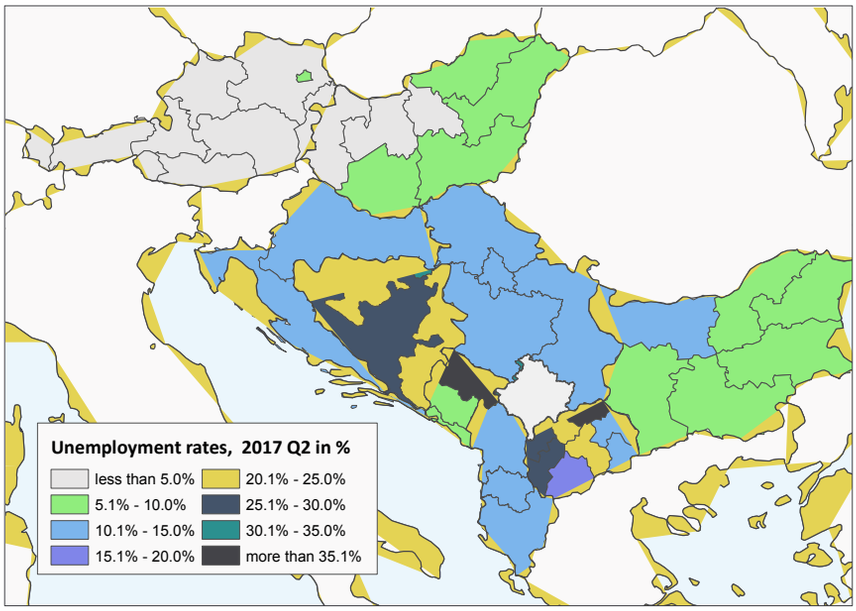
The sizable and persistent regional mismatch in unemployment in some Western Balkan countries suggests that there were strong barriers to regional labor mobility (Vidovic, 2012). There were wide variations in regional unemployment in the FYR Macedonia and in Montenegro, while differences were small in Albania and Serbia (Map 2).

Regional unemployment rates varied widely across the 21 regions of the Western Balkans in 2017, with the lowest rates recorded in the Coastal and Central regions of Montenegro (6.8 percent and 8.5 percent, respectively), and in Vojvodina in Serbia (10.2 percent). Unemployment was highest in the Northeastern region of the FYR Macedonia (37.3 percent), the Northern region of Montenegro (35.4 percent), and the Southwestern region of Macedonia (29.3 percent).

Almost all 21 Western Balkan regions analyzed in this report recorded decreases in their regional unemployment rates in 2017, the most significant of which were reported in Vojvodina (Serbia) and the Eastern region of the FYR Macedonia (decreases of around 5 percentage points). By contrast, unemployment continued to rise in the Macedonian regions of Polog and Vardar, and in the Southern region of Albania.

In the peer countries, regional unemployment rates varied from around 3 percent in Western and Central Transdanubia (both Hungary) and Vorarlberg (Austria) to 14.2 percent in the Adriatic region (Croatia). Annual data suggest that unemployment fell in almost all regions between 2015 and 2016, and most markedly in the Continental and Coastal regions of Croatia and the Southeastern region of Bulgaria. In Austria, which reported data quarterly, unemployment fell in all regions except Upper Austria in 2017.

Map 2 / Unemployment rates (15+ years), in %



Note: Data for BG, HR, and HU refer to 2016; data for BA refer to 2016 Q2. Data for MK are based on NUTS-3 level. 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.

References

Atoyan, R., and J. Rahman (2017), "Western Balkans: Increasing women's role in the economy," IMF Working Paper WP/17/194, Washington.

Blunch, N. (2015), "Bound to lose, bound to win? The financial crisis and the informal-formal earnings gap in Serbia", IZA Discussion Paper No. 9231, July.

Cojocaru, A. (2017), "Kosovo Jobs Diagnostic," Job series no. 5, World Bank Group, Washington, DC, http://documents.worldbank.org/curated/en/814361497466817941/Kosovo-jobs-diagnostic

Djuric, D. (2016), "Labor market transitions of young women and men in Montenegro," Work4Youth Publication Series No. 34, ILO, Geneva, April.

European Commission (2017), Employment and Social Developments in Europe 2017, Annual Review 2017, Brussels.

European Training Foundation – ETF (2015), "Young people not in employment, education or training (NEET), An overview in ETF partner countries", August.

Gashi, A., and G. Krstić (2016), "Informal employment in the Western Balkan region," mimeo.

Gerovska-Mitev, M. (2016), "Access to social protection of people working as self-employed or on non-standard contracts former Yugoslav Republic of Macedonia," ESPN Thematic Report, December.

Hirose, K., and M. Hettes (2016), "Extending social security to the informal economy, evidence from Bosnia and Herzegovina and the Republic of Moldova," ILO, Budapest.

IMF (2016), "Cross country report on minimum wages," IMF Country Report No. 16/151, Selected issues, Washington, June.

Koettl, J. (2012) "Does formal work pay in Serbia? The role of labor taxes and social benefit design in providing disincentives for formal work." In Caterina Ruggeri Laderchi and Sara Savastano (eds.), Poverty and Exclusion in the Western Balkans: New directions in measurement and policy, Volume 8. Springer.

Kosovo Stability Initiative – IKS (2016), "Minimum wage study, identifying the best model for Kosovo: models and good practices in determining minimum pay," Policy Brief prepared for the Kosovo Economic and Social Council, June.

Kovtun, D., A. Meyer Cirkel, Z. Murgasova, D. Smith, and S. Tambunlertchai (2014), "Boosting job growth in the Western Balkans," IMF Working Paper 14/16, January.

Krstić, G. and P. Sanfey (2011), "Earnings inequality and the informal economy", Economics of Transition, Volume 19, Issue 1, January.

OECD (2016), "Perspectives on Global Development 2017: International Migration Shifting in a Global World", OECD Publishing, Paris.

Pejin-Stokić, L., and J. Bajec (2017), “Access to social protection of people working as self-employed or on non-standard contracts, Serbia,” ESPN Thematic Report, January.

Petreski, M., B. Petreski, D. Tumanoska, E. Narazani, F. Kazazi, G. Ognjanov, I. Jankovic, A. Mustafa, and T. Kochovska (2017), “The size and effects of emigration and remittances in the Western Balkans: Forecasting based on a Delphi process,” MPRA Paper, No. 75512 Munich.

Simović-Zvicer, V. (2017), “Annual review of labor relations and social dialogue Montenegro,” Friedrich Ebert Stiftung, February.

Stehrer, R., Foster-McGregor, N., Leitner, S., Leitner, S. and Pöschl, J., (2014), "Earnings distributions and dimensions of inequality," wiiw, Research Report no 399, December.

UNDP (2016a), “Making the Labor Market Work for Women and Youth”, Kosovo Human Development Report 2016, Prishtina.

UNDP (2016b), “Informal work: From Challenges to Solutions”, National Human Development Report Montenegro 2016, Podgorica.

Vidovic, H. (2012), “Trends in the Western Balkan labor markets,” in: D. Sternad and T. Döring (eds.), Handbook of Doing Business in South East Europe. Palgrave Macmillan.

Vladisavljević, M., Narazani, E. and Golubović, V. (2017), "Public-private wage differences in the Western Balkan countries," MPRA Paper No. 80739, August.

World Bank (2016), “Ten messages about youth employment in South East Europe,” South East Europe Regular Economic Report No. 9S, Special Topic, World Bank, Washington, DC.

World Bank (2017a), “Western Balkans Labor Market Trends 2017”, World Bank, Washington, D.C.

World Bank (2017b), “Western Balkans Regular Economic Report No. 12, Fall 2017: Job Creation Picks Up”, World Bank, Washington, DC.

World Bank (2017c),”Western Balkans: Reviving Up the Engines of Growth and Prosperity, Overview”, World Bank, Washington, DC.

Annex 1: Wage data and wage statistics in the Western Balkans

Comparing wages across countries is a complex and inexact endeavor. Differences in concepts and in data collection methods affect countries' headline indicators such as average wages and median wages. This is especially true of both intra-regional and international comparisons in the Western Balkan countries.

This annex to the Western Balkan Labor Market Trends 2018 discusses the advantages and limitations of three main sources of wage data – establishment and enterprise surveys, tax administration data, and household surveys – in the specific context of the Western Balkan countries. The comparability of current official wage estimates is assessed. The Structure of Earnings Survey (SES) – a Europe-wide harmonized survey with a uniquely detailed questionnaire – is currently implemented in the FYR Macedonia, Montenegro, and Serbia, and we recommend its use in all six Western Balkan countries. Nevertheless, the SES also has limitations in capturing significant portions of wage employment in micro firms and outside of unincorporated businesses, as well as overall income from employment in the highly dualized labor market context of the region. Some of the key findings of SES wave 2014 are presented for the three Western Balkan countries in which it was carried out. These complement the summary statistics presented in the report that are based mainly on establishment surveys and administrative records on wages.

THE IMPORTANCE OF HIGH-QUALITY AND COMPARABLE DATA ON WAGES

Wages were the most important source of household income and population wellbeing. In high-income and upper middle-income countries, including in the Western Balkans, wages were the primary source of household income, and consequently had a decisive influence on people's living standards. Therefore, knowledge of the level, structure, and trends in wages is vital to assess the wellbeing of the working population. It should be noted that net (after-tax) wages are more directly linked to the current standard of living of the population than are gross (market or pre-tax) wages.

Wages constituted the largest portion of labor cost. At the level of the enterprise, the wages of paid employees represented the bulk of total labor costs. Firms are primarily concerned with their labor costs, and thus it is important to track trends in non-wage labor costs alongside gross wage trends. Further, unit labor costs provide a direct link between productivity and the cost of labor used in generating output.

Sustained wage growth contributed to economic growth. At the macroeconomic level, sustainable wage growth is essential in maximizing aggregate demand, especially in the context of post-crisis wage-led growth. While excessive wage growth may lead to price inflation and declining export or investment, weak wage growth can slow household consumption and domestic demand, with a negative impact on overall economic growth (ILO, 2016).

High inequality of wage distribution may have destabilizing socio-economic consequences. It is not only the average wage level and its change from one point in time to another that is important, but also the distribution of wages. Excessive inequality has been found to negatively impact economic growth and social cohesion (Ostry, Berg, and Tsangarides, 2014). Recent World Bank research on the causes of the Arab Spring suggested that the erosion of middle-class incomes ("middle-class squeeze"), of which wages were the most important component, translated into a perception of a broken social contract, and middle-class dissatisfaction was ultimately a key factor leading to the uprising (Ianchovichina, 2018).

CONCEPTS AND DEFINITIONS

Wages are the remuneration of paid employees. Wage statistics are concerned with the wages of employees who are defined as workers who hold "paid employment jobs." In such jobs, the basic remuneration is not directly dependent on the employer's revenue, but is generally set in advance. Employees include regular workers, workers in short-term employment, casual workers, outworkers, seasonal workers, and other categories of workers in paid employment jobs.

According to the definition adopted by the 12th International Conference of Labor Statisticians (1973), wages include: (1) Direct wages and salaries for time worked (time-rate) or work done (piece-rate); (2) Remuneration for time not worked (payment to employees for public holidays, annual vacations, and other time off with pay granted by the employer); and (3) Bonuses and gratuities.

Labor costs comprise wages, employer social security contributions, payroll taxes, and other costs. Labor costs include the gross wage, or total cash remuneration, and also employers' social security expenditure and taxes regarded as labor costs (e.g., taxes on employment or payroll). An even broader definition of labor costs includes elements such as food, drink, and fuel.; the cost of workers' housing; and vocational training, if the cost is borne by the employer.

Income from employment comprises wages and self-employment income. Income from employment is a broader concept than wage income, comprising both wage income and income from self-employment. Even broader is total household income, which extends beyond income from employment to include such items as services for own consumption (e.g., imputed rents and unpaid domestic services), property income, and current transfers (social insurance schemes, employer benefits, social assistance benefits, and private transfers).

Both the share of wages in total income from employment and the share of wage employees in total employment tend to increase with economic development. Globally, the share of wage employees in total employment rose by almost 10 percentage points between 1995 and 2015 – from 41.8% to 51.6% (ILO, 2016); and the share of vulnerable employment, comprising the self-employed and unpaid family members, fell by a corresponding amount. Since the share of wage employees in total employment was already very high in high-income countries, the increase in the global share of wage employment was largely due to a faster-than-average rise in wage employment in middle- and lower-income countries – from 29.9% to 42.9% between 1995 and 2015. This is a key driver behind the observed reduction in global income inequality.

In the Western Balkans, the share of wage employment in total employment was generally above the global average. However, in all the Western Balkan countries it fell far below the EU average (even more so if wage employment rates are considered, rather than wage employment share), reflecting the relative underdevelopment of the region (compared to the EU) and the consequent scarcity of salaried jobs.

SOURCES OF WAGE DATA – ADVANTAGES AND LIMITATIONS

Comparability issues

International comparisons of wages are inexact and require the harmonization of data. International comparisons of wages and wage developments are not as common as comparisons of key labor force aggregates and their derived indicators, such as employment, unemployment, and activity rates. The main reason for this is the difficulty of ensuring that the data provided are reasonably comparable. The ILO's *Global Wage Report*, published every two years, goes to great lengths to explain the methodological issues related to the harmonization of wage data from around the world.

Household surveys

Labor force surveys (LFS) are a widely used source of information on labor markets. A statistically sound solution would be the use of a single survey as the main source of information for both quantities (employment) and prices (wages) on the labor market. Unfortunately, while the LFS is universally accepted as the best and most comprehensive source of data on the labor force, it is much more problematic as a source of wage data.

LFS data have significant drawbacks as a source of information on wages. In most cultures data on wages (and more generally on employment income) are perceived as private and confidential, and respondents are reluctant to disclose the information. Consequently, national LFS questionnaires sometimes omit wage questions. In surveys that do contain wage and employment income questions, the response rate can be disappointingly small. And when they do respond, they tend to under-report their wages. The probability of an individual responding and **under-reporting** his/her wage may vary, depending on the wage level and the personal characteristics of the respondent, implying **self-selection bias**. There is also a **recollection problem**, and thus **rounding** occurs frequently. For example, in the Serbian LFS 2014, a net monthly wage of exactly 30,000 dinars was reported by some 10 percent of all respondents, so that it became both the median and the modal wage. To overcome the problems of disclosure and recollection, a menu of broad wage ranges is sometimes offered to respondents. This addresses some issues but also creates new problems, such as data aggregation and the calculation of mean and median values.

What has been said about LFS largely holds for other household surveys, such as the EU-wide Statistics on Income and Living Conditions (**SILC**) or the various household budget surveys **(HBS**), including the World Bank's Living Standards Measurement Study (**LSMS)**. In addition, while the EU-SILC focuses primarily on total annual family income, rather than solely on wages within a shorter time period, HBS-type surveys typically concentrate on consumption, and do not provide detailed information on income.

Household surveys are, in principle, able to capture informal and undeclared ("envelope") wages. Household survey data have one important advantage over establishment and administrative data: they are the most complete source of information on take-home wages and other net employment income data. This is the case because they are, in principle, "blind" to differences between formal and informal earnings, and to differences between the declared and undeclared wages of formal workers. They do not, however, provide exact information on gross wages.

Establishment and enterprise surveys

Establishment and company-level surveys are traditional and reliable sources of high-quality wage data. Establishment and enterprise-level surveys are the oldest and most common source of wage data in high- and middle-income countries, and they have clear advantages over household surveys. Establishments report summary statistics on their workers (such as total employment, hours of work, and the wage bill), as well as some structural data (such as employee headcount by type of contract, total basic compensation, and bonuses). These data are of high quality and are easy to process because the establishments use accounting records (as opposed to personal recollections or the disclosure of individual workers) for monthly summary statistics on the wages of their employees. Also, unlike household surveys, the data refer to jobs rather than to workers. This allows for a more accurate measure of wages when individuals hold multiple jobs.

Establishment data can include large worker samples, even approaching the total employee population. In the Western Balkans, consistently sampling large and medium-sized firms helps ensure that the majority of employees in each economic activity are included in their firms' reports. Furthermore, by using establishments as the units of observation (rather than firms), data can be collected on local average wages. Thus, wage statistics by sector of economic activity and by region are easily produced.

The drawbacks of establishment surveys include a potential overestimation of wages due to skewness of the sample toward large firms, lack of information on wage distribution, and inability to measure undeclared wages. In the Western Balkans, the national sample of establishments tends to be biased toward large firms, whose employees tend to have higher wages; meanwhile small firms and sole-proprietor businesses are either under-represented or excluded from the sample altogether. Similarly, establishment data also exclude farm wages, wages in the armed forces, and sometimes police and other public-sector wages. It is also not possible to include the wages of informal workers or the envelope wages of formal workers. Wage distribution data are not readily available from standard statistical reports on wages, although some information can be obtained through extended (typically annual or semi-annual) data that include establishment-level data on the number of employees who fall within various wage ranges and categories of demographic characteristics such as gender, age, occupation, and level of education.

The Structure of Earnings Survey (SES) is a firm-level survey with detailed information on individual wage employees. Many (though not all) of the limitations mentioned above are addressed in a systematic and harmonized manner at the EU level through the SES which, since 2002, has been conducted every four years across the EU (and more recently in some candidate countries), with the latest wave in 2014 (more precisely, conducted in 2015, but referring to 2014). It is an enterprise sample survey that collects representative and harmonized data on wages in companies with more than 10 employees in all sectors except agriculture, fishing, public

administration, education, health, and community and social services. Participating countries may also include small enterprises and the excluded sectors, if they so wish. The sample is representative of both enterprises and workers with respect to all covered sectors and company sizes (Eurofound, 2014).

The SES was specifically designed to provide detailed and comparable information on the relationships between the level of remuneration and the individual characteristics of employees (e.g., sex, age, occupation, length of service, highest educational level attained) and of their employers (e.g., economic activity, size, and location of the enterprise). By the same token, the SES is able to report not only on average wages at various levels of disaggregation, but also in great detail on the individual wage distribution. Its primary disadvantage is that it is a relatively time-consuming and expensive survey and is conducted very infrequently.

Administrative data

In certain circumstances, a central registry with data from the tax directorate and/or the social insurance administration can serve as a single source of information on wages in a country. The use of tax administration and social insurance data as a source of information on wages has been facilitated by computer technology, and many developed countries already rely primarily on these datasets to produce their official wage statistics. The main advantage is that – in ideal circumstances – they can gather information on firms and establishments and on their workers. This facilitates the creation of employer-employee datasets that can be used both for the creation of descriptive wage profiles and for scientific research into patterns of labor demand and supply. These datasets are most likely the future of wage statistics worldwide.

However, in countries (such as those of the Western Balkans) where imperfect information systems do not allow employer data to be linked to the tax and social insurance data of individual workers, administrative sources offer limited information, broadly similar to that provided by establishment surveys. Because the links between firms and their workers cannot be fully retrieved from the income tax and social insurance databases at this time, the tax administration data are combined with establishment survey data and with data from other sources.

Because of the wealth of individual variables that the SES provides, the production of monthly and annual wage statistics will have to be augmented by information from SES-type enterprise surveys for a long time to come.

WAGE DATA IN THE WESTERN BALKANS – OVERVIEW OF SOURCES AND COMPARABILITY ISSUES

Establishment surveys have a long tradition in the countries of the former Yugoslavia, though their comparability has declined over time. From the old Yugoslavia, the three Western Balkan countries of Serbia, Bosnia and Herzegovina, and FYR Macedonia have continued the tradition of utilizing an establishment survey, which translates as “Labor” (Bosnian/Croatian/Montenegrin/Serbian: *Rad*; Macedonian: *Trud*). This dates back to 1963, when the Monthly Report on Employees and Wages was established. The survey itself was modelled on the Current Employment Statistics (CES), constructed in 1914 by the US Bureau of Labor Statistics. Since the break-up of Yugoslavia, however,

the individual successor countries have introduced methodological changes and somewhat divergent survey practices; as discussed below, these have affected comparability among the countries.

Montenegro, Albania, and Kosovo rely on central registry/tax data on wages. Several years ago, Montenegro began using central registry data as opposed to the "Labor" survey used in the past. And recently, Albania and Kosovo began basing their official wage statistics on administrative data from their respective tax directorates.

Apart from these key sources that are used to produce official estimates of average wages and wage trends (presented in Section 6 of this report), the Western Balkans also draw on other data sources. FYR Macedonia, Montenegro and Serbia conducted an SES survey in 2014 (FYR Macedonia also in 2010). Serbia has gradually built up an administrative database of social insurance ("CROSO"). Beginning in 2018, its statistical office (SORS) will use data from the tax administration as the main source of wage statistics.

Wage data from household surveys exist, but they are not published as headline indicators. When it comes to household surveys, all countries have labor force surveys, and all of these surveys contain wage questions; however, none of the countries publish statistics on wages. The LFS micro data on wages are primarily utilized in scientific empirical research. All the countries have HBS, while Serbia, the FYR Macedonia, and most recently Montenegro have EU-SILC (though the Montenegrin data have not yet been made public).

Annex Table 1 summarizes the data sources on wages throughout the Western Balkans. Sources used for official purposes are labeled with a capital X.

The official statistical data presented in Section 6 of this report suggest that their comparability depends, to a large extent, on the sub-population of wage employees used to calculate average wages in the economy.

Annex Table 1 / Overview of data sources on wages in the Western Balkans

	AL	BA	MK	ME	RS	XK
Establishment and enterprise surveys						
Summary establishment survey CES type (*Rad/Trud*)		**X**	**X**		**X**	
Structure of Earnings Survey			x	x	x	
Administrative databases (tax directorate, central registry)	**X**			**X**	(X)	**X**
Household surveys						
Labor Force Survey (direct)	x	x	x	x	x	x
Household Budget Survey (can be derived)	x	x	x	x	x	x
Statistics on Income and Living Conditions (can be constructed)			x	(x)	x	

Legend: **X** – source of official average wage, (X) – source of official average wage as of 2018, X – survey with published data on average and median wage, x – survey containing micro data on wages available for scientific use, (x) survey containing micro data on wages not yet available.

Serbia is the only country to include wage employees employed by private persons. In 2009, Serbia included wage employees of unincorporated employers (so-called “entrepreneurs”) in the population from which the average wage was calculated. The wages were drawn from administrative (social insurance) sources. As a result, the average wage dropped. Other countries have broadly retained the original population of establishments from which the sample of wage employees was drawn (apart from the armed forces and the police). However, the way in which the

sampling of establishments occurred may have concealed differences because sampling is typically not random but intentionally skewed toward the larger establishments.

Serbia's published average wage is underestimated in a regional comparison. From a regional perspective, Serbia's inclusion of employees in unincorporated businesses likely results in an underestimation of the Serbian average wage when compared with the other two countries that conduct the *Rad*/*Trud* survey, and with Montenegro. This is best observed by comparing the official average wage estimates for 2014 to the average wage estimates from the SES survey for the three countries that conducted it, as presented in Table 2 below.

Annex Table 2 / Gross wages in current EUR, 2014

	Montenegro	FYR Macedonia	Serbia
Rad/Trud			
Mean wage	723	508	524
SES			
Mean wage	724	494	574
Median wage	602	402	477

As evident in Annex Table 2, the Serbian gross average wage calculated with the SES was significantly higher (some 10 percent) (some 10 percent) than a statistics produced from the *Rad* survey. This is a result of the different populations used to estimate the average wage: while the SES counts only the wages of workers employed in legal entities with more than 10 employees, the Serbian *Rad* survey includes all wage employees, regardless of whether they work for legal entities or for individual "entrepreneurs." Montenegro and the FYR Macedonia, on the other hand, displayed little or no differences between their official average wages and the average wages according to the SES because the populations used in the two surveys did not differ as much as they did in Serbia.

Even without comparability issues, the representativeness of wage data for the overall employment income of households varied across the Western Balkans. At a more general level, one question that is particularly relevant to middle-income countries, such as those of the Western Balkans is: how representative is the published average wage for the overall employment income of households? Employment income is a broader concept, comprising wage income and income from self-employment. Wages and wage employment represent a much larger share of employment income and of total employment in Montenegro and Serbia, for example, than in Albania and Kosovo.

CONCLUSION AND SUGGESTIONS FOR FURTHER RESEARCH

Wages and wage trends are an under-researched area in the Western Balkans, and warrant closer attention. While information on gross wages is essential for international comparisons, information on net wages is important for estimating the standard of living of the working population, and information on labor costs is necessary for estimates of labor productivity and competitiveness, as well as for calculating the labor tax wedge (which affects workers and employers alike).

There are strong indications that the wage distribution is uneven, but more information is needed, including results based on the pooling of all three groups of sources on wage and income data. Information on the distribution of wages is scant. While there are indications that the wage

distribution is uneven from a comparative perspective (with the most compelling evidence coming from the SES and pointing to large shares of low-wage earners), there are other important avenues of research. Ideally, the data should come from both establishment and administrative records, and from household surveys. Because of the labor market duality in the region (unusual in Europe, but typical of middle-income countries), the data on wage distribution must be examined in the context of overall employment income distribution – or even more broadly, in the context of the distribution of total household income.

REFERENCES

Eurofound (2014), “Pay in Europe in the 21st Century," Dublin.

Ianchovichina, E. (2018), “Eruptions of Popular Anger,” The World Bank, Washington, DC.

ILO (2016), “Global Wage Report 2016/17,” International Labor Organization, Geneva.

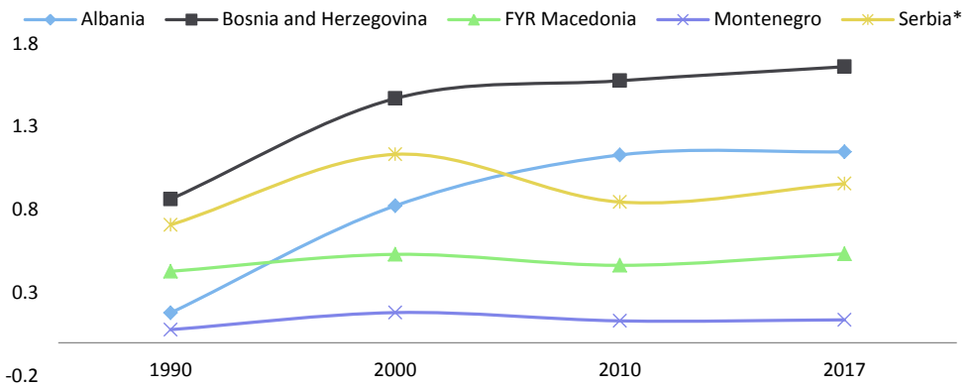
Ostry, J.D., A. Berg, and C.G. Tsangarides (2014). “Redistribution, inequality, and growth,” International Monetary Fund Staff Discussion Note SDN/14/02.

Special topic: Improving data on labor mobility in the Western Balkans

1. Introduction

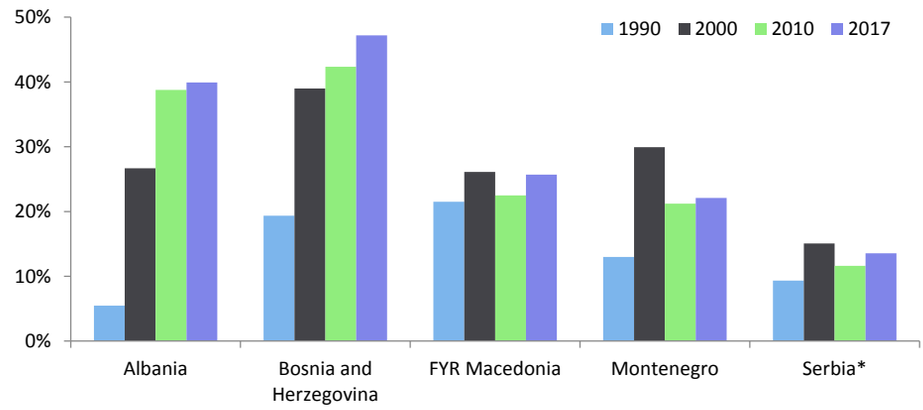
The Western Balkan countries showed high levels of outward migration that persisted between the years 1990 and 2015. During this period, the stock of migrants from the region has more than doubled, reaching almost 4.4 million (see Figure 1; for further details, see Tables A1 - A2 in the Annex). This trend was particularly pronounced in Albania, Kosovo, and Bosnia and Herzegovina, where the share of emigrants (outside the region) amounted to over 30 percent of the resident population (Figure 2). Bosnia and Herzegovina was the region's leading country in terms of absolute numbers of emigrants (1.3 million), followed by Albania (1.05 million), and Serbia (0.9 million). The ratio of out-of-region to within-region migration was about 9:1.

Figure 1 / Stock of emigrants from the Western Balkan region, million persons, 1990–2017



Note: * 1990–2000 including Kosovo.
Source: UN Statistics (2018).

Figure 2 / Emigration-share-to-resident population, 1990-2015

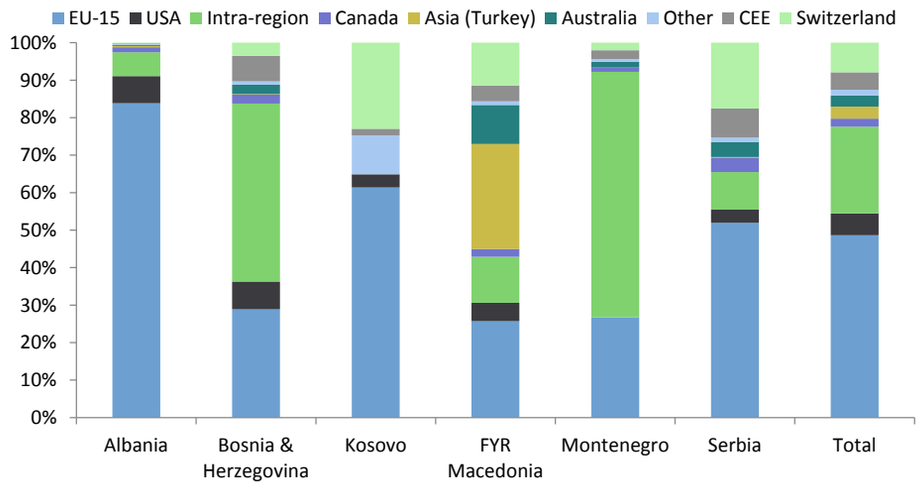


Note: The stock of migrants as share of resident population does not include intra-regional migration in the Western Balkans.
Source: stocks of migrants and resident population: UN Statistics (2015).

Almost half of emigrants from the Western Balkans moved to the EU-15. In 2015, the EU-15 was the primary destination for 84 percent of Albanian (particularly Greece and Italy), 51 percent of Serbian (e.g., Austria and Germany), and 61 percent of Kosovar emigrants (e.g., Germany). Switzerland was another important destination, especially for migrants from Serbia (17 percent), Kosovo (22 percent), and the FYR Macedonia (11 percent). Overseas or distant countries – such as

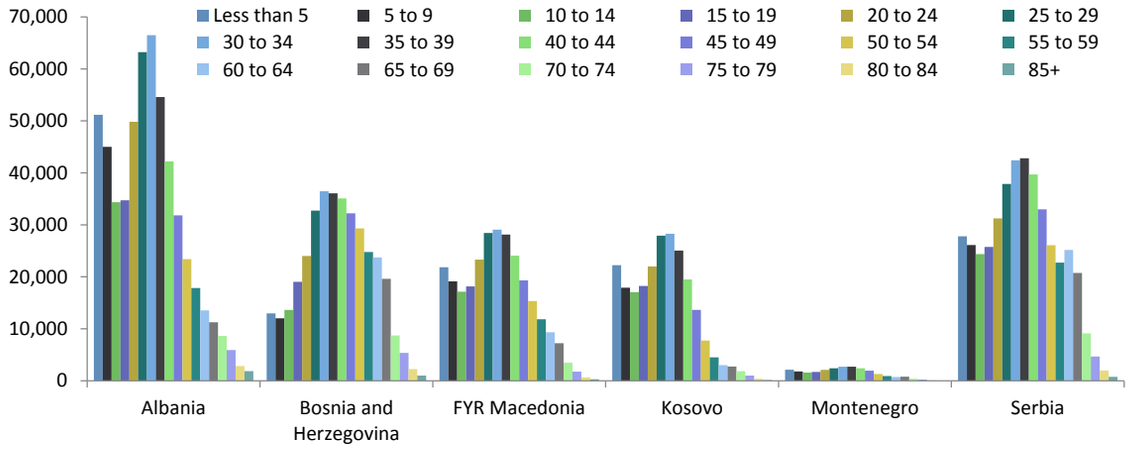
the United States, Canada, and Australia – were preferred destinations for 11 percent of emigrants from the region. The United States has been particularly attractive to migrants from Albania and Bosnia and Herzegovina (7 percent each), while Australia has drawn Macedonian and Serbian emigrants (10 percent and 4 percent, respectively). In the case of Macedonian emigrants, Turkey was also a key destination, attracting 28 percent of emigrants from that country (Figure 3).

Figure 3 / Main destination countries for Western Balkan emigrants, share in %, 2015



Source: UN Statistics (2017).[13]

Figure 4 / Age structure of emigrants to selected EU countries, persons, 2015



Source: Eurostat[14]

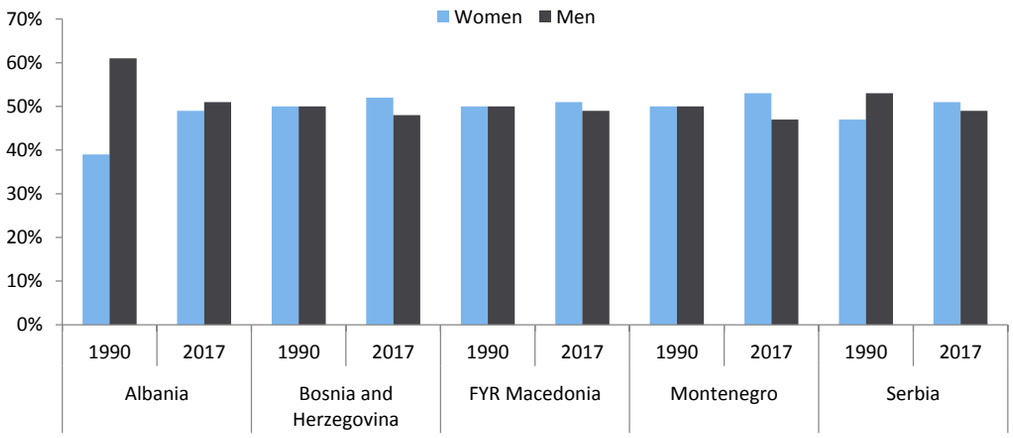
Emigrants from the Western Balkans tended to be young and of working-age, and women made up an increasingly large share. All countries (except for Bosnia and Herzegovina), reported a relatively large share of children among emigrants. The bulk of emigrants across countries were in the age group between 20 and 39 (Figure 4). This holds true for both men and women. Women made up an increasingly large share of emigrants, and even surpassed men in all countries but

[13] UN Statistics (2015), "Trends in international migrant stock: Migrants by destination and origin," United Nations database, POP/DB/MIG/Stock/Rev2015.

[14] Source: Eurostat - Emigration by age group, sex and country of birth [migr_emi4ctb], last updated on 08.11.17, extracted on 09.01.18.

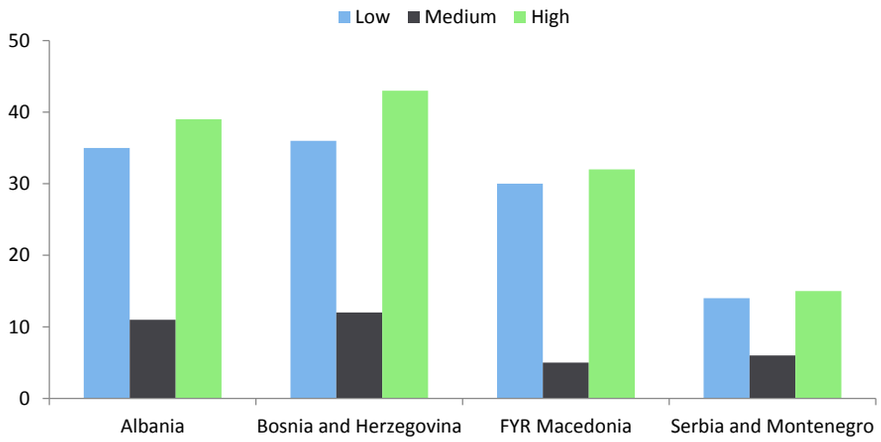
Albania (Figure 5), in part because they were not only dependents but increasingly migrated for economic opportunities.

Figure 5 / Emigration: Breakdown by gender, in %, 1990 and 2017



Source: UN Statistics (2017).

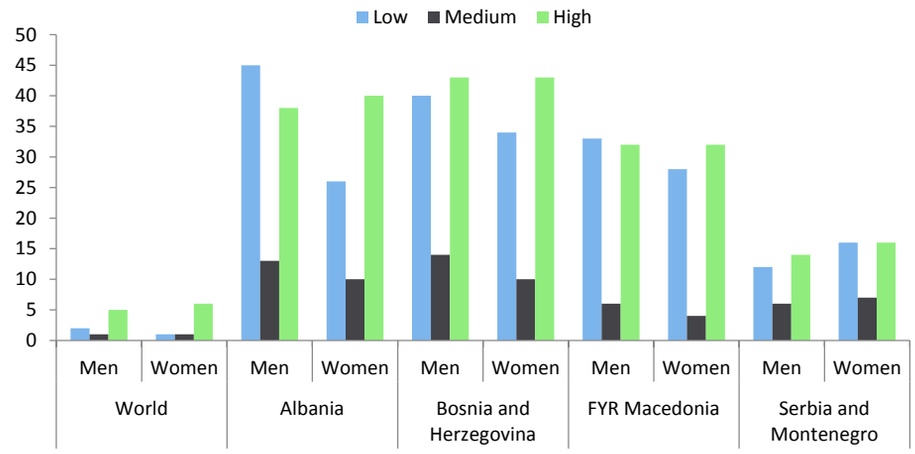
Figure 6 /Emigration rates by education level, in %, 2010



Note: For any given education level and year, the emigration rate is defined as the total migrant population from a given source country divided by the sum of the migrant and resident population in the same source country. Low-educated includes lower secondary schooling, primary schooling and no schooling; medium-educated includes a high-school certificate or equivalent and high educated includes levels of education higher than a high school certificate or equivalent.
Source: IAB Brain Drain Database (Brücker et al. 2013).

More high-educated than low-educated migrants left the region, and the emigration of highly educated people was particularly pronounced among women. The IAB Brain Drain database (Brücker et al., 2013) is an international data source that provides information on the characteristics of emigrants from the region in terms of age, gender, educational attainment, and main destination countries within the Organization for Economic Co-operation and Development (OECD). According to these data, Bosnia and Herzegovina, Albania, and the FYR Macedonia lost a sizable share of their high-educated population aged 25 and older (43 percent, 39 percent, and 32 percent, respectively emigrated to OECD countries by 2010). Overall, high-educated emigration from the Western Balkan region was six times higher than in the rest of the world, and the emigration rates of highly-educated women from the Western Balkans was higher than those of highly-educated men (Figures 6-7).

Figure 7 / Emigration rates by gender and education level, in %, 2010



Source: IAB Brain Drain Database (Brücker et al., 2013).

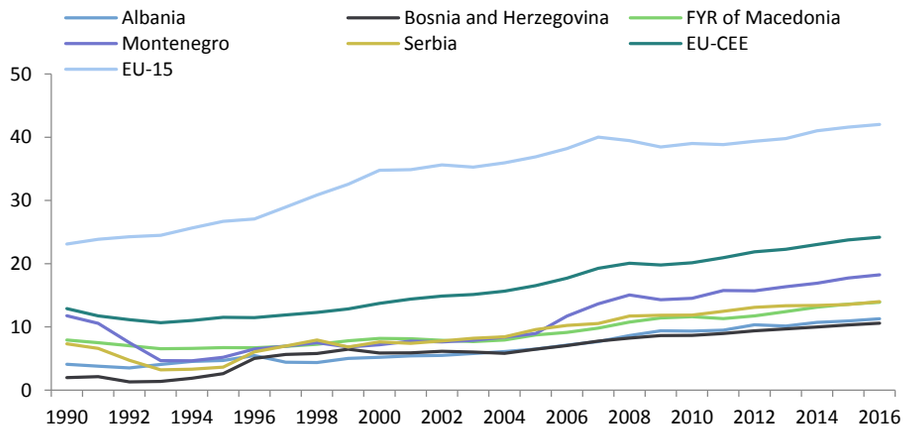
Large-scale emigration, especially of the highly educated, had important consequences for human capital formation and labor market dynamics. On the positive side, labor market tensions – as reflected in high unemployment rates, especially among younger people – declined due to emigration. Also, a large influx of remittances acted to counter poverty (World Bank, 2017). Meanwhile, return migration (the transfer of knowledge and human capital obtained abroad) and financial investments of the diaspora likely generated economic and productivity gains (World Bank, 2017).

Governments in the region have focused on the positive externalities generated by emigration, but research is necessary to gain a deeper understanding of its negative impacts. Challenges associated with the emigration of young and highly educated individuals, although not necessarily observable, included shortages of highly qualified workers, difficulties faced by enterprises in finding workers with the necessary skill set, a limited capacity to invest further or generate new jobs, labor market matching (i.e., the correspondence of labor supply and demand) and its impact on unit labor costs and productivity, and consequences for the incomes of those who remain in the region.

Emigration will likely impede demographic developments if the youngest and most productive continue to leave the region. In the 20th century, the region was still characterized by a continuously growing population even though emigration exceeded immigration. By contrast, from the 1990 onwards, declining birth rates, an aging population, low – or even negative – growth rates, and a shrinking of the population have characterized the region. These demographic trends are expected to continue over the next decades and further emigration could worsen the situation, resulting in an irreparable loss of the region's population (see also World Bank, 2015).

Persistent emigration likely influenced economic growth and development in the medium and long run. The Western Balkan countries did not manage to keep up in terms of income with the EU-15 and the EU-CEE - the group of Central and Eastern European countries that joined the EU from 2004 onwards (Figure 8). The future competitiveness of the region's economies is further at risk if large-scale emigration of well-educated or highly skilled young people continues. While the developed and the most competitive countries focus on attracting and training qualified workers, the less developed countries, including those of the Western Balkans, fail to retain such workers.

Figure 8 / GDP per capita, Western Balkan countries versus other countries, 1990–2016, in thousand US dollars



Notes: Real GDP per capita in US dollars at 2011 prices.
Source: Maddison Project Database (2018).

To shed light on how labor migration potentially affects the economies and labor markets of the Western Balkan countries, sound data on the size and labor market-related characteristics of emigration from the region is indispensable. A better understanding of the phenomenon could make migration a win-win situation, particularly for the countries of origin and for the migrants themselves. Consequently, the objective of this special topic is to provide a brief description of the patterns and size of emigration from the Western Balkan region, and to highlight challenges in the data. With respect to this latter point, the purpose is to:

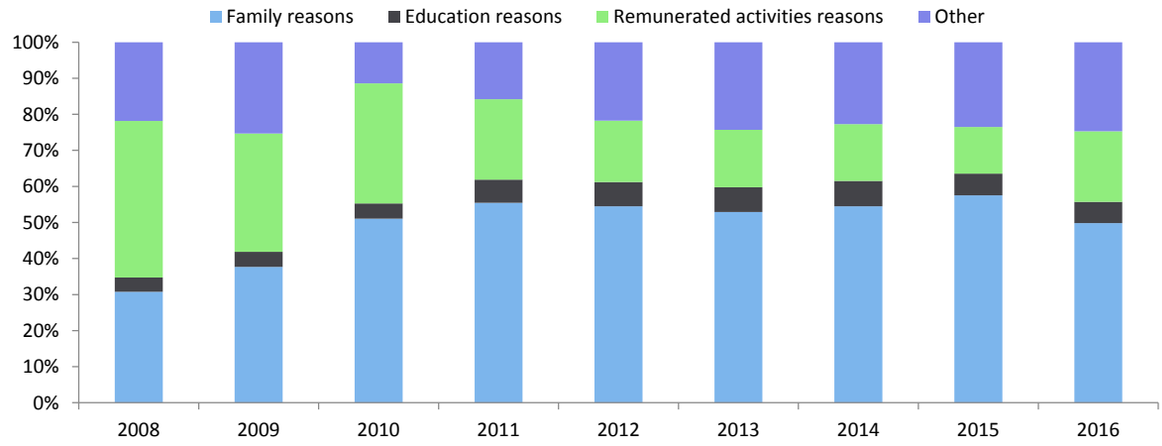
- Provide an analysis of the extent to which existing statistics on migration allow for a comprehensive understanding of the phenomenon;
- Identify possible data sources, assess their quality, and consider the gaps in migration statistics. Specifically, the focus is on labor migration vis-à-vis the current state of knowledge, the challenges of data collection, and the constraints involved in analyzing the impact of labor migration on the country of origin;
- Make recommendations for improving data quality.

2. The current state of evidence

MOTIVATIONS FOR MIGRATION AND DURATION OF STAY

Migration has mostly been work related, but recently other motives have come to the fore. The residence permits issued to citizens of other countries provide important information about the reasons for and length of migration stays. (Note, however, that the data do not include undocumented workers)[15]. According to Eurostat data, the residence permits issued to migrants from the Western Balkan countries by EU and European Free Trade Association (EFTA) countries indicated that, in 2008, the motives for migration were predominantly work related (43 percent), followed by family reasons. Other explanations included asylum and subsidiary protection, as well as retirement. Between 2008 and 2016, there was a steadily rising trend of permits issued for family reasons (Figure 9).

Figure 9 / First permits issued in the six Western Balkan countries, by reason, share in %, 2008-2016



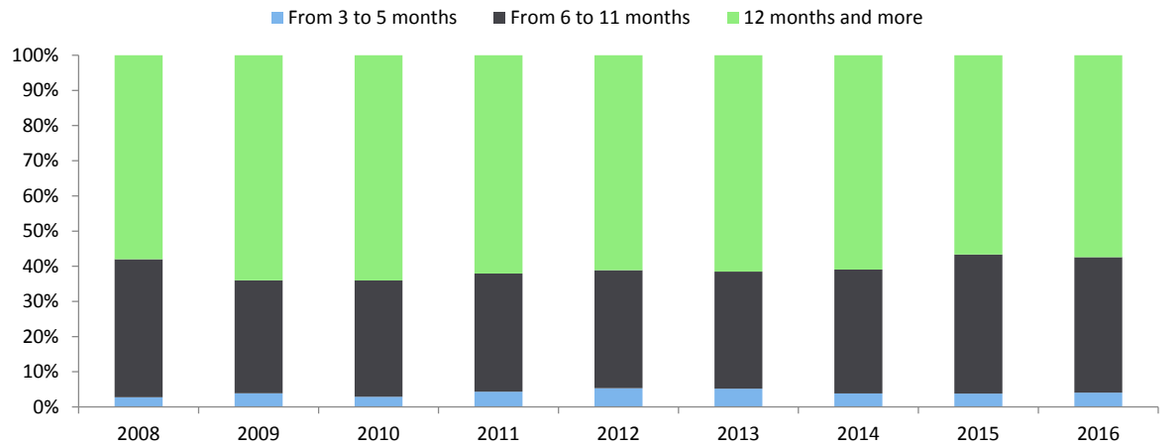
Note: First residence permits, by motivation, issued to immigrants originating from the six Western Balkan countries (Albania, Bosnia and Herzegovina, Kosovo, Montenegro, Serbia, and the FYR Macedonia) by EU and EFTA countries.
Source: Eurostat[16]

[15] Usually, the destination country collects such information through administrative registers or corresponding population registers. The country of origin collects similar statistics through household surveys. Ideally, the data sources can be crosschecked and provide important information on migration choice, reasons for leaving the country and for choosing a particular destination country.

[16] Eurostat: First permits by reason, length of validity and citizenship [migr_resfirst]; last update 08.12.17; extracted on 08.01.18.

Migration and residence permits issued for motives[17] other than working, studying or family reunification dropped significantly in 2010[18]. Nevertheless, between 2015 and 2016, this category of permits almost doubled compared to 2010. By contrast, permits issued for work purposes halved, despite the rise recorded in 2016. Available statistics on the motives of residence permits and how such permits change over time indicate that a change from any type of residence permit to one for employment purposes was not common, and slightly increased from 12 to 14 percent between 2010 and 2016. Also, a change from an education to a work permit, despite having doubled from 2 to 4 percent between 2010 and 2016, remained infrequent. The jobless growth that characterized the EU countries during these years was likely a primary cause of these patterns. Nevertheless, the unfavorable social and economic prospects in the Western Balkan region itself may have pushed people to explore any possibility of moving to or remaining in one of the EU countries.

Figure 10 / First permits issued in the six Western Balkan countries, by length of validity, share in %, 2008-2016



Source: Eurostat [19]

LABOR MARKET INTEGRATION OF MIGRANTS

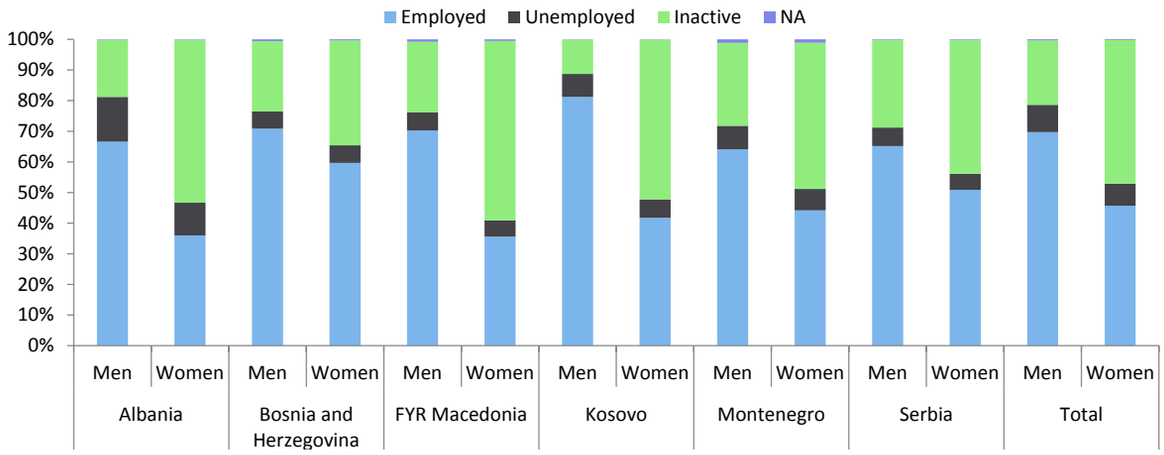
The employability abroad of emigrants from the region was relatively high, but there were substantial differences in terms of gender and country of origin. On average, more than 70 percent of men but less than 50 percent of women from the region were employed. In the case of Kosovars but also Macedonians, the share of employed male emigrants was double the share of employed females. Diverging patterns also emerged for types of occupations and respective skill level of jobs (Figures 11-12).

[17] Residence permits that fall into the category "Other motives" comprise permits issued to refugees, those in need of subsidiary protection, and retirees.

[18] 2010 was also the year that visa-free travel was granted to citizens of the Western Balkan region, with the exception of Kosovo. Residency permits issued for "Other motives" in 2010 were relatively low, suggesting that, at that time, Western Balkan citizens did not abuse the opportunity for visa-free travel. This was a phenomenon which increased afterwards, especially during 2015 to 2016. See Eurostat http://ec.europa.eu/eurostat/statistics-explained/index.php/Asylum_statistics

[19] ibid

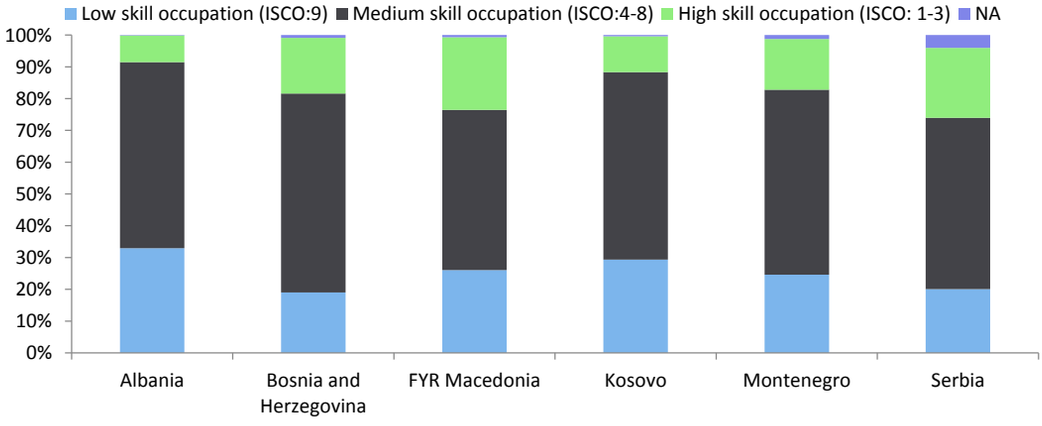
Figure 11 / Labor force status of emigrants in the OECD countries, share in %, 2011



Source: DIOC Database 2010-2011[20]

More than 50 percent of the jobs fell into the medium-skill level classification. Employment in high-skilled jobs was above 20 percent, especially for Serbian and Macedonian emigrants. In contrast, only 10 percent of Albanians and Kosovars had high-skill level occupations. The comparison of data on emigrants' education levels and employment by occupational skill categories hinted at a relatively high incidence of brain waste[21] among emigrants from the region.

Figure 12 / Employed emigrants by occupational skill level, share in %, 2011



Source: DIOC Database 2010-2011.

The countries most successful at attracting foreign talent, such as the USA, Canada and the UK, absorbed a larger share of high-educated emigrants from the region (Figure 13). For example, the skill composition of Albanian emigrants in Canada suggests that above 80 percent of both men and women were highly educated. These findings, in part, reflect the point-based immigration system[22]

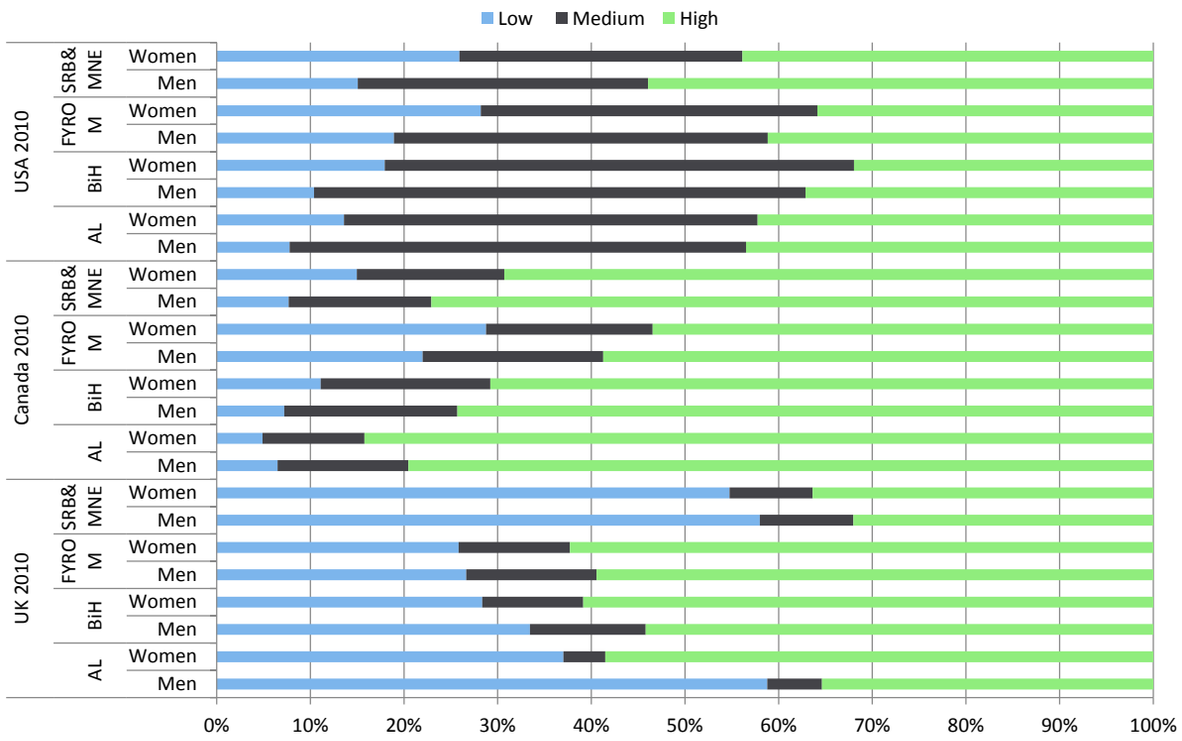
[20] DIOC Database: http://www.oecd.org/els/mig/dioc.htm

[21] For a comprehensive discussion on brain drain, brain gain and brain waste see Schiff and Özden (2006). According to Salt (1997), "*Brain waste describes the deskilling that occurs when highly skilled workers migrate into forms of employment not requiring the application of the skills and experience applied in the former job".* http://www.oecd.org/migration/mig/2383909.pdf

[22] See further details here: https://www.loc.gov/law/help/points-based-immigration/index.php

in Canada which attracts highly skilled immigrants. Another example is the educational attainment (acquired in either the sending or receiving country) of emigrants from the FYR Macedonia in the USA: more than 60 percent of men and women were highly educated. Noteworthy is that the share of highly educated women exceeded that of highly skilled men in several cases (e.g., Albanians in Canada, and Macedonians, Serbian and Montenegrins in the USA).

Figure 13 / Immigrants by gender and education level in the USA, Canada and the UK, share in %, 2010



Source: IAB Brain Drain Database (Brücker et al., 2013).

3. Main implications of persistent migration

The negative consequences of high levels of emigration likely included loss of human capital and slowed economic growth (Baine et al., 2001, 2008; Di Maria and Lazarova, 2009; Lucas, 2015; Schellinger, 2017). The impact of high levels of emigration, however, appeared to differ according to the sending country's size and level of development. The empirical evidence suggests that migration might be detrimental to developing countries whose share of the population with tertiary education levels was only 5 percent and whose emigration of the highly skilled ranged from 20 percent upwards. Overall, however, the effects of emigration on brain drain or brain gain remain inconclusive (Docquier et al., 2012, 2014; Schellinger, 2017).

The empirical evidence of Central Eastern European countries, including the Western Balkan-6, suggest that massive migration was a key predictor of slow economic convergence, especially in the WB-6 countries (Atoyan et al., 2016). However, migration of the highly skilled has supported output growth and, to some extent, the increase in income per capita levels in Central Eastern European countries and WB-6 (Landesmann and Mara, 2016). Emigration and remittances have also

played a crucial role in smoothing labor market tensions, and alleviating social vulnerability and poverty (Atoyan et al., 2016; Mara et al., 2012; World Bank, 2017).

Massive emigration can generate both brain drain but also brain gain in the long term (Docquier et al., 2012, 2014; Stark, 2005). Human capital formation may result in brain gain for the country of origin if some of those who enhance their skills and education level – motivated by better migration prospects - end up not migrating (Stark et al., 1998; Sorger et al., 2012). Return migration is another channel which could generate brain gain via transferability of experience acquired abroad to the country of origin (Peri and Mayr, 2010).

International mobility of students and researchers has been a key element that fosters the transmission of knowledge and spurs innovation (Bertoli et al., 2009). Accordingly, exchange programs have been put in place with the purpose of promoting the transfer of knowledge. As discussed, the change of permits from educational to work purposes has more than doubled, but the frequency remains low among migrants from the Western Balkans. Nevertheless, there is potential for sending countries to benefit from the return of students and researchers who graduate abroad (Mara, 2015).

Brain drain may be sector specific. Overall, migration of the highly educated may not be common but may occur within certain professions or occupations (e.g., medicine and other health professions; Foti, 2014; Hars and Simons, 2016). Research suggests that in the receiving countries job-skill mismatch among the high-educated is much higher for migrants than natives (Jestl et al., 2015). Also, the frequency of "job-skill mismatch" or "brain waste" is higher for high-educated migrants from developing countries compared with migrants from, for example, other EU countries.

In the context of the Western Balkan countries, outward mobility is likely a response to high levels of unemployment and to aspirations for improved life prospects, but also to political tension in the region. Political tension and war in Bosnia between 1992 and 1995 and in Kosovo in 1999, may explain, in part, why more than 30 percent of the population in these countries abandoned their homeland (Selm, 2000, European Commission, 2012). Political tension combined with precarious labor market conditions, low levels of income and high levels of poverty, have been strong drivers for emigrating. Recently, unemployment rates in the WB-6, overall and for young age groups, dropped but were still double or higher than in their peer countries.[23] Total employment rose, but primarily because of self-employment. Self-employment in the region may be a sign of vulnerability because the self-employed are more exposed to informality and lower remuneration, and consequently at higher risk of poverty.[24] Thus, although the creation of new jobs is a positive outcome for the working poor, this group benefits less when the jobs are of lower quality. Besides, wages in the WB-6 countries stand out on account of the low level as compared with the peer countries used in this report, but also other EU countries.[25] Therefore, precarious work conditions and low level of wages continue to prevent emigration from subsiding.

[23] See the first section of the report about Labor Market Trends.

[24] ibid

[25] ibid

Western Balkan emigrants tend to be young and have relatively high levels of education. This is the case for both men and women. In the long run, high levels of emigration, especially among the highly educated, generate mismatches between available skill levels and the composition of the work force needed in the country of origin. Thus, imbalances in the labor demand and labor supply side of the labor market are not surprising. Accordingly, the loss of human capital and the shortage of skills, especially in the fields of medicine, science, research and IT, as well as the weakening of competitiveness put fragile economies at further risk. From the perspective of sending countries in the Western Balkans, which have fallen behind in their development compared with their peer countries in the past (i.e., the group of Central and Eastern European countries, which are now part of the EU), the phenomenon of brain drain may continue to obstruct economic convergence. At the same time, highly skilled emigrants from the Western Balkans often accept jobs below their level of qualification. The underutilization of migrants' skills is detrimental for both the migrants and the receiving countries.

Brain waste occurs when skills are underutilized, but often this is an issue of whether and to what extent the skills acquired in the country of origin are transferable (which itself depends on the quality of human capital acquired at home). Similarly, highly educated immigrants from Central and Eastern European countries in the USA have a higher incidence of qualification-job skills mismatch than immigrants from other countries and this can be attributed to the quality of human capital formation at home (Mattoo et al., 2008). Therefore, brain waste is not only a symptom of mismatch between qualifications and skills required on the job, but also a sign of low levels of skill and human capital acquired in the country of origin's education system.

Important challenges remain for the labor market. In the short and medium run, outward mobility has been beneficial for the sending countries during periods of high unemployment, limited employment opportunities and high inactivity among the working age population. Yet, young workers and those with low and middle levels of education are less likely to move out of unemployment.[26] At the same time, those with medium levels of education are also less likely to emigrate than those with low and high levels of education. This is another indication that the existing education system is not equipping both younger and older generations with the skills necessary for success in the local labor market. Therefore, origin countries should first focus on reformation of the education system to allow for greater synergy and synchronization of the skills in supply with those in demand. Secondly, the enhancement of workers' existing knowledge and skills for example through active labor market programs and on-the-job training is of high priority for meeting the needs of both the local and international labor markets.

A key outcome of high levels of emigration is the inflow of remittances poured into the WB-6. Subsequent to the international financial crisis, the inflow of remittances as share of GDP dropped to 10 percent by 2017, compared to 15 percent prior to the crisis. Emigration and remittances have played a crucial role in alleviating poverty in the short run. In the long run, a positive impact on the health and education of children left behind has transpired, even after accounting for the negative effects associated with the absence of a parent (Jusufi, 2012; Mara et al., 2012). Remittances have also lifted the consumption constraints of receivers. Nevertheless, remittances have played less of a role in the easing of credit constraints and the channeling of remittances into investments (which

[26] ibid

potentially stimulates job creation). Kovtun et al. (2014) suggest that, for the WB countries, remittances might negatively affect particularly long term-unemployment, which remains high.[27] The extent to which allocation of remittances for consumption smoothing is predominant over its allocation for investment purposes, remains an open question. What is clear, however, is the importance of establishing policy interventions that allocate funds from remittances into investment.

Overall, the primary challenges of massive emigration from the region can be broken down into four main categories. Firstly, the large gap in income levels between sending and receiving countries continues to be a strong pull factor. The gap is such that migrants adjust their expectations and accept employment below their level of qualification. Workers understand that they can earn higher wages in the receiving country compared to employment in their resident country, even if the job matches their skill level. The result is a trade-off between the quality of the job and the level of earnings. A second factor is the high levels of emigration among highly educated Western Balkan citizens, which implies a loss of human capital. This, in conjunction with the employment of emigrants below their skill level, can result in brain waste. It may also signal a mismatch between skills acquired in the education system and those demanded in the origin country. Thirdly, on the positive side, remittances have been a source of income for those left behind, but also for the overall economies of the sending countries. Nevertheless, the easing of credit constraints and the channeling of remittances into investment with the goal of generating employment remains of low significance. Lastly, brain gain in the form of return migration and transfer of know-how has been less tangible in the region, but is an important avenue for future investigations. Accordingly, maximizing the benefits of emigration will require that remittances, diaspora but also return migration, are channeled into capital intensive sectors to generate employment in high quality jobs.

4. Western Balkan labor mobility data gaps

SUGGESTED INDICATORS FOR ANALYZING LABOR MOBILITY

The following section explores the statistics necessary for analyzing labor mobility and its implications. It also discusses how such statistics can be harmonized and made comparable in a regional or international context. The complexity of statistical concepts, definitions, and indicators of mobility pose several challenges in terms of understanding and measuring migration, managing the process through proper migration policies, and evaluating the impact of such policies (Fassmann and Musil, 2013; Kraler and Reichel, 2010; Carlotto et al., 2015).[28] The accurate measurement migration and the characterization of the groups of migrants involved require the construction of a number of comprehensive statistical indicators. The construction of such indicators should occur through a coordination mechanism that involves the collection, disaggregation, monitoring, reporting, and harmonization of the related migration statistics.

At the international level, the most comprehensive efforts to establish an all-inclusive definition of international migration dates back to 1998. The United Nations Statistics Division (UNSD) and the

[27] ibid

[28] For further discussion on this issue see Carlotto et al. (2015).

Statistical Office of the European Union (Eurostat) proposed a framework for collecting statistics according to a set of pre-established definitions. By doing so, they made a number of recommendations for statistics, and for the measurement of the stock and flow of international migrants.

Other recommendations have focused on gathering data on the foreign-born population, which is necessary for measuring the international stock of migrants. According to UNSD (1998), the collection of migration statistics employs various sources, including administrative registers, registration at border points of entry and exit in the respective countries, household-based surveys, and any other administrative bodies responsible for monitoring international mobility. These administrative units and the bodies responsible for recording population statistics in the various countries (e.g., interior ministries, statistical offices, customs offices and employment agencies) coordinate and exchange information with one other.

The recently published *Handbook* on migration data tackles a number of issues, and provides useful guidelines concerning the collection and analysis of key data on labor mobility (Global Migration Group, 2017; see especially chapters 3 and 8). According to the guidelines, a number of indicators are relevant for understanding the profile of migrants and for analyzing labor migration impacts, such as:

- Demographic characteristics, including gender and age, country of birth/citizenship, and residency status;
- Skills and qualification levels, such as educational attainment and skills acquired abroad, recognition of qualifications, enhancement of skills, and qualifications through formal training or acquisition of skills on the job;
- Economic activity, such as employment status, working sector, occupation, years of work experience, type of formal or informal employment before and at the time of migration, and the recruitment process;
- Reasons for migration, duration of stay abroad, return migration, reasons of return
- Characteristics of the new destination following the move: urban/rural, internal/international, origin and destination country.

Box 1 / Standards for data collection on labor migration

The International Labor Organization (ILO) supports the development and improvement of data collection instruments, such as household-based labor force surveys, according to international standards and common methodologies. The ILO encourages the adoption of such standards on labor migration as put forward in Resolution I: Resolution concerning statistics of work, employment and labor underutilization to the 19th International Conference of Labor Statisticians (ICLS 2013) … [Additional] guidance from international sources [includes]:

- International Migration Statistics: Guidelines for Improving Data Collection Systems (p.453). International Labor Office, 1997.
- Recommendations on Statistics of International Migration, Revision 1 (p. 113). United Nations, 1998.

Further, although there are internationally recognized legal definitions of an international “migrant for employment” (C.97, Article 11) or “migrant worker” (C.143, Article 11, UN ICMW, Article 2), there is no internationally accepted statistical guidelines for data collection. Therefore, the ILO recommends that for the purposes of data collection, the term “migrant worker” also encompasses persons who may not currently be employed or economically active at the time of their migration (Global Migration Group, 2017: 35–36).

DATA CHALLENGES AND GAPS

The following sections discuss the statistics necessary for analyzing labor mobility and its implications, and highlight some of the main obstacles that hamper the collection of such statistics. The data collection process presents a number of challenges in and of itself. Migration is an event that must be measured simultaneously and comparably in both the sending and the receiving country. Unfortunately, data from the respective sending or receiving countries are often poor measures of migratory movements (UNSD, 1998), because the recording of international migration differs among the countries concerned. The coordination and exchange of information at the bilateral level between the respective countries, a process necessary for the accurate matching of international migration statistics, is neither systematic nor timely.[29]

The difficulty of recording emigration/immigration statistics is exacerbated, when countries apply different rules for registration on arrival and deregistration on departure (Eurostat, 2015: 16). In practice, deregistration on departure from a country is not a straightforward procedure. Migrants often register on arrival but rarely deregister on departure (for various reasons, both practical and administrative).

Emigration statistics from the Western Balkan countries are sparse. From the perspective of the country of origin, the main challenge in data collection is that members of the target group are not directly or easily reachable while absent from the country of origin and residing abroad. The Western Balkan countries often utilize censuses or household-related surveys (or other indirect methods) to report emigration figures. Typically, indirect methods combine census data and statistics on births and deaths, by age category and gender, to estimate net migration rates. The data collection systems often suffer from a number of limitations related to disaggregation, period, space, and calculation methodologies applied.

The many dimensions of labor migration and the target groups involved make measurement a complex task. The collection of information may be disjointed, so long as an internationally agreed definition of "migrant worker" is not employed. This limitation jeopardizes comparability across countries, at the regional and international level. Other challenges include limitations in infrastructure, financial, and human resources. With this in mind, this section provides an inventory of available, unavailable, and inaccessible statistics on migration/labor mobility, bearing in mind the recommendations provided in Global Migration Group (2017).

Depending on the migration process, timing, legality and space, different categories of migrants emerge. Such groupings can be disaggregated by gender, age cohort, citizenship or country of birth, reason for migration (e.g., work, family reunification, study, or protection), type of worker (e.g., long- or short-term, seasonal, circular, commuter, irregular), work experience (before, at the time of, and after migration), type of occupation (before, at the time of, and after migration), return, permanent or temporary migration, level of education or skills, acquisition of and transferability of new skills (Tables 1 and A3 in the Annex list the national and international data sources). With regard to national data sources, household labor force surveys (LFS) are the primary and most important

[29] For further discussion on this issue, see Carlotto et al. (2015)

data source for collecting statistics on emigrants (particularly migrant workers), allowing comparability across time and country.[30]

The **demographic characteristics** that define the composition of migrants – cross-validated for migrant workers – are available from both national (e.g., Census and LFS data) and international data sources (e.g., UN Statistics, World Bank Group Migration and Remittances data, Eurostat population Statistics).

Duration of stay – intended or actual – is critical in measuring the scale of international migration flows, but also the type of migration, whether permanent or temporary. Using duration of stay, we can observe categories of long-term migrants, including those who remain for more than 12 months in the destination country. Permanent migration can be proxied using such information, but is problematic to the extent that it fails to capture further outward migration (i.e., moves to other destination countries). Those who spend less than 12 months away from their usual residence are defined as short-term migrants. However, these statistics do not capture those who spend less than three months abroad, such as seasonal workers or circular migrants, i.e. those who move repetitively between home and host areas. Commuters form another category that is underrepresented in the data. In the context of intra-regional mobility, these categories of workers may be relevant because this type of migration might be frequent – e.g., seasonal migration of Macedonians to Montenegro, but information on them is scarce. Both national household LFSs and statistical sources in the destination country provide information about the actual duration of stay. In the context of the Western Balkan countries, information about the duration of stay is unharmonized because the LFSs of different countries use different measurement criteria (see Table A3 in the Annex).

[30] In Table A3 in the Annex, we have assembled the most relevant questions that form part of the household LFSs in each of the Western Balkan countries and that provide evidence about those individuals or their family members with migration experience.

Table 1 / Labor migration: What we know and what is still missing

		Available				Not available (N/A)
		National	**International**	**Accessible**	**Not Accessible**	
Labor migrants' characteristics	Age	LFS household surveys	EU-LFS, destination countries	Eurostat	EU-LFS, extraction[31] on request	
	Gender	LFS household surveys	EU-LFS, destination countries	Eurostat	EU-LFS, extraction on request	
	Education	LFS household surveys, but information not collected systematically	EU-LFS, destination countries		EU-LFS, extraction on request	
Location information	Country of origin	residency concept, LFS household surveys	Destination countries	Eurostat, other international data sources	EU-LFS, extraction on request	
	Country of destination	residency concept, LFS household surveys	Destination countries	Eurostat, other international data sources	EU-LFS, extraction on request	
Time information	Duration of stay abroad (actual or intended)					
	Short term	time of departure, LFS household surveys	Origin, destination countries	LFS household surveys, Eurostat	EU-LFS, extraction on request	
	Circular/seasonal/ commuter					(N/A)
	Long term	time of departure, LFS household surveys	Origin, destination countries	LFS household surveys Eurostat	EU-LFS, extraction on request	
Spells of migration abroad	More than one move	Thematic surveys	Origin, destination countries			(N/A)
	Return migration	Thematic surveys	Origin, destination countries			(N/A)
Motives for migration	Actual, economic related, wars and politically related, refugees, asylum seekers, other	LFS household surveys, information not collected systematically	EU-LFS, destination countries	Eurostat	EU-LFS, extraction on request	
	Likelihood of migrating	Thematic surveys	Origin, destination countries			(N/A)
Work experience before migration	Employment status/ occupation/working sector	LFS household surveys	EU-LFS, destination countries	Eurostat	EU-LFS, extraction on request	
Work experience during migration	Employment status/ occupation/working sector	LFS household surveys	EU-LFS, destination countries	Eurostat	EU-LFS, extraction on request	
Qualification and skills	Recognition of qualifications, acquisition of new skills	Thematic surveys	Destination countries			(N/A)
Formal/informal work		Thematic surveys	Origin, destination countries			(N/A)
Recruitment process		Thematic surveys	Origin, destination countries			(N/A)
Work experience on return	Employment status/ intentions	LFS household surveys / Thematic surveys	Origin countries			(N/A)

Source: authors' elaboration.

Often, the motivation for leaving the country of origin is different from the motivation for moving to a particular destination country. The previous section reported the motivations for first permits of stay provided by Eurostat. Generally, Eurostat uses five groups to categorize the motivation for migration, based on the residence permit registrations. This categorization is too narrow, and likely fails to capture the variety of migration reasons. In most cases, there is more than one motive for

[31] On request Eurostat provides special extractions of labor force survey statistics distinguishing between natives and migrants combining different breakdowns for labor market related indicators.

migration or staying abroad. A combination of "push" and "pull" factors operating simultaneously, but to different degrees likely drives migration decisions. Thus, pinpointing one factor is limiting, (see also Table A3 in the Annex regarding how origin countries document push and pull factors of emigration). Recently, the number of asylum requests from Western Balkan citizens to the EU has increased significantly[32]. The statistics indicate, however, that the reasons for emigrating to an EU country differ from those that impel migrants from Western Balkan countries to leave their country of origin. The latter are economic rather than political because the countries of the Western Balkan region are considered safe (or non-refugee producing).

A lack of consistent statistics on work experience prior to and during the migration, on the recognition of qualifications, and on the acquisition of new skills hampers knowledge in this area. First of all, household surveys in the destination countries, particularly EU-LFSs, provide information on employment status, working sector, and occupation. However, information on occupational skill level, skills upgrades, deskilling, matching between skill levels and qualifications required for employment, progression in the work place, and other factors that capture brain waste, drain or gain still remain underexplored. For example, through cross-validation of indicators of levels of education (ISCED)[33] and types of occupations (ISCO),[34] the extent to which a person is employed in a job matching his or her level of education can be assessed. Nevertheless, comparing pre-migration work experience with work experience during migration – which is essential to understand the phenomenon of deskilling or brain waste – is far from straightforward. Secondly, a noteworthy shortcoming of the EU-LFS is not offering direct and free access to the data, which is only made available upon request. Lastly, small sample sizes constrain the analysis of the data. Further disaggregation of the data (e.g., by occupation, work experience, country of origin) can generate samples that are not statistically representative.

FURTHER STEPS FOR ADDRESSING DATA GAPS

In the context of the Western Balkan countries, the institutional setting surrounding the collection of migration statistics is a work in progress (see Table A4 in the Annex). It is essential to note that the process of EU accession has emphasized the need for countries to harmonize their national data collection systems with those applied in the European Union or at the international level. Also, migration management has become part of the national action plans of all Western Balkan countries (Vidovic et al., 2015: 3).

National sources that complement international ones can provide a comprehensive picture of the stock and demographic characteristics of emigrants (e.g., age, gender, and country of birth or citizenship). The primary sources are population registers and censuses, both in the countries of origin and in the destination countries. But not all Western Balkan countries conduct regular censuses (e.g., the FYR Macedonia refused to hold one in October 2011). International sources report migrants by both citizenship and country of birth, according to the UNSD recommendation. This is a useful approach, as naturalization/change of citizenship affects the number of immigrants

[32] See Eurostat http://ec.europa.eu/eurostat/statistics-explained/index.php/Asylum_statistics

[33] ISCED – International Standard Classification of Education, http://uis.unesco.org/en/topic/international-standard-classification-education-isced

[34] ISCO – International Standard Classification of Occupations suggested by the ILO, http://www.ilo.org/public/english/bureau/stat/isco/

recorded either by country of birth or by citizenship. Therefore, the complementarity between national and international sources assists the process of data collection.

In the context of the Western Balkan countries, accurate measures of duration of stay are necessary for differentiating among the various categories of migrant workers (e.g., commuters, seasonal, and circular workers).

Box 2 / Current institutional setting

The Western Balkan countries have made important steps toward adopting the EU legal framework for the collection and harmonization of migration statistics, but its implementation is far from perfect. Better cooperation between **Albanian institutions** and those of the host countries is highly recommended to improve the exchange of information and the mapping of Albanian emigrants abroad (Albania Ministry of Interior, 2015). In 2009, **Bosnia and Herzegovina** enacted a new mechanism to monitor migration flows, following the EU Regulation 862/2007 "on Community statistics on migration and international protection and repealing Council Regulation (EEC) No. 311/76 on the compilation of statistics on foreign workers" (Bosnia and Herzegovina Ministry of Security, 2016). The regulation provides guidelines for the recording of data on foreign workers, emigrants, and immigrants by citizenship, country of birth, sex, and age. However, the authorities have not been successful in collecting and disseminating the migration statistics according to the adopted EU regulation. With regard to **Serbia**, despite adopting EU Regulation No. 862/2007 on international migration, the national legal framework still does not recognize the category of "immigrants" or immigration. As such, the existing system fails to record this group with any accuracy (Government of Republic of Serbia, 2010). Montenegro and the FYR Macedonia have made progress regarding the adoption of a legal framework for the collection and harmonization of migration statistics in accordance with EU Regulation No. 862/2007, but are at different stages of implementation. [35]

Adjusting and harmonizing indicators to meet international standards, so that a wider spectrum of push and pull factors can be measured, is of upmost importance for the study of migration. Household and individual labor force surveys in both the origin countries and the destination countries have the potential to improve statistics on motivations for migration. This would allow for greater understanding of whether push factors or pull factors are more dominant in generating mobility. For example, household LFSs (i.e., repeated cross-sectional or longitudinal data) follow a sample of migrants over several years. This approach allows for observations of changes over time in motivations for migration. Tracking a wider range of migration motivations and potential change in them over time would equip policy makers with a better understanding of the drivers of migration and labor mobility dynamics.

High-quality data in line with international standards on workforce composition at home and on migrants living abroad are necessary for accurate analysis of labor market dynamics. Such results would aid in the identification of skills and qualifications at home, their demand and supply, and how the need for skills varies according to the characteristics of those who leave. NACE,[36] ISCED, and ISCO classifications should be followed in the construction of harmonized and comparable statistics on working sectors, workers' skill level, and type of occupation. Knowledge about the characteristics and the employment experiences of migrant workers could provide the empirical basis for identifying policy actions related to both labor migration, and to related factors such as demographic or economic development.

[35] Further details are provided in the Annex, Table A3.

[36] NACE Statistical classification of economic activities in the European Community: http://ec.europa.eu/eurostat/web/nace-rev2/correspondence_tables

A special module on labor migration measurement within existing household labor force surveys in the countries of origin could help tackle challenges associated with the comparability of data at a regional and international level. For example, the insertion of labor mobility-related questions that are in line with international standards will increase the reliability and quality of data.[37]

5. Labor mobility data, knowledge gaps, and policy implications

In the Western Balkans, governments have largely taken a passive approach to addressing the persistently high levels of emigration from the region. Emigration is an individual choice, but i a closer look at push and pull factors suggest that it depends to a large extent on the state of the economy and its level of development, which depends on the policies, reforms, and political actions of the country of origin. As opposed to just touting the benefits of migration and ignoring its negative aspects, governments in the region need to make a concerted effort to tackle these issues. Governments can take a bottom-up approach by initially intervening with pilot projects and guided interviews and focus groups with migrants, the diaspora, or returnees. This will foster greater understanding of migration dynamics before subsequently launching policy actions in line with those dynamics.

When top-down approaches are implemented, there is a need for sound empirical data and knowledge on the relationship between emigration and economic growth in the region. Migration from the region is still at peak level. In recent years, a lack of opportunity and a loss of hope for success at home have increased movement out of the region. Almost half of all citizens would be prepared to leave the region to work abroad (RCC, 2017: 79). The effects of large-scale emigration on demographic, labor-market, and economic developments of the region have been, and will continue to be, large. At the same time, to predict potential future migration, there is a need to ascertain how the economy, income, labor-market conditions, and social and geopolitical conflicts will develop domestically and internationally. And this causality is bidirectional. It remains unclear how the various migration policy initiatives, bilateral agreements, and visa regimes will affect Western Balkan intra- and inter-regional mobility. Any top-down approach must be underpinned by high-quality, comprehensive statistics on migration and labor mobility. Thus, the construction of sound empirical data and knowledge about the causality of emigration and economic growth in the region are fundamental both for the research community and policy makers.

Harmonized evidence on the size, characteristics, and types of migrant workers is crucial for understanding and comparing labor migration at a regional level. Currently, each country adopts its own approach for recording emigrants/immigrants. Because of the different concepts, definitions, and data sources used in compiling migration statistics, cross-country comparison is complex and challenging. Progress has been made on the adoption of a legal framework for the collection and harmonization of migration statistics in accordance with EU Regulation No. 862/2007. Nevertheless, more work is needed to ensure that Western Balkan countries are at similar stages of implementation.

[37] For further details see Global Migration Group (2017), Chapter 4, page 37.

The introduction of a special module on migration within existing labor force surveys could be cost effective. The use of the existing infrastructure could also minimize the burden on those responsible for collecting migration data. Financial and human capital resource constraints represent a key challenge for the Western Balkan countries. Governments have limited financial resources allocated for the collection of migration data. International donors (e.g., the World Bank, the European Commission, and other international institutions) occasionally provide support to resource and build the technical capacity for the compilation of new statistics (e.g., training of staff). Unfortunately, such sponsorship is not systematic either across countries or over time. Efforts to compile migration statistics according to international standards may increase the chances of accessing international funding. Therefore, further steps to utilize the existing infrastructure and explore international resources are worth undertaking.

In terms of content, the introduction of special modules on migrants into existing LFs could broaden the knowledge base on human capital formation and employment experience prior to, at the time of, and during migration. The literature argues that there is an issue of selectivity among migrants. Whether the young and the highly educated migrate will affect the structure of labor supply, as well as wages, skills, and the matching of labor supply and demand. How the labor market adjusts will affect the economy, and consequently the competitiveness and development of the country in question. Human capital formation may increase further if the chances of successful labor migration rise in line with higher levels of educational attainment. Therefore, the inclusion of new variables in labor force surveys that measure (1) changes in human capital and the brain drain, (2) the potential gains that accrue from return migration, (3) the transferability of expertise, and (4) the potential investment of the diaspora. The creation of new variables designed to identify individual behavior or decision making with respect to the allocation of remittances might be useful for designing policy actions or incentives to reposition remittances away from consumption and toward investment. One such example is the labor migration modules implemented in the LFSs of Moldova and Ukraine. These special modules were designed to improve the quality of data on emigrant workers by inserting labor migration related questions in the LFS of both the sending and destination countries.[38]

The potential for highly educated migrants to return to their country of origin, for knowledge transfer, and for the involvement of the diaspora should be a top priority in the policy agenda of the Western Balkan countries. International mobility of students and researchers has been advocated to foster the diffusion of knowledge and consequently spur innovation. Trends in permits for study purposes, at least in the EU, indicate that mobility for this reason remains low and has recently been in decline. Besides, the change from studies to other motives of staying abroad has dropped to 6 percent in 2016 compared with 12 percent in 2014. These findings suggest that there is a high potential for sending countries to benefit from the knowledge and skills acquired by returning students and researchers who graduated abroad. Particularly the return of highly educated students, scientists, and researchers, for example, can be beneficial for the sending countries as knowledge transfer and knowledge spillovers contribute to development.

[38] For further details see Global Migration Group (2017), Chapter 4, page 37.

A smoother labor market adjustment can be achieved through mutual coordination between the sending and receiving countries with respect to the mobility of highly skilled workers. Better coordination, particularly regarding the entry and permanence of migrants from the Western Balkan region, can contribute to the adjustment of highly skilled workers in line with labor demand needs. Furthermore, a coordinated and efficient allocation of labor supply would leave less space for brain waste or brain drain.

Youth unemployment is a strong push factor for migration. The Western Balkans Labor Market Trends 2018 points to signs of improvement in the labor markets across the region. For example, the youth unemployment rate has been decreasing at a faster rather than the overall unemployment rate. The employment of15-24-year-olds rose substantially in Kosovo (plus 18.2 percent), Bosnia and Herzegovina (plus 17.2 percent), Albania (13.4 percent), and the FYR Macedonia (13.2 percent). While employment of the young is on the rise, structural challenges remain. Still, Western Balkan countries have a large share of NEET and more than one third of young people are unemployed. The plethora of labor market challenges continues to drive emigration, especially for the highly educated. Reducing youth unemployment is high on governments' agendas across the region. If young workers cannot fulfil their aspirations for quality employment to build a future at home, emigration will likely intensify.

[39] ibid

References

Albania Ministry of Interior (2015), Albania Extended Migration Profile 2012–2014, Tirana.

Atoyan, M. R., Christiansen, L. E., Dizioli, A., Ebeke, M. C., Ilahi, M. N., Ilyina, M. A., & Raei, M. F. (2016), "Emigration and Its Economic Impact on Eastern Europe" IMF Staff Discussion Notes 16/7, International Monetary Fund.

Beine, M., F. Docquier, H. Rapoport (2001), "Brain drain and economic growth: theory and evidence, Journal of Development Economics," Vol. 64, pp. 275-289.

Beine, M., F. Docquier, H. Rapoport (2008), "Brain drain and human capital formation in developing countries: winners and losers," The Economic Journal, Vol. 118, No. 528, pp. 631-652.

Bertoli, S., Brücker, H., Facchini, G., Mayda, A.M., Peri, G. (2009): "The Battle for Brains: How to Attract Talent", Report for the Fondazione Redolfo Debenedetti, Milano, www.frdb.org.

Bosnia and Herzegovina Ministry of Security (2016), "Bosnia and Herzegovina Migration Profile for the year 2015," Sarajevo, April.

Brücker, H., S. Capuano, and A. Marfouk (2013), "Education, gender and international migration: Insights from a panel-dataset 1980–2010," mimeo.

C. Carlotto, J. Larrison and C. Ozden (2015) "Informing Migration Policies: A Data Primer," in International Handbook on Migration and Economic Development, Robert Lucas (ed.), Edward Elgar.

Di Maria, C., E.A. Lazarova (2009), "Migration, Human Capital Formation and Growth: An Empirical Investigation," http://ssrn.com/abstract=1517647 or http://dx.doi.org/10.2139/ssrn.1517647

Docquier, F., Ç. Ozden, G. Peri (2014), "The labor market effects of immigration and emigration in OECD countries," The Economic Journal 124 (579), 1106-1145

Docquier, F., H. Rapoport (2012), "Globalization, brain drain, and development," Journal of Economic Literature 50 (3), 681-730

European Commission, DG Employment, Social Affairs and Inclusion (2012), "Social Impact of Emigration and Rural-Urban Migration in Central and Eastern Europe: Final Country Report Bosnia and Herzegovina," VT/2010/001, http://ec.europa.eu/social/main.jsp?langId=en&catId=89&newsId=1778&furtherNews=yes

European Parliament and Council (2007), "Regulation (EC) No. 862/2007 on Community statistics on migration and international protection and repealing Council Regulation (EEC) No 311/76 on the compilation of statistics on foreign workers," Official Journal of the European Union, 11 July, http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32007R0862&qid=1448964364407&from=EN

Eurostat (2015), "Demographic Statistics: A review of definitions and methods of collection in 44 European countries," Eurostat.

Eurostat (2017), “International migration statistics,” Reference metadata, http://ec.europa.eu/eurostat/cache/metadata/en/migr_immi_esms.htm

Fassmann, H. and E. Musil (2013), “Conceptual framework for modelling longer term migratory, labor market, and human capital processes,” SEEMIG Working Paper No. 1, May, Vienna.

Fóti, K. (2014), "The perspective of sending countries: Brain drain or brain gain? Eurofound Global Migration Group (2017), Handbook for Improving the Production and Use of Migration Data for Development," Global Knowledge Partnership for Migration and Development (KNOMAD), World Bank, Washington, DC.

Government of Republic of Serbia (2010), “Migration profile of the Republic of Serbia for 2010.”

Hars, A., D. Simon (2016), "Why do doctors leave - and what would make them stay? On the characteristics of the migration of medical doctors from Hungary, Külgazdaság," 2016, Vol. LX, No. 5–6, pp. 3–26, No. 7–8, pp. 3–26.

Kovtun, D., Cirkel, A.M., Murgasova, S., Smith, D., Tambunlertchai, S.,(2014) ,“Boosting Job Growth in the Western Balkans," IMF working paper 14/16 https://www.imf.org/external/pubs/ft/wp/2014/wp1416.pdf.

Kraler, A. and D. Reichel (2010), "Statistics on Migration, Integration and Discrimination in Europe," PROMINSTAT Final Report.

Lucas, R. (2005), "International Migration Regimes and Economic Development," prepared for the Expert Group on Development Issues in the Swedish Ministry for Foreign Affairs; http://www.egdi.gov.se/migraiton.htm.

Landesmann, M., S.M. Leitner, S. Jestl (2015), "Migrants and Natives in EU Labor Markets: Mobility and Job-Skill Mismatch Patterns," wiiw Research Report, No. 403.

Landesmann, M., Mara, I., (2016), "Massive Migration and its Effect on Human Capital and Growth: The Case of Western Balkan and Central and Eastern European Countries," wiiw Balkan Observatory Working Papers 124, The Vienna Institute for International Economic Studies, wiiw.

Maddison Project Database, version 2018. Bolt, Jutta, Robert Inklaar, Herman de Jong, and Jan Luiten van Zanden (2018), “Rebasing ‘Maddison’: new income comparisons and the shape of long-run economic development,” Maddison Project Working paper 10, https://www.rug.nl/ggdc/historicaldevelopment/maddison/releases/maddison-project-database-2018

Mara, I. (2015), "Occupations Wanted: the Role of Migrants and the Potential of Foreign Students in the EU," wiiw Monthly Report April 2015

Mara, I. et al. (2012) “Analysis of Literature on the Effects of Remittances on Education and Health of Family Members Left Behind,” Mimeo. www.analyticamk.org/~analytic/images/stories/files/2012002.pdf.

Mattoo, A., Neagu, I., C., Özden, C. (2008) "Brain waste? Educated immigrants in the US labor market," Journal of Development Economics, ISSN: 0304-3878, Vol: 87, Issue: 2, Page: 255-269

Özden, Ç., C. Parsons, M. Schiff and T.L. Walmsley (2011). "Where on earth is everybody? The evolution of global bilateral migration, 1960–2000," World Bank Economic Review 25(1): 12–56.

Peri, G., K. Mayr (2010), "Return migration as a channel of brain gain," NBER Working Paper 14039.

Regional Cooperation Council (RCC) (2017), "Balkan Barometer: Public Opinion Survey 2017," http://www.rcc.int/seeds/files/RCC_BalkanBarometer_PublicOpinion_2017.pdf

Schellinger, A. (2017) "Brain drain – brain gain: European labor markets in times of crisis," Politik für Europa, 2017 plus, Friedrich Ebert Stiftung

Salt, J C, (1997), "International movements of the highly skilled," OECD Occasional Papers 3.

Schiff, M., Özden, C. (2006), "International migration, remittances, and the brain drain," Washington, DC: World Bank. http://documents.worldbank.org/curated/en/426881468127174713/International-migration-remittances-and-the-brain-drain.

Selm, J. (2000),"Kosovo's refugees in the European Union," London, New York: Pinter.

Sorger, G., O. Stark, Y. Wang (2012), "Migration and dynamics: How a leakage of human capital lubricates the engine of economic growth," International Review of Economics & Finance, Volume 28, Issue null, Pages 26-37.

Stark, O. (2005), "The New Economics of the Brain Drain," World Economics, Vol. 6., No 2., pp 137–140.

Stark, O., C. Helmenstein, A. Prskawetz (1998), "Human capital depletion, human capital formation, and migration: a blessing or a "curse"?, Economics Letters, Vol. 60, pp. 363 367.

UN Statistics (2015), "Trends in international migrant stock: Migrants by destination and origin," United Nations database, POP/DB/MIG/Stock/Rev. 2015.

UN Statistics (2018), "International migrant stock: the 2017 revision," http://www.un.org/en/development/desa/population/migration/data/estimates2/estimates17.shtml.

UNSD (1998), "Recommendations on statistics of international migration: Revision 1," Department of Economic and Social Affairs, Statistics Division, Statistical Papers Series M, No. 58, Rev. 1, United Nations, New York.

Vidovic, H., M. Landesmann, and I. Mara (2015), "SEE 2020 Strategy: Study on labor mobility," wiiw Research Report No. 408, October.

Willcox, F.W. (1929), "International Migrations, Vol. I: Statistics," NBER Books, National Bureau of Economic Research, Inc.

World Bank (2015), “The impact of aging on economic growth,” South East Europe Regular Economic Report, Special Topic, No. 8S, Washington, DC.

World Bank (2017), “Migration and mobility,” Europe and Central Asia Economic Update, October, Washington, DC.

Yusufi, I., (2012) "Migration from the perspective of sending country: the literature and the facts," Analytical Journal, Vol.5, No.1, November 2012, analyticalmk.com

Annex 2

Table A1 / Stock of migrants from the Western Balkan region, 2015

	Stock of emigrants, total, 2015	Stock of emigrants, within the region, 2015	Stock of emigrants, outside the region, 2015	Resident Population, 2015	Emigration outside the region as share of resident population, in percent
Albania	1122,910	71,020	1051,890	2889,167	36
Kosovo	610,000	.	610,000	1797,151	34
Bosnia and Herzegovina	1650,772	378,964	1271,808	3810,416	33
FYR Macedonia	516,024	53,424	462,600	2078,453	22
Serbia	964,585	44,586	919,999	7098,247	13
Montenegro	138,356	84,421	53,935	622,388	9
Total	5002,647	632,415	4370,232	18295,822	24

Source: UN Statistics (2015) for the stock of migrants and World Bank Population Statistics for resident population.

Table A2 / Intra – regional mobility, 2015

		Origin countries					
		Albania	Bosnia and Herzegovina	Montenegro	Serbia	FYR Macedonia	TOTAL
Destination countries	Albania	.	.	.	.	591	591
	Bosnia and Herzegovina	.	.	3,968	9,223	2,779	15,970
	Montenegro	2,754	34,259	.	17,433	3,317	57,763
	Serbia	467	335,992	71,224	.	46,737	454,420
	FYR Macedonia	67,799	8,713	9,229	17,930	.	103,671
	TOTAL	71,020	378,964	84,421	44,586	53,424	

Source: UN Statistics (2015).

BOX A1 / Definition of international migration

The UNSD definition of international migration

The UNSD definition of international migration for the purpose of measuring flows is as follows: an international migrant is defined as any person who changes his/her usual country of residence. The usual country of residence means the geographical place where the respective person usually resides or the country in which he/she has a place to live or where he/she normally spends the daily period of rest. Two factors were taken into account in the measurement of international migration: length of stay in the country of destination and whether the country of usual residence can be uniquely defined. Therefore, a long-term migrant is defined as a person who moves to a country other than that of his/her usual residence for a period of at least 12 months so that the country of destination effectively becomes his/her new country of usual residence. A short-term migrant is defined as a person who moved to a country other than that of his/her usual residence for a period of at least 3 months but less than 12 months, except in cases in which the purpose of moving to that country was for recreation, holidays, visits to friends and relatives, business, medical treatment or religious pilgrimage. Thus, the country of usual residence for a short-term migrant is the country of destination during the period he/she spends there.

The Eurostat definition of international migration

Regulation (EC) No 862/2007 of the European Parliament and of the Council of 11 July 2007 on Community statistics on migration and international protection and repealing Council Regulation (EEC) No 311/76 on the compilation of statistics on foreign workers. Commission implementing Regulation (EU) No 351/2010 as regards the definitions of the categories of the groups of country of birth, groups of country of previous usual residence, groups of country of next usual residence and groups of citizenship, with 1 January of the reference year as the reference date for drawing up the list of countries to be included in each of the groups. However, given Regulation (EU) 1260/2013 on European demographic statistics had entered into force and for the sake of consistency, it was decided by gentlemen's agreement to take the end of the reference year as the reference date and to exclude stateless people from the category of non-EU nationals. Non-EU citizens are defined as those who do not have the citizenship of any of the EU-28, excluding stateless people. Non-EU citizens are those who do not have the citizenship of any of the EU-27, including stateless people. According to Regulation (EC) No 862/2007, migrants should be defined the same way as population. For example, if population is defined in terms of usual residence, then the number of immigrants should be the number of those who establish their usual residence in the territory of a Member State for a period that is, or is expected to be, of at least 12 months, having previously been usually resident in another Member State or a non-EU country. The metadata provided by the countries in question confirm that migration statistics are calculated according to the harmonized definition given above. The following data on migrants are collected under unified demographic data collection: 1) immigrants by age, sex and: a. country of citizenship; b. country of birth; c. country of previous residence; 2) immigrants by country of citizenship and country of birth; 3) emigrants by age, sex and: a. country of citizenship; b. country of birth; c. country of next residence.

Statistical concepts and definitions

Immigration: the action by which a person establishes his or her usual residence in the territory of a Member State for a period that is, or is expected to be, of at least 12 months, having previously been usually resident in another Member State or a third country. Emigration: the action by which a person, having previously been usually resident in the territory of a Member State, ceases to have his or her usual residence in that Member State for a period that is, or is expected to be, of at least 12 months. Usual residence: the place where a person normally spends the daily period of rest, regardless of temporary absences for purposes of recreation, holidays, visits to friends and relatives, business, medical treatment or religious pilgrimage or, in default, the place of legal or registered residence. The following persons alone are considered to be usual residents of the geographical area: those who have lived in their place of usual residence for a continuous period of at least 12 months before the reference time; or those who arrived in their place of usual residence during the 12 months before the reference time with the intention of staying there for at least one year. Immigrant: a person undertaking immigration. Emigrant: a person undertaking emigration.

Table A3 / Individual and household Labor Force Survey: migration and labor mobility related questions

Albania	QUARTERLY LABOR FORCE SURVEY 2017	
	District in Albania	page 2
	Abroad (write code of country of birth according to the country list)	
	Residency status (Usual household members) 1=Person usually absent (for more than one year) living elsewhere in Albania 2=Person usually absent (for one year or more) living outside Albania Skip to QM2	
	When [NAME] left Albania? (write month and year)	
	What was the reason that [NAME] left Albania? 1=Employment opportunities; 2=Study opportunities 3= Lost job in Albania 4.=To join family; 5=Family reasons 6=Health reasons 7=Other	
	What country did [NAME] go to? (write code according to the countries list and do not continue with the individual questionnaire for this person)	
	Year on which person came in Albania; Month and year of leaving this place of residence; District of actual place of residence (write code according to the district list)	
	Have you ever travelled abroad with the intention to work or seek work? (Q95)	page 17
	Have you ever worked abroad? (Q96)	
	For how many months did you work abroad the last time? (Q97) 1=Less than 3 months; 2=3 to less than 6 months; 3=6 to less than 12 months; 4=12 months or more	
	Which is the main reason why you returned to Albania? (Q98) 1=Lost the job and could not find another; 2=The job was not stable; 3=The wage was low compared to cost of living; 4=No contract, health, social insurance, etc.; 5=Job, employment opportunity in Albania; 6=Other personal or family reasons; 7=Other (specify)	
	What was your usual place of residence one year before? Q18 What was the reason for coming to the actual place of residence? 1=Lost job abroad 2=Finished studies abroad, 3=other QM1	page 5
	What was your situation immediately before you started to look for employment (or before starting to wait for beginning the new job) Q111 - You came back from emigration or other reasons	page 20
	For how many months have you been looking for a/another job or trying to establish your own business or income–generating activity? Q112	
	What type of employment would you like to have (have found)? Q113	
Bosnia and Herzegovina	LABOR FORCE SURVEY 2017	
	Where did you live 12 month before the survey? Identify the country if not Bosnia and Herzegovina	page 3
	What is the name of the municipality you work in? (if you work abroad, please insert a country)	page 7
	Employment characteristics of the main job	page 159
	Main activity	
	Type of ownership of the unit where the person is employed	
	Employment status	
	Type of work contact	
FYR Macedonia	LABOR FORCE SURVEY 2014	
	Citizenship (if answer is code 2 or 3, write the country on the line) 1=Republic of Macedonia 2=dual: Republic of Macedonia and other country 3=Other country 4=Without citizenship	page 2-3
	Where were you born?	
	Year, since when you have been residing in the Republic of Macedonia (How long have you been a resident of this country?) Answered only by persons who answered the citizenship question with code 2 (and were born abroad) or code 3	
	Presence in the household: 1=Present, permanent residence/dwelling; 2=Present, temporary residence/ dwelling; 3=Temporarily absent in other city in the Republic of Macedonia up to six months; 4=Temporarily absent in other city in the Republic of Macedonia more than six months; 5-=Absent abroad up to 1 year NON-RESPONSE Household is abroad 1 year and longer	Page 4
Montenegro	LABOR FORCE SURVEY 2017	
	Where is person's usual or prevalent place of work in this job-activity? 1=The same municipality where this household is located 2=Another municipality of Montenegro (name of municipality) 3=Abroad (name of country of labor)	
	1=In this private household; 2=In an institution (school, hospital, etc.) in MNE; 3=In another private household in MNE; 4 – Abroad; 5 - other	
	1=The person has moved permanently to another location; 2=Works in MNE or for Montenegrin employer abroad; 3=Works abroad for foreign employer; 4=Studies, 5=Other	
	1=Montenegro ; 2=Other countries ; Country of birth for persons born abroad (name)	
	1=Less than one year 2=Number of years for person who has been in this country	
	Most likely less than one year STOP 2 Most likely one year or longer	
	1=Montenegro ; 2= Other countries	
	Where did the person usually live one year ago? 1=In the same place 2=In another place in MNE 3=In another country (in which country if abroad)	

ctd.

Table A3 / ctd.

Serbia	LFS 2017	
	Respondent's sequence number Reason of absence from the household	
	Uninterrupted length of absence from the household: 1=Less than one year 2=One year or longer (for persons who are absent more than one year because they work in another municipality or abroad, or studying abroad, enter code 1 if they visit the household at least once a week)	
	1 =Serbia (enter 1)	page 6
	2=For members of other nationalities, enter code 2 and enter the answer on the line	
	Where did the person live a year ago? 1= In the same municipality 2= In another municipality on the territory of Serbia 3= In another country	
	01= Business trip 02=Work in another municipality in Serbia 03=Work abroad 04=Stay abroad as family member of the person whose reason of absence is under code 03 05=Studying, professional education or training in another municipality in Serbia 06=Studying, professional education or training abroad 07= Other	page 6
Kosovo	LFS 2012-2013	
	What was your situation immediately before you started to look for employment (or before starting to wait for beginning the new job) Q79 1=You were working (including apprentices, trainees) 2=You were in full time education (excluding apprentices, trainees) 3=You had domestic/family responsibilities 4=Other (e.g. retired, in emigration)	
	Years of residence in Kosovo: 1=Born in Kosovo, 2=Not born in Kosovo, enter year (4 digits) when you came to Kosovo, Go to - Q16 (Citizenship Q14-Q18)	
	Identify according to country list, assign code according to the country list Q16	
	1=Person has been usually living* in this dwelling for 1 year or more. 2=Person has been usually living* in this dwelling for less than 12 months, but intends to stay here for a total** of 1 year or more. 3= Person has been usually living* in this dwelling for less than 12 months and does not intend to stay here for a total** of 1 year or more. END INTERVIEW 4=Person is usually living* at a dwelling elsewhere in Kosovo or abroad from which he/she goes to work during the week, but returns to the family home on weekends. 5=Person is a seasonal worker who is usually living* at a dwelling elsewhere in Kosovo or abroad during the work season, but returns to the family home during the off-season. 6=Person is usually living* at a dwelling elsewhere in Kosovo where he/she attends college/university. 7=Person is usually living* at a dwelling outside Kosovo where he/she attends college/university. END INTERVIEW 8=Person is usually living* at a dwelling elsewhere in Kosovo or abroad where he/she attends primary or secondary school. 9=Person has been usually living* at a dwelling elsewhere in Kosovo or abroad for 1 year or more. END INTERVIEW 10=Person has been usually living* at a dwelling elsewhere in Kosovo or abroad for less than 12 months, but intends to stay there for a total** of 1 year or more. END INTERVIEW 11=Person has been usually living* at a dwelling elsewhere in Kosovo or abroad for less than 12 months and does not intend to stay there for a total** of 1 year or more. *A person is considered to be usually living at the dwelling where he/she sleeps, eats his/her private meals and undertakes other domestic activities and from where he/she goes to work/school. **The total length of residence in a dwelling is the time which a person has spent there up to now plus the time which he/she intends to continue to stay there.	

Table A4 / Matrix with definitions, methodologies and national data sources[40]

	Albania	Bosnia and Herzegovina	Kosovo
Institutional setting	INSTAT is responsible for collection, processing, analysis, conducting survey, distribution and publication of statistics mainly in the area of im(e)migration.	A number of Institutes, agencies and organizations are involved in data collection.	Kosovo Agency for Statistics and a number of Ministries provide statistics on migration. The national strategy and action plan on migration for 2013-2018 is under implementation.
Definition of the population[41]	Usual residents: -All persons who are usually resident in Albania, regardless of their citizenship and whether or not they were present at their usual place of residence at the date of the census or temporarily absent; -Persons who had resided in the place of usual residence for a continuous period of at least 12 months prior to the date of the census; -Persons arrived at their place of usual residence in the 12 months prior to that date, with the intention of staying there for at least one year; -Persons who are usually resident at the place of enumeration, but had been absent for less than 12 months as of that date.	BA Usually resident population	Under Law No 03/L–237 on population and housing census, the resident population consists of persons who have lived in their usual residence for a continuous period of more than 12 months before the reference date of the census or who have arrived in that place during the 12 months before that date with the intention of staying there for over a year.
Adaptation of EU regulation No. 862/2007 and alignment with acquis	Adopted but is not part of the legal framework	Is part of the legal framework since 2010	Adopted but is not part of the legal framework
National data sources	Population Census 2011 [42] and Living Standard Measurement Survey (LSMS) 2012 (collection of information about emigrants through household members), Thematic surveys 'Indirect methods' used for calculation of net-migration Migration Module in LFS	Population Census 2013, LSMS 2004 (collection of evidence about emigrants through household members)	Population Census 2011 LSMS 2007 (collection of information about emigrants through household members)
Recommendations in national action plans, migration profile documents and EU Progress report with reference to migration statistics [43]	Strengthening of cooperation of Albanian institutions with those of the host countries Mapping emigration of Albanian citizens, old and new Diaspora Continued efforts to produce migration statistics in line with the acquis.	A Memorandum of Understanding between BHAS and the Ministry of Security of Bosnia and Herzegovina to clearly determine the role of each Institution in producing migration and asylum statistics has yet to be concluded.	The national strategy and action plan on migration for 2013-2018 is being implemented smoothly. In January 2016, the government appointed a national coordinator on migration responsible for monitoring and reporting on its implementation. His role and resources need to be strengthened.

ctd.

Table A4 / ctd.

[40] Source of information: Country experts, SEE Strategy report 2015, Migration profile 2012-2014, EU Commission progress country report 2015/2016.

[41] Source: "Demographic statistics: A review of definitions and methods of collection in 44 European countries'", Eurostat, 2015 edition.

[42] Questions on ethnicity, religion and language included.

[43] Source of information: Country experts, SEE Strategy report 2015, Migration profile 2012-2014, EU Commission Progress Country Report 2015/2016.

	FYR Macedonia	Montenegro	Serbia
Institutional setting	A number of Institutions of the Former Yugoslav Republic of Macedonia are collecting data on migration.	The Institute of Statistics of Montenegro is responsible for the type, content and manner of keeping records of migration flow of population, net migration, and monitoring external and internal migration.	The Statistical Office is responsible for development of methodology, collection, processing, analysis and publication of statistical data and adoption of uniform statistical standards on migration.
Definition of the population[44]	Total population consisted of: -Persons who have place of usual residence in the Republic of Macedonia, regardless of whether at the time of the Census they are present at their place of usual residence or elsewhere in the Republic of Macedonia; -Foreigners who have a residence permit for the Republic of Macedonia and they are temporarily present in the Republic of Macedonia at least 12 months (one year), but who have a place of usual residence outside of the Republic of Macedonia[45]	Usual residents: -Persons with their usual place of residence in Montenegro, i.e. the place where a person usually resides, regardless of temporary absence for the purposes of recreation, holiday, visits to friends or relatives, business, medical treatment or religious pilgrimage; -A person resides or intends to reside continuously for at least one year.	Place of usual residence is the geographical location where the person usually resides. Only those persons who have lived in their place of usual residence for a continuous period of at least 12 months before the date of the census or who have arrived in their usual place of residence in the 12 months before that date with the intention of staying there for at least one year are considered as usual residents of the relevant geographical or administrative subdivision.
Adaptation of EU regulation No. 862/2007 and alignment with acquis	Different stages of alignment with EU Directive No 862/2007	Different stages of alignment with EU Directive No 862/2007	Different stages of alignment with EU Directive No 862/2007
National data sources	Population Census 2011 cancelled, the latest available is in 2002	Population Census 2011, LSMS 2003 (collection of information about emigrants through household members)	Population Census 2011, LSMS 2007 (collection of information about emigrants through household members) Migration Module in LFS questionnaire Regional services provide data on regional work migration.
Recommendations in national action plans, migration profile documents and EU Progress report with reference to migration statistics[46]	Migration statistics need to be developed. The survey of income and living conditions is implemented. Labor market statistics are broadly aligned with the EU acquis. The lack of reliable data on the scope and structure of migration flows needs to be addressed	Eurostat receives migration flow data without metadata and has not yet received data on asylum and acquisition and loss of nationality	Statistics on external migration and asylum are collected by the Ministry of Interior and are only partly harmonized with the relevant EU statistics. Crime statistics are collected but need to be aligned with EU standards.

[44] Source: "Demographic statistics: A review of definitions and methods of collection in 44 European countries'", Eurostat, 2015 edition.

[45] Source: http://www.stat.gov.mk/OblastOpsto_en.aspx?id=31

[46] Source of information: Country experts, SEE Strategy report 2015, Migration profile 2012-2014, EU Commission Progress Country Report 2015/2016.

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, FYR 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 this second round of data collection 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 2012-2015 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 the FYR 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) and 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). 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). The Western Balkan-6 aggregate data are only available on an annual basis.

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** and **unemployment** 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 register-based statistics (enterprise surveys or 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 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).

Key economic indicators

annual growth in %

Albania	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017 Q1**	**2017 Q2**
GDP, real	3.7	2.5	1.4	1.0	1.8	2.2	3.4	4.0	4.1
Employment aged 15+	.	-0.6	-1.8	-10.2	1.3	4.8	6.5	3.5	3.4
Labor productivity	.	3.2	3.2	12.5	0.5	-2.4	-2.9	0.4	0.6
Inflation	3.6	3.4	2.0	1.9	1.6	1.9	1.3	2.4	2.0
Monthly gross wages per employee, nominal	-3.6	4.9	2.9	-3.2	0.9	2.8	-2.1	4.1	11.0
Monthly gross wages per employee, real	-7.0	1.5	0.9	-5.0	-0.7	0.9	-3.4	1.6	8.8
Unit labor costs	.	1.7	-0.3	-13.9	0.4	5.4	0.9	3.6	10.3
Bosnia and Herzegovina	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017 Q1**	**2017 Q2**
GDP, real	0.9	1.0	-0.8	2.3	1.1	3.1	3.1	3.2	2.9
Employment aged 15+	.	-3.2	-0.3	1.0	-1.2	1.2	-2.5	.	1.8
Labor productivity	.	4.3	-0.5	1.4	2.3	1.9	5.8	.	1.1
Inflation	2.1	3.7	2.1	-0.1	-0.9	-1.0	-1.1	1.1	1.2
Monthly gross wages per employee, nominal	1.1	4.4	1.5	0.1	-0.1	0.0	0.9	1.5	1.8
Monthly gross wages per employee, real	-1.0	0.7	-0.5	0.2	0.8	1.0	2.0	0.4	0.6
Unit labor costs	.	0.2	2.1	-1.3	-2.4	-1.9	-4.6	.	0.8
Kosovo	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017 Q1**	**2017 Q2**
GDP, real	3.3	4.4	2.8	3.4	1.2	4.1	4.1	2.7	4.3
Employment aged 15+	.	.	.	12.3	-4.6	-8.0	11.7	15.8	9.2
Labor productivity	.	.	.	-7.9	6.1	13.2	-6.9	-11.3	-4.4
Inflation	3.5	7.3	2.5	1.8	0.4	-0.5	0.3	1.6	1.9
Monthly gross wages per employee, nominal	.	.	.	3.0	8.6	5.8	1.8	.	.
Monthly gross wages per employee, real	.	.	.	1.2	8.1	6.3	1.5	.	.
Unit labor costs	.	.	.	11.8	2.3	-6.5	9.2	.	.
FYR Macedonia	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017 Q1**	**2017 Q2**
GDP, real	3.4	2.3	-0.5	2.9	3.6	3.9	2.9	0.0	-1.3
Employment aged 15+	.	1.1	0.8	4.3	1.7	2.3	2.5	2.7	2.7
Labor productivity	.	1.2	-1.3	-1.4	1.9	1.5	0.4	-2.7	-3.8
Inflation	1.6	3.9	3.3	2.8	-0.3	-0.3	-0.2	0.5	1.2
Monthly gross wages per employee, nominal	1.0	1.2	0.2	1.2	1.0	2.7	2.0	2.3	2.3
Monthly gross wages per employee, real	-0.6	-2.6	-3.0	-1.6	1.3	3.0	2.2	1.8	1.0
Unit labor costs	.	0.1	1.5	2.6	-0.9	1.2	1.6	5.1	6.4
Montenegro	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017 Q1**	**2017 Q2**
GDP, real	2.7	3.2	-2.7	3.5	1.8	3.4	2.9	3.1	5.2
Employment aged 15+	.	.	2.6	0.4	7.1	2.5	1.1	2.5	3.5
Labor productivity	.	.	-5.2	3.1	-5.0	0.9	1.8	0.7	1.6
Inflation	0.5	3.3	4.0	1.8	-0.5	1.4	0.1	2.5	2.5
Monthly gross wages per employee, nominal	11.2	1.0	0.7	-0.1	-0.4	0.3	3.6	3.8	1.8
Monthly gross wages per employee, real	10.6	-2.2	-3.2	-1.9	0.1	-1.1	3.5	1.3	-0.6
Unit labor costs	.	.	6.2	-3.1	4.8	-0.6	1.8	3.1	0.2
Serbia	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017 Q1**	**2017 Q2**
GDP, real	0.6	1.4	-1.0	2.6	-1.8	0.8	2.8	1.1	1.4
Employment aged 15+	.	-5.8	-1.2	3.5	4.7	0.6	5.6	3.2	4.3
Labor productivity	.	7.7	0.1	-0.9	-6.3	0.2	-2.7	-2.0	-2.8
Inflation	6.1	11.1	7.3	7.7	2.1	1.4	1.1	3.1	3.7
Monthly gross wages per employee, nominal	7.5	11.1	8.9	5.7	1.2	-0.5	3.8	4.3	4.7
Monthly gross wages per employee, real	0.6	0.1	1.0	-1.9	-1.7	-2.4	2.6	1.2	1.0
Unit labor costs	.	3.2	8.8	6.6	7.9	-0.6	6.7	6.4	7.7
Western Balkans-6	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017 Q1**	**2017 Q2**
GDP, real	1.7	1.9	-0.4	2.5	0.3	2.1	3.1	.	.
Employment aged 15+	.	.	.	0.7	2.3	1.2	4.4	.	.
Labor productivity	.	.	.	1.7	-2.0	1.0	-1.4	.	.
Inflation	4.0	7.1	4.6	4.1	0.9	0.7	0.4	.	.
Monthly gross wages per employee, EUR nominal	.	.	.	3.6	-0.3	-0.7	1.0		
Monthly gross wages per employee, EUR real	.	.	.	-0.5	-1.2	-1.4	0.6	.	.
Unit labor costs, EUR adjusted	.	.	.	1.8	1.7	-1.6	2.3	.	.

EU peer countries

Austria	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017 Q1**	**2017 Q2**
GDP, real	1.8	2.9	0.7	0.0	0.8	1.1	1.5	3.2	2.7
Employment aged 15-74	.	0.9	0.8	0.5	0.1	0.9	1.7	1.0	1.2
Labor productivity	.	2.0	-0.1	-0.5	0.7	0.2	-0.2	2.2	1.5
Inflation (harmonized CPI)	1.7	3.6	2.6	2.1	1.5	0.8	1.0	2.2	2.2
Monthly gross wages per employee, nominal	1.1	2.0	2.7	2.1	1.8	2.1	2.5	1.8	1.7
Monthly gross wages per employee, real	-0.6	-1.5	0.2	0.0	0.3	1.3	1.5	-0.3	-0.4
Unit labor costs	.	0.0	2.8	2.6	1.1	1.9	2.7	-0.4	0.2
Bulgaria	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017 Q1**	**2017 Q2**
GDP, real	1.3	1.9	0.0	0.9	1.3	3.6	3.9	3.6	3.9
Employment aged 15-74	.	-3.6	-1.1	0.0	1.6	1.7	-0.5	2.1	4.5
Labor productivity	.	5.7	1.1	0.9	-0.3	1.9	4.4	1.5	-0.6
Inflation (harmonized CPI)	3.0	3.4	2.4	0.4	-1.6	-1.1	-1.3	0.8	1.4
Monthly gross wages per employee, nominal	6.4	5.8	6.6	6.0	6.0	6.8	8.0	9.2	9.9
Monthly gross wages per employee, real	3.3	2.3	4.1	5.6	7.7	8.0	9.4	8.4	8.4
Unit labor costs	.	0.1	5.5	5.1	6.3	4.9	3.4	7.6	10.6
Croatia	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017 Q1**	**2017 Q2**
GDP, real	-1.4	-0.3	-2.2	-0.6	-0.1	2.3	3.2	2.6	3.0
Employment aged 15-74	.	-4.0	-3.6	-2.6	2.9	1.3	0.3	0.1	1.7
Labor productivity	.	3.8	1.4	2.0	-2.9	1.0	2.8	2.5	1.3
Inflation (harmonized CPI)	1.1	2.2	3.4	2.3	0.2	-0.3	-0.6	1.1	1.1
Monthly gross wages per employee, nominal	-0.4	1.5	1.0	0.8	0.2	1.3	1.9	2.9	3.8
Monthly gross wages per employee, real	-1.5	-0.7	-2.3	-1.5	0.0	1.6	2.5	1.8	2.7
Unit labor costs	.	-2.2	-0.4	-1.1	3.1	0.2	-0.9	0.4	2.6
Hungary	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017 Q1**	**2017 Q2**
GDP, real	0.7	1.7	-1.6	2.1	4.2	3.4	2.2	4.3	3.3
Employment aged 15-74	.	0.7	1.8	1.7	5.3	2.7	3.4	2.5	1.8
Labor productivity	.	0.9	-3.4	0.4	-1.1	0.7	-1.1	1.7	1.5
Inflation (harmonized CPI)	4.7	3.9	5.7	1.7	0.0	0.1	0.4	2.6	2.1
Monthly gross wages per employee, nominal	1.3	5.2	4.7	3.4	3.0	4.3	6.1	11.1	14.0
Monthly gross wages per employee, real	-3.2	1.3	-1.0	1.7	3.0	4.2	5.7	8.2	11.6
Unit labor costs	.	4.2	8.4	3.0	4.1	3.6	7.3	9.2	12.3

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	2011	2012	2013	2014	2015	2016	2017 Q1	2017 Q2
Total									
Total population (1,000)	2,913	2,905	2,900	2,895	2,889	2,881	2,876	.	.
Working-age population aged 15+ (1,000)	2,459	2,236	2,297	2,322	2,340	2,354	2,374	2,376	2,376
Employment aged 15+ (1,000)	1,167	1,160	1,140	1,024	1,037	1,087	1,157	1,169	1,189
Employment rate (% population aged 15+)	47.5	51.9	49.6	44.1	44.3	46.2	48.7	49.2	50.0
Employment rate (% population aged 15-64)	53.5	58.7	55.9	49.9	50.5	52.9	55.9	56.3	57.3
Employment rate (% population aged 20-64)	60.3	64.9	62.4	56.7	56.6	59.3	62.1	62.7	63.7
Employment rate (% population aged 15-24)	23.4	34.1	25.8	19.0	17.7	18.9	20.2	20.9	21.4
Employment rate (% population aged 25-29)	59.4	66.4	61.7	54.8	53.2	55.5	59.0	58.6	59.4
Employment rate (% population aged 25-54)	68.7	71.5	68.9	63.9	64.6	67.5	69.7	70.0	70.9
Employment rate (% population aged 55-64)	48.3	54.7	56.3	51.1	51.2	53.6	54.8	54.0	55.7
Employment rate for low skilled 15-64 (ISCED 0-2)	50.9	56.0	52.7	45.3	46.7	50.2	52.5	51.7	52.6
Employment rate for medium skilled 15-64 (ISCED 3-4)	52.7	60.0	57.3	50.6	49.9	51.8	55.8	56.8	58.1
Employment rate for high skilled 15-64 (ISCED 5-8)	71.7	68.1	67.1	67.1	66.5	64.4	66.6	69.6	69.6
Self-employed (% of total employment)	30.3	29.7	26.9	25.8	26.0	29.2	34.9	35.6	35.9
Part-time employment (% of total employment)	22.5	25.7	22.2	24.3	27.5	26.6	24.3	21.8	20.7
Temporary employment (% of total employees)	16.9	14.8	10.9	12.6	13.7	11.8	12.4	11.5	11.8
Activity rate (% population aged 15+)	55.2	60.3	57.3	52.4	53.7	55.7	57.5	57.3	58.1
Activity rate (% population aged 15-64)	62.3	68.5	64.9	59.6	61.5	64.2	66.2	65.9	66.8
Activity rate (% population aged 15-24)	33.7	44.8	36.7	27.6	29.0	31.3	31.8	30.9	31.7
Activity rate (% population aged 25-54)	77.8	81.7	78.4	75.5	76.7	79.7	80.7	80.7	81.3
Activity rate (% population aged 55-64)	52.6	61.3	60.7	56.6	58.1	60.2	61.4	59.4	61.5
Unemployment aged 15+ (1,000)	191	189	176	194	220	224	208	193	192
Unemployment rate (% labor force 15+)	14.0	14.0	13.4	15.9	17.5	17.1	15.2	14.2	13.9
Youth unemployment rate (% labor force 15-24)	30.5	23.9	29.8	31.4	39.0	39.8	36.5	32.6	32.4
NEET rate (% population aged 15-24)	29.4	29.9	27.4	30.8	30.9	29.6	27.0	.	.
Long-term unemployment rate (% labor force 15+)	10.5	10.3	10.3	11.5	11.2	11.3	10.1	9.9	9.6
Share of long-term unemployed (% of total)	74.9	74.0	77.1	72.4	64.3	66.0	66.2	70.0	69.5
Unemployment rate, low educated 15+ (ISCED 0-2)	12.9	12.9	11.7	14.1	14.5	13.5	12.7	12.1	12.5
Unemployment rate, medium educated 15+ (ISCED 3-4)	15.7	15.0	14.8	18.9	21.3	20.4	17.5	17.2	15.6
Unemployment rate, high educated 15+ (ISCED 5-8)	13.7	15.7	16.0	14.9	17.2	19.1	16.9	13.5	13.8
Male									
Total population (1,000)	1,458	1,457	1,460	1,461	1,461	1,460	1,456	.	.
Working-age population aged 15+ (1,000)	1,198	1,107	1,139	1,110	1,140	1,164	1,189	1,194	1,190
Employment aged 15+ (1,000)	670	649	637	563	586	621	650	664	675
Employment rate (% population aged 15+)	55.9	58.6	55.9	50.7	51.4	53.3	54.7	55.6	56.7
Employment rate (% population aged 15-64)	63.1	65.7	62.2	57.3	58.0	60.5	61.9	62.9	64.1
Employment rate (% population aged 20-64)	71.5	72.7	70.1	64.8	65.2	68.1	69.4	70.6	71.9
Employment rate (% population aged 15-24)	28.1	38.9	29.9	24.2	21.4	23.8	23.1	23.5	24.1
Employment rate (% population aged 25-29)	69.1	73.2	67.0	59.7	59.6	63.7	65.4	66.6	70.0
Employment rate (% population aged 25-54)	79.9	79.0	76.5	71.6	72.7	75.5	76.3	77.4	78.7
Employment rate (% population aged 55-64)	66.6	66.0	68.3	62.2	64.7	66.9	67.1	68.1	69.8
Employment rate for low skilled 15-64 (ISCED 0-2)	60.2	60.7	57.2	51.8	53.0	55.5	57.2	56.9	57.8
Employment rate for medium skilled 15-64 (ISCED 3-4)	64.4	69.8	66.2	60.3	60.0	62.4	64.9	66.6	68.5
Employment rate for high skilled 15-64 (ISCED 5-8)	74.9	74.1	71.7	70.6	70.6	71.4	69.4	72.4	72.5
Self-employed (% of total employment)	38.6	35.8	34.2	32.4	32.8	37.8	42.0	42.3	42.6
Part-time employment (% of total employment)	15.1	20.9	18.2	19.2	21.3	22.0	21.0	18.5	16.6
Temporary employment (% of total employees)	21.4	17.5	13.8	16.1	18.0	14.8	15.5	14.2	15.1
Activity rate (% population aged 15+)	64.0	67.9	65.5	61.7	63.5	64.3	65.0	66.0	66.6
Activity rate (% population aged 15-64)	72.3	76.4	73.4	70.2	72.2	73.4	74.1	75.0	75.7
Activity rate (% population aged 15-24)	40.0	52.2	44.3	36.6	37.2	39.2	36.9	36.3	37.1
Activity rate (% population aged 25-54)	88.8	88.9	87.7	86.4	87.4	88.6	88.7	90.5	90.9
Activity rate (% population aged 55-64)	71.7	74.5	74.5	70.2	74.9	76.0	76.3	76.0	77.9
Unemployment aged 15+ (1,000)	97	102	109	122	139	128	123	123	118
Unemployment rate (% labor force 15+)	12.6	13.6	14.6	17.8	19.2	17.1	15.9	15.6	14.9
Youth unemployment rate (% labor force 15-24)	29.6	25.5	32.6	33.8	42.5	39.2	37.4	35.4	35.1
NEET rate (% population aged 15-24)	25.5	27.7	25.8	29.7	29.6	28.2	26.8	.	.
Long-term unemployment rate (% labor force 15+)	9.3	9.9	10.9	12.4	11.7	11.2	10.3	10.7	10.0
Share of long-term unemployed (% of total)	73.9	73.0	74.8	69.7	61.0	65.8	64.9	68.6	67.1
Unemployment rate, low educated 15+ (ISCED 0-2)	12.0	14.6	14.3	17.3	17.8	15.4	14.6	14.8	14.9
Unemployment rate, medium educated 15+ (ISCED 3-4)	13.3	12.7	15.6	19.8	21.6	19.0	17.1	17.3	15.0
Unemployment rate, high educated 15+ (ISCED 5-8)	13.1	12.9	12.4	13.5	16.0	16.4	16.2	13.7	14.1

	2010	2011	2012	2013	2014	2015	2016	2017 Q1	2017 Q2
Female									
Total population (1,000)	1,455	1,448	1,441	1,434	1,428	1,421	1,420	.	.
Working-age population aged 15+ (1,000)	1,261	1,129	1,157	1,212	1,199	1,190	1,186	1,182	1,186
Employment aged 15+ (1,000)	497	512	503	461	451	466	507	504	514
Employment rate (% population aged 15+)	39.5	45.3	43.5	38.0	37.6	39.2	42.8	42.7	43.4
Employment rate (% population aged 15-64)	44.5	51.8	49.6	43.1	43.4	45.5	49.7	49.5	50.3
Employment rate (% population aged 20-64)	49.8	57.2	54.9	49.3	48.5	50.7	55.0	54.8	55.6
Employment rate (% population aged 15-24)	18.6	29.1	20.9	14.1	13.9	13.4	16.8	17.7	18.3
Employment rate (% population aged 25-29)	52.0	59.4	55.7	49.8	46.3	46.3	51.8	49.9	47.8
Employment rate (% population aged 25-54)	58.6	64.3	62.2	57.3	57.2	60.1	63.4	62.8	63.4
Employment rate (% population aged 55-64)	30.7	43.4	42.9	40.0	37.3	39.2	42.0	39.7	41.7
Employment rate for low skilled 15-64 (ISCED 0-2)	42.8	51.8	48.7	40.1	41.3	45.3	48.3	46.9	47.8
Employment rate for medium skilled 15-64 (ISCED 3-4)	39.9	48.3	46.5	39.4	37.9	38.8	44.3	44.3	44.9
Employment rate for high skilled 15-64 (ISCED 5-8)	69.1	62.7	62.9	64.2	63.1	58.9	64.4	67.2	67.2
Self-employed (% of total employment)	19.1	21.8	17.7	17.6	17.2	17.6	25.7	26.8	27.1
Part-time employment (% of total employment)	32.5	31.7	27.4	30.5	35.4	32.6	28.5	26.1	26.0
Temporary employment (% of total employees)	9.0	26.8	3.9	7.8	7.9	8.1	8.8	8.4	7.8
Activity rate (% population aged 15+)	46.9	52.9	49.2	44.0	44.4	47.2	49.9	48.6	49.6
Activity rate (% population aged 15-64)	52.9	60.8	56.4	50.1	51.3	55.1	58.3	56.6	57.7
Activity rate (% population aged 15-24)	27.2	37.0	27.6	19.4	20.5	22.7	25.8	24.4	25.3
Activity rate (% population aged 25-54)	67.9	74.8	70.2	66.1	66.9	71.6	73.1	71.3	72.0
Activity rate (% population aged 55-64)	34.2	47.9	45.5	42.9	40.8	43.1	45.8	42.5	45.2
Unemployment aged 15+ (1,000)	94	86	67	72	81	96	85	70	74
Unemployment rate (% labor force 15+)	15.9	14.4	11.7	13.5	15.2	17.1	14.4	12.2	12.5
Youth unemployment rate (% labor force 15-24)	31.7	21.4	24.3	27.3	32.6	40.8	34.9	27.5	27.8
NEET rate (% population aged 15-24)	33.4	32.4	29.4	31.9	32.2	31.1	27.1	.	.
Long-term unemployment rate (% labor force 15+)	12.1	10.8	9.5	10.4	10.7	11.3	9.8	8.8	9.2
Share of long-term unemployed (% of total)	76.0	75.1	80.9	76.9	70.1	66.2	68.2	72.5	73.5
Unemployment rate, low educated 15+ (ISCED 0-2)	14.1	11.0	8.6	10.5	10.4	11.2	10.5	8.7	9.5
Unemployment rate, medium educated 15+ (ISCED 3-4)	19.7	18.7	13.3	17.2	20.7	23.0	18.3	16.9	16.7
Unemployment rate, high educated 15+ (ISCED 5-8)	14.2	18.4	19.5	16.2	18.2	21.5	17.6	13.4	13.5

Earnings and unit labor costs

	2010	2011	2012	2013	2014	2015	2016	2017 Q1	2017 Q2
Average monthly gross wages, NCU	34,767	36,482	37,534	36,332	45,539	46,829	45,845	56,500	60,500
nominal annual growth in %	-3.6	4.9	2.9	-3.2	0.9	2.8	-2.1	4.1	11.0
real annual growth in % (CPI deflated)	-7.0	1.5	0.9	-5.0	-0.7	0.9	-3.4	1.6	8.8
Average monthly gross wages, EUR	252	260	270	259	325	335	334	416	450
Average monthly gross wages, EUR (PPP)	602	627	650	605	784	807	774	.	.
Minimum wages as of January 1st									
Monthly gross minimum wages, NCU	18,000	19,000	20,000	21,000	22,000	22,000	22,000	.	.
Monthly gross minimum wages, EUR (ER)	130	137	144	150	157	157	160	.	.
Monthly gross minimum wages, EUR (PPP)	260	276	304	311	327	336	321	.	.
Unit labor costs (ULC)									
ULC, NCU in %	.	1.7	-0.3	-13.9	0.4	5.4	0.9	.	.
ULC, EUR in %	.	-0.1	0.6	-14.7	0.6	5.6	2.6	.	.

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	2011	2012	2013	2014	2015	2016	2017 Q1	2017 Q2
Total									
Total population (1,000)	3,843	3,840	3,836	3,832	3,827	3,819	3,816	.	.
Working-age population aged 15+ (1,000)	2,597	2,561	2,566	2,598	2,565	2,579	2,489	.	2,407
Employment aged 15+ (1,000)	843	816	814	822	812	822	801	.	816
Employment rate (% population aged 15+)	32.5	31.9	31.7	31.6	31.7	31.9	32.2	.	33.9
Employment rate (% population aged 15-64)	39.0	38.7	38.5	38.5	39.0	39.2	40.2	.	43.0
Employment rate (% population aged 20-64)	.	.	.	.	.	43.2	44.2	.	.
Employment rate (% population aged 15-24)	14.0	13.2	10.8	11.6	10.9	12.1	13.8	.	17.8
Employment rate (% population aged 25-29)	.	.	.	.	.	45.5	45.6	.	.
Employment rate (% population aged 25-54)	51.0	50.7	51.2	51.4	52.5	52.4	53.6	.	.
Employment rate (% population aged 55-64)	26.8	27.0	27.2	27.7	28.5	28.2	29.7	.	.
Employment rate for low skilled 15-64 (ISCED 0-2)	20.8	20.6	20.8	20.3	18.4	20.1	20.2	.	.
Employment rate for medium skilled 15-64 (ISCED 3-4)	45.6	44.6	44.4	43.8	45.5	44.4	45.3	.	.
Employment rate for high skilled 15-64 (ISCED 5-8)	70.5	72.4	69.2	69.8	68.0	68.6	66.7	.	.
Self-employed (% of total employment)	.	.	.	.	.	20.7	21.1	.	20.6
Part-time employment (% of total employment)	.	.	.	.	.	7.1	6.8	.	9.1
Temporary employment (% of total employees)	.	.	.	.	.	.	.	.	.
Activity rate (% population aged 15+)	44.6	44.0	44.0	43.6	43.7	44.1	43.1	.	42.6
Activity rate (% population aged 15-64)	54.0	53.8	53.9	53.5	54.2	54.6	54.2	.	54.5
Activity rate (% population aged 15-24)	33.0	31.4	29.4	28.3	29.3	32.2	30.2	.	32.5
Activity rate (% population aged 25-54)	67.8	68.0	68.9	69.1	70.8	70.3	70.4	.	.
Activity rate (% population aged 55-64)	31.3	32.2	32.1	33.1	32.8	33.1	35.2	.	.
Unemployment aged 15+ (1,000)	315	311	317	311	308	315	273	.	211
Unemployment rate (% labor force 15+)	27.2	27.6	28.0	27.5	27.5	27.7	25.4	.	20.5
Youth unemployment rate (% labor force 15-24)	57.5	57.9	63.1	59.1	62.7	62.3	54.3	.	45.5
NEET rate (% population aged 15-24)	.	.	.	.	.	27.7	26.4	.	.
Long-term unemployment rate (% labor force 15+)	22.3	22.3	23.0	22.8	23.3	22.6	21.6	.	16.9
Share of long-term unemployed (% of total)	82.0	80.7	82.0	83.1	84.8	81.7	85.0	.	82.1
Unemployment rate, low educated 15+ (ISCED 0-2)	28.0	29.2	26.9	28.2	30.2	27.3	25.6	.	18.2
Unemployment rate, medium educated 15+ (ISCED 3-4)	29.3	29.9	30.6	30.0	28.9	30.0	26.6	.	22.3
Unemployment rate, high educated 15+ (ISCED 5-8)	15.6	15.4	17.9	16.9	19.3	18.4	20.3	.	15.4
Male									
Total population (1,000)	1,878	1,876	1,874	1,872	1,870	1,866	1,864	.	.
Working-age population aged 15+ (1,000)	1,260	1,244	1,238	1,268	1,242	1,259	1,208	.	1,177
Employment aged 15+ (1,000)	531	513	514	515	511	515	514	.	509
Employment rate (% population aged 15+)	42.2	41.3	41.5	40.6	41.2	40.9	42.5	.	43.2
Employment rate (% population aged 15-64)	49.6	48.7	49.0	48.0	48.9	48.8	51.1	.	53.4
Employment rate (% population aged 20-64)	.	.	.	.	.	53.9	56.4	.	.
Employment rate (% population aged 15-24)	17.8	16.9	14.1	14.9	13.5	15.8	18.3	.	22.8
Employment rate (% population aged 25-29)	.	.	.	.	.	52.3	54.4	.	.
Employment rate (% population aged 25-54)	63.8	63.3	64.0	63.4	64.9	64.6	67.3	.	.
Employment rate (% population aged 55-64)	36.9	35.7	37.2	36.4	38.9	37.3	40.4	.	.
Employment rate for low skilled 15-64 (ISCED 0-2)	31.9	31.6	31.3	30.4	27.7	30.9	30.9	.	.
Employment rate for medium skilled 15-64 (ISCED 3-4)	53.6	52.2	53.0	51.4	53.8	52.2	54.8	.	.
Employment rate for high skilled 15-64 (ISCED 5-8)	74.0	73.4	72.6	72.1	70.2	70.1	71.0	.	.
Self-employed (% of total employment)	.	.	.	.	.	23.9	23.6	.	22.6
Part-time employment (% of total employment)	.	.	.	.	.	6.6	5.7	.	8.4
Temporary employment (% of total employees)	.	.	.	.	.	.	.	.	.
Activity rate (% population aged 15+)	56.7	55.9	56.4	55.3	55.0	55.1	54.9	.	53.3
Activity rate (% population aged 15-64)	67.1	66.3	67.0	65.7	65.9	66.2	66.2	.	66.2
Activity rate (% population aged 15-24)	39.7	38.8	37.7	36.3	34.6	38.9	38.1	.	40.2
Activity rate (% population aged 25-54)	82.7	82.4	83.3	83.0	84.1	83.8	83.8	.	.
Activity rate (% population aged 55-64)	44.3	43.6	44.5	44.4	45.3	44.0	48.2	.	.
Unemployment aged 15+ (1,000)	183	181	184	186	172	179	149	.	118
Unemployment rate (% labor force 15+)	25.6	26.1	26.4	26.5	25.2	25.8	22.5	.	18.9
Youth unemployment rate (% labor force 15-24)	55.1	56.4	62.6	59.1	61.0	59.5	52.0	.	43.2
NEET rate (% population aged 15-24)	.	.	.	.	.	29.2	28.0	.	.
Long-term unemployment rate (% labor force 15+)	20.6	21.0	21.4	21.7	21.4	21.1	19.2	.	15.3
Share of long-term unemployed (% of total)	80.4	80.5	81.3	81.9	85.0	81.8	85.1	.	81.0
Unemployment rate, low educated 15+ (ISCED 0-2)	28.6	29.0	27.9	29.0	27.9	27.0	24.1	.	16.7.
Unemployment rate, medium educated 15+ (ISCED 3-4)	26.7	27.6	27.9	28.3	26.3	27.2	23.6	.	20.8
Unemployment rate, high educated 15+ (ISCED 5-8)	13.0	13.8	14.5	14.3	16.2	15.9	14.8	.	11.1

	2010	2011	2012	2013	2014	2015	2016	2017 Q1	2017 Q2
Female									
Total population (1,000)	1,966	1,964	1,962	1,960	1,958	1,953	1,952	.	.
Working-age population aged 15+ (1,000)	1,337	1,317	1,328	1,330	1,324	1,320	1,281	.	1,230
Employment aged 15+ (1,000)	311	303	300	307	301	307	288	.	307
Employment rate (% population aged 15+)	23.3	23.0	22.6	23.0	22.7	23.2	22.4	.	24.9
Employment rate (% population aged 15-64)	28.6	28.7	28.1	28.9	28.9	29.5	29.1	.	32.5
Employment rate (% population aged 20-64)	.	.	.	.	.	32.4	32.0	.	.
Employment rate (% population aged 15-24)	10.0	9.2	7.5	7.9	8.1	8.0	8.7	.	11.7
Employment rate (% population aged 25-29)	.	.	.	.	.	37.2	35.3	.	.
Employment rate (% population aged 25-54)	38.0	38.0	38.2	39.2	39.7	40.0	39.8	.	.
Employment rate (% population aged 55-64)	17.9	19.3	18.3	19.7	19.3	19.8	19.4	.	.
Employment rate for low skilled 15-64 (ISCED 0-2)	14.1	13.9	14.4	13.7	12.6	13.3	13.6	.	.
Employment rate for medium skilled 15-64 (ISCED 3-4)	34.9	34.3	32.9	33.7	34.3	34.0	32.8	.	.
Employment rate for high skilled 15-64 (ISCED 5-8)	67.1	71.3	66.0	67.4	65.9	67.3	62.7	.	.
Self-employed (% of total employment)	.	.	.	.	.	15.2	16.5	.	17.4
Part-time employment (% of total employment)	.	.	.	.	.	8.0	8.8	.	10.1
Temporary employment (% of total employees)	.	.	.	.	.	.	.	.	.
Activity rate (% population aged 15+)	33.2	32.8	32.6	32.5	33.0	33.5	32.1	.	32.4
Activity rate (% population aged 15-64)	41.1	41.2	41.0	41.0	42.4	42.9	41.9	.	42.7
Activity rate (% population aged 15-24)	25.9	23.3	20.9	19.4	23.3	24.5	21.3	.	23.4
Activity rate (% population aged 25-54)	52.9	53.4	54.3	54.8	57.1	56.6	56.8	.	.
Activity rate (% population aged 55-64)	19.9	22.1	21.1	22.9	21.9	22.9	22.9	.	.
Unemployment aged 15+ (1,000)	133	129	133	125	136	136	124	.	92
Unemployment rate (% labor force 15+)	29.9	29.9	30.7	29.0	31.2	30.7	30.0	.	23.1
Youth unemployment rate (% labor force 15-24)	61.3	60.5	64.0	59.2	65.4	67.3	58.9	.	50.0
NEET rate (% population aged 15-24)	.	.	.	.	.	26.0	24.7	.	.
Long-term unemployment rate (% labor force 15+)	25.1	24.3	25.4	24.6	26.4	25.1	25.5	.	19.3
Share of long-term unemployed (% of total)	84.1	81.1	82.8	84.8	84.7	81.6	85.0	.	83.6
Unemployment rate, low educated 15+ (ISCED 0-2)	27.4	29.4	25.5	27.0	33.1	27.8	27.5	.	20.0
Unemployment rate, medium educated 15+ (ISCED 3-4)	34.1	34.2	35.8	33.2	33.9	35.0	32.6	.	25.3
Unemployment rate, high educated 15+ (ISCED 5-8)	18.3	17.1	21.2	19.6	22.2	20.9	25.5	.	19.5

Earnings and unit labor costs

	2010	2011	2012	2013	2014	2015	2016	2017 Q1	2017 Q2
Average monthly gross wages, NCU	1,217	1,271	1,290	1,291	1,290	1,289	1,301	1,313	1,320
nominal annual growth in %	1.1	4.4	1.5	0.1	-0.1	0.0	0.9	1.5	1.8
real annual growth in % (CPI deflated)	-1.0	0.7	-0.5	0.2	0.8	1.0	2.0	0.4	0.6
Average monthly gross wages, EUR	622	650	660	660	659	659	665	671	675
Average monthly gross wages, EUR (PPP)	1,271	1,334	1,381	1,382	1,385	1,393	1,375	.	.
Minimum wages as of January 1st									
Monthly gross minimum wages, NCU	.	.	.	.	.	.	.	.	.
Monthly gross minimum wages, EUR (ER)	.	.	.	.	.	.	.	.	.
Monthly gross minimum wages, EUR (PPP)	.	.	.	.	.	.	.	.	.
Unit labor costs (ULC)									
ULC, NCU in %	.	0.2	2.1	-1.3	-2.4	-1.9	-4.6	.	.
ULC, EUR in %	.	0.2	2.1	-1.3	-2.4	-1.9	-4.6	.	.

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	2011	2012	2013	2014	2015	2016	2017 Q1	2017 Q2
Total									
Total population (1,000)	1,775	1,796	1,807	1,818	1,813	1,788	1,778	.	.
Working-age population aged 15+ (1,000)	.	.	1,213	1,250	1,277	1,262	1,276	1,297	1,300
Employment aged 15+ (1,000)	.	.	303	340	324	298	333	350	360
Employment rate (% population aged 15+)	.	.	25.0	27.2	25.4	23.6	26.1	27.0	27.7
Employment rate (% population aged 15-64)	.	.	26.6	29.2	27.5	25.8	28.7	29.7	30.6
Employment rate (% population aged 20-64)	.	.	31.0	34.0	32.1	29.9	33.1	34.3	35.2
Employment rate (% population aged 15-24)	.	.	10.1	10.2	9.1	8.7	10.2	11.3	12.3
Employment rate (% population aged 25-29)	.	.	29.1	32.2	30.0	27.8	31.4	32.5	33.1
Employment rate (% population aged 25-54)	.	.	34.7	38.1	36.2	33.8	37.4	38.0	38.9
Employment rate (% population aged 55-64)	.	.	29.1	33.5	31.9	28.9	31.6	34.9	34.5
Employment rate for low skilled 15-64 (ISCED 0-2)	.	.	9.7	12.5	11.5	9.9	13.6	13.5	13.9
Employment rate for medium skilled 15-64 (ISCED 3-4)	.	.	37.2	38.5	35.4	32.0	33.8	35.0	37.1
Employment rate for high skilled 15-64 (ISCED 5-8)	.	.	60.6	64.9	58.9	53.3	56.3	59.8	56.7
Self-employed (% of total employment)	.	.	19.6	22.8	23.2	21.2	22.4	24.3	24.0
Part-time employment (% of total employment)	.	.	11.2	12.1	8.2	5.3	6.0	6.6	6.2
Temporary employment (% of total employees)	.	.	72.9	68.8	71.5	72.0	70.6	69.0	71.2
Activity rate (% population aged 15+)	.	.	35.8	38.6	39.1	35.1	36.0	38.8	39.8
Activity rate (% population aged 15-64)	.	.	38.2	41.5	42.4	38.4	39.6	42.7	44.1
Activity rate (% population aged 15-24)	.	.	22.3	23.0	23.3	20.4	21.5	22.8	24.9
Activity rate (% population aged 25-54)	.	.	47.5	51.8	53.3	48.6	49.5	53.7	54.7
Activity rate (% population aged 55-64)	.	.	32.0	37.3	37.6	33.1	35.9	39.3	39.3
Unemployment aged 15+ (1,000)	.	.	132	142	175	145	126	153	158
Unemployment rate (% labor force 15+)	.	.	30.3	29.5	35.1	32.7	27.4	30.4	30.4
Youth unemployment rate (% labor force 15-24)	.	.	54.7	55.7	60.9	57.6	52.3	50.4	50.7
NEET rate (% population aged 15-24)	.	.	35.1	35.3	30.2	31.4	29.5	.	.
Long-term unemployment rate (% labor force 15+)	.	.	18.0	19.7	24.7	23.6	18.0	21.0	22.0
Share of long-term unemployed (% of total)	.	.	59.4	66.9	70.5	72.1	65.5	69.2	72.1
Unemployment rate, low educated 15+ (ISCED 0-2)	.	.	43.9	39.9	45.9	46.6	32.2	34.7	34.3
Unemployment rate, medium educated 15+ (ISCED 3-4)	.	.	29.1	29.1	35.4	32.6	28.9	32.3	31.0
Unemployment rate, high educated 15+ (ISCED 5-8)	.	.	17.6	16.8	20.6	19.9	18.5	21.7	25.7
Male									
Total population (1,000)	900	906	910	915	912	895	885	.	.
Working-age population aged 15+ (1,000)	.	.	637	639	653	651	658	667	669
Employment aged 15+ (1,000)	.	.	240	263	250	231	259	273	285
Employment rate (% population aged 15+)	.	.	37.7	41.1	38.2	35.6	39.3	40.9	42.6
Employment rate (% population aged 15-64)	.	.	40.7	44.6	41.9	39.2	43.6	45.3	47.4
Employment rate (% population aged 20-64)	.	.	47.5	52.1	48.9	45.4	50.5	52.2	54.6
Employment rate (% population aged 15-24)	.	.	14.7	15.3	13.6	13.0	15.4	16.8	18.1
Employment rate (% population aged 25-29)	.	.	42.3	46.1	43.7	38.8	44.2	46.8	49.6
Employment rate (% population aged 25-54)	.	.	53.9	59.0	56.0	51.5	57.1	58.2	61.5
Employment rate (% population aged 55-64)	.	.	45.9	51.5	48.0	46.1	50.8	54.7	52.4
Employment rate for low skilled 15-64 (ISCED 0-2)	.	.	21.5	26.0	24.7	21.0	28.5	28.4	30.7
Employment rate for medium skilled 15-64 (ISCED 3-4)	.	.	46.7	50.3	46.3	42.9	45.9	47.7	50.9
Employment rate for high skilled 15-64 (ISCED 5-8)	.	.	69.9	71.8	66.0	61.3	64.5	68.7	65.9
Self-employed (% of total employment)	.	.	22.5	25.9	26.2	23.3	24.6	27.3	26.8
Part-time employment (% of total employment)	.	.	11.3	11.4	7.6	4.7	4.4	5.3	5.3
Temporary employment (% of total employees)	.	.	73.0	68.9	71.6	73.9	71.0	70.9	73.3
Activity rate (% population aged 15+)	.	.	52.0	56.0	56.9	51.9	53.2	57.7	59.6
Activity rate (% population aged 15-64)	.	.	56.2	60.9	62.5	57.4	59.0	63.9	66.6
Activity rate (% population aged 15-24)	.	.	30.1	30.8	30.9	28.4	29.1	31.3	34.0
Activity rate (% population aged 25-54)	.	.	71.3	77.6	80.6	73.5	75.1	81.8	84.9
Activity rate (% population aged 55-64)	.	.	51.2	57.8	57.3	53.2	58.3	61.9	60.3
Unemployment aged 15+ (1,000)	.	.	91	95	122	106	91	112	114
Unemployment rate (% labor force 15+)	.	.	27.5	26.5	32.9	31.5	26.1	29.1	28.6
Youth unemployment rate (% labor force 15-24)	.	.	51.2	50.2	56.1	54.1	47.1	46.2	46.8
NEET rate (% population aged 15-24)	.	.	30.7	30.0	26.6	28.3	25.9	.	.
Long-term unemployment rate (% labor force 15+)	.	.	16.1	18.1	22.6	22.4	17.1	20.4	20.9
Share of long-term unemployed (% of total)	.	.	58.5	68.3	68.8	70.9	65.7	70.0	72.9
Unemployment rate, low educated 15+ (ISCED 0-2)	.	.	39.8	37.2	44.8	48.5	34.2	38.0	36.2
Unemployment rate, medium educated 15+ (ISCED 3-4)	.	.	26.8	25.5	32.4	30.6	27.1	30.2	28.8
Unemployment rate, high educated 15+ (ISCED 5-8)	.	.	12.7	14.2	16.1	14.6	12.0	15.3	18.9

	2010	2011	2012	2013	2014	2015	2016	2017 Q1	2017 Q2
Female									
Total population (1,000)	875	893	897	903	901	893	892	.	.
Working-age population aged 15+ (1,000)	.	.	576	611	624	611	617	630	632
Employment aged 15+ (1,000)	.	.	63	77	75	67	74	77	75
Employment rate (% population aged 15+)	.	.	10.9	12.7	12.0	11.0	12.0	12.3	11.9
Employment rate (% population aged 15-64)	.	.	11.4	13.4	12.9	11.9	13.1	13.4	13.1
Employment rate (% population aged 20-64)	.	.	13.4	15.6	15.0	13.7	15.1	15.5	15.1
Employment rate (% population aged 15-24)	.	.	4.9	4.6	4.2	3.8	4.5	5.4	6.0
Employment rate (% population aged 25-29)	.	.	14.6	16.5	14.6	14.8	15.7	15.3	13.1
Employment rate (% population aged 25-54)	.	.	14.9	17.6	16.8	16.0	17.7	17.7	16.4
Employment rate (% population aged 55-64)	.	.	9.8	14.1	15.0	10.6	11.0	12.1	13.5
Employment rate for low skilled 15-64 (ISCED 0-2)	.	.	2.6	4.7	4.1	3.7	5.0	5.1	4.4
Employment rate for medium skilled 15-64 (ISCED 3-4)	.	.	20.1	19.2	17.4	14.3	14.7	14.4	14.7
Employment rate for high skilled 15-64 (ISCED 5-8)	.	.	45.8	54.7	49.8	43.2	45.7	48.4	45.6
Self-employed (% of total employment)	.	.	8.2	12.4	13.1	13.7	14.7	13.7	13.7
Part-time employment (% of total employment)	.	.	10.7	14.6	10.2	7.5	11.5	11.0	9.6
Temporary employment (% of total employees)	.	.	72.5	68.6	71.3	66.5	69.3	63.4	64.9
Activity rate (% population aged 15+)	.	.	18.0	20.4	20.5	17.3	17.7	18.8	18.8
Activity rate (% population aged 15-64)	.	.	18.9	21.8	22.0	18.7	19.3	20.6	20.7
Activity rate (% population aged 15-24)	.	.	13.3	14.6	15.0	11.5	12.9	13.7	14.9
Activity rate (% population aged 25-54)	.	.	23.0	26.4	26.4	23.5	23.8	25.5	24.7
Activity rate (% population aged 55-64)	.	.	10.0	15.3	16.9	11.7	11.8	13.0	14.4
Unemployment aged 15+ (1,000)	.	.	41	48	53	38	35	41	43
Unemployment rate (% labor force 15+)	.	.	39.3	38.1	41.4	36.4	31.7	34.5	36.5
Youth unemployment rate (% labor force 15-24)	.	.	63.5	68.4	71.7	67.2	65.4	60.4	60.2
NEET rate (% population aged 15-24)	.	.	40.1	40.9	34.0	34.9	33.6	.	.
Long-term unemployment rate (% labor force 15+)	.	.	24.2	24.5	30.8	27.4	20.6	23.2	25.6
Share of long-term unemployed (% of total)	.	.	61.5	64.2	74.5	75.3	64.9	67.2	70.1
Unemployment rate, low educated 15+ (ISCED 0-2)	.	.	57.8	47.1	49.0	39.3	24.9	21.8	25.3
Unemployment rate, medium educated 15+ (ISCED 3-4)	.	.	37.5	41.2	45.9	41.0	36.7	41.7	41.2
Unemployment rate, high educated 15+ (ISCED 5-8)	.	.	27.5	21.4	27.3	28.1	28.3	31.3	35.1

Earnings and unit labor costs

	2010	2011	2012	2013	2014	2015	2016	2017 Q1	2017 Q2
Average monthly gross wages, NCU	.	.	431	444	482	510	519	.	.
nominal annual growth in %	.	.	.	3.0	8.6	5.8	1.8	.	.
real annual growth in % (CPI deflated)	.	.	.	1.2	8.1	6.3	1.5	.	.
Average monthly gross wages, EUR	.	.	431	444	482	510	519	.	.
Average monthly gross wages, EUR (PPP)	.	.	990	986	1,059	1,160	1,169	.	.
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)	.	341	339	328	333	343	333	.	.
Unit labor costs (ULC)									
ULC, NCU in %	.	.	.	11.8	2.3	-6.5	9.2	.	.
ULC, EUR in %	.	.	.	11.8	2.3	-6.5	9.2	.	.

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 € 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.

FYR Macedonia: Labor market indicators

	2010	2011	2012	2013	2014	2015	2016	2017 Q1	2017 Q2
Total									
Total population (1,000)	2,055	2,059	2,061	2,064	2,067	2,070	2,072	.	.
Working-age population aged 15+ (1,000)	1,649	1,656	1,670	1,672	1,673	1,677	1,679	1,679	1,680
Employment aged 15+ (1,000)	638	645	651	679	690	706	724	734	740
Employment rate (% population aged 15+)	38.7	38.9	39.0	40.6	41.2	42.1	43.1	43.7	44.1
Employment rate (% population aged 15-64)	43.5	43.9	44.0	46.0	46.9	47.8	49.1	50.1	50.5
Employment rate (% population aged 20-64)	48.1	48.4	48.2	50.3	51.3	51.9	53.3	54.4	54.6
Employment rate (% population aged 15-24)	15.4	14.4	15.5	16.2	15.2	17.3	16.2	18.6	17.6
Employment rate (% population aged 25-29)	47.8	46.8	45.7	45.9	48.2	47.3	49.6	51.7	50.5
Employment rate (% population aged 25-54)	55.8	56.4	55.8	57.9	59.3	59.4	61.2	62.0	62.7
Employment rate (% population aged 55-64)	34.2	35.4	35.4	37.9	38.6	40.1	40.7	40.9	41.4
Employment rate for low skilled 15-64 (ISCED 0-2)	26.6	27.3	25.7	28.4	29.9	28.9	27.3	28.8	27.8
Employment rate for medium skilled 15-64 (ISCED 3-4)	49.9	49.4	50.1	52.4	52.5	53.6	55.4	56.7	56.3
Employment rate for high skilled 15-64 (ISCED 5-8)	70.7	68.6	68.1	67.5	69.1	72.0	72.4	73.0	73.6
Self-employed (% of total employment)	13.1	13.0	13.6	14.5	14.0	13.9	13.2	12.5	13.0
Part-time employment (% of total employment)	5.9	6.3	6.4	4.6	5.9	4.4	5.0	5.3	4.1
Temporary employment (% of total employees)	11.8	10.7	10.0	10.1	11.3	9.3	10.3	10.4	10.8
Activity rate (% population aged 15+)	56.9	56.8	56.5	57.2	57.3	57.0	56.5	56.7	56.9
Activity rate (% population aged 15-64)	64.2	64.2	63.9	64.9	65.3	64.9	64.5	65.2	65.4
Activity rate (% population aged 15-24)	33.3	32.1	33.6	33.6	32.4	32.8	31.3	33.5	33.3
Activity rate (% population aged 25-54)	79.4	79.2	78.5	79.2	80.0	78.8	78.7	79.0	79.5
Activity rate (% population aged 55-64)	47.4	49.2	47.2	49.9	49.9	50.6	49.4	49.4	48.5
Unemployment aged 15+ (1,000)	300	295	293	277	269	249	225	219	216
Unemployment rate (% labor force 15+)	32.0	31.4	31.0	29.0	28.0	26.1	23.7	22.9	22.6
Youth unemployment rate (% labor force 15-24)	53.7	55.3	53.9	51.9	53.1	47.3	48.2	44.4	47.1
NEET rate (% population aged 15-24)	25.5	25.2	24.8	24.2	25.2	24.7	24.3	.	.
Long-term unemployment rate (% labor force 15+)	26.7	25.9	25.5	23.9	23.4	21.3	19.2	17.5	18.1
Share of long-term unemployed (% of total)	83.3	82.6	82.1	82.5	83.4	81.6	80.9	76.3	80.4
Unemployment rate, low educated 15+ (ISCED 0-2)	38.9	37.5	37.7	34.2	32.1	29.7	29.1	28.1	25.7
Unemployment rate, medium educated 15+ (ISCED 3-4)	32.1	31.6	31.4	28.7	28.3	26.6	23.7	22.4	23.3
Unemployment rate, high educated 15+ (ISCED 5-8)	21.8	23.0	22.4	23.5	22.5	21.1	19.4	19.7	18.8
Male									
Total population (1,000)	1,030	1,031	1,033	1,034	1,036	1,037	1,038	.	.
Working-age population aged 15+ (1,000)	824	828	835	837	837	839	840	841	841
Employment aged 15+ (1,000)	392	389	393	408	420	424	440	444	450
Employment rate (% population aged 15+)	47.5	47.0	47.1	48.7	50.1	50.5	52.3	52.9	53.5
Employment rate (% population aged 15-64)	52.8	52.3	52.4	54.5	56.1	56.6	58.6	59.8	60.4
Employment rate (% population aged 20-64)	58.4	57.8	57.5	59.7	61.6	61.5	63.7	64.9	65.4
Employment rate (% population aged 15-24)	19.5	17.7	18.1	18.9	18.9	20.2	20.4	23.0	21.6
Employment rate (% population aged 25-29)	56.0	53.9	50.9	52.3	57.1	53.8	56.7	62.8	61.0
Employment rate (% population aged 25-54)	66.1	65.7	65.4	67.4	69.8	69.1	71.2	72.5	73.2
Employment rate (% population aged 55-64)	46.7	47.3	46.6	49.4	50.3	52.2	55.0	53.2	55.7
Employment rate for low skilled 15-64 (ISCED 0-2)	39.6	40.4	37.8	41.9	44.3	42.2	42.6	42.6	42.0
Employment rate for medium skilled 15-64 (ISCED 3-4)	55.6	54.3	55.4	57.3	58.6	59.7	61.9	63.8	63.1
Employment rate for high skilled 15-64 (ISCED 5-8)	74.0	71.5	72.1	71.4	72.8	74.8	75.7	77.4	80.4
Self-employed (% of total employment)	18.2	17.6	18.2	19.2	19.4	18.9	17.2	16.9	17.5
Part-time employment (% of total employment)	5.0	5.8	5.9	4.4	6.5	4.3	4.6	4.9	4.2
Temporary employment (% of total employees)	12.8	11.6	10.5	10.2	11.8	9.8	10.9	11.0	11.0
Activity rate (% population aged 15+)	69.8	68.8	68.7	68.5	69.3	68.9	69.2	68.9	69.5
Activity rate (% population aged 15-64)	77.7	76.8	76.6	76.8	77.7	77.5	77.8	78.0	78.6
Activity rate (% population aged 15-24)	42.2	39.9	40.5	39.9	39.3	40.1	39.2	40.8	42.1
Activity rate (% population aged 25-54)	93.3	92.0	92.2	91.9	93.2	91.8	92.1	92.4	92.8
Activity rate (% population aged 55-64)	65.6	67.7	63.9	65.7	66.8	67.4	68.1	65.9	65.9
Unemployment aged 15+ (1,000)	183	181	180	166	160	155	142	134	134
Unemployment rate (% labor force 15+)	31.9	31.8	31.5	29.0	27.6	26.7	24.4	23.2	22.9
Youth unemployment rate (% labor force 15-24)	53.9	55.5	55.2	52.5	52.0	49.7	47.9	43.6	48.7
NEET rate (% population aged 15-24)	25.1	24.9	25.3	23.3	23.6	24.5	23.6	.	.
Long-term unemployment rate (% labor force 15+)	26.7	26.6	26.1	24.0	23.1	22.1	20.1	17.4	18.7
Share of long-term unemployed (% of total)	83.7	83.6	83.0	82.7	83.6	82.5	82.5	74.8	81.8
Unemployment rate, low educated 15+ (ISCED 0-2)	40.0	39.4	40.6	35.3	32.8	31.2	30.3	31.1	29.9
Unemployment rate, medium educated 15+ (ISCED 3-4)	31.3	31.5	31.0	28.6	27.4	27.0	24.2	22.4	23.5
Unemployment rate, high educated 15+ (ISCED 5-8)	18.9	19.5	18.7	19.8	20.0	19.3	17.6	16.1	13.8

	2010	2011	2012	2013	2014	2015	2016	2017 Q1	2017 Q2
Female									
Total population (1,000)	1,025	1,027	1,029	1,030	1,032	1,033	1,034	.	.
Working-age population aged 15+ (1,000)	824	828	835	835	836	838	839	839	839
Employment aged 15+ (1,000)	246	256	257	271	271	282	284	290	290
Employment rate (% population aged 15+)	29.8	30.9	30.8	32.5	32.4	33.7	33.8	34.5	34.6
Employment rate (% population aged 15-64)	34.0	35.3	35.3	37.3	37.4	38.8	39.2	40.2	40.3
Employment rate (% population aged 20-64)	37.5	38.8	38.7	40.7	40.8	42.1	42.5	43.6	43.5
Employment rate (% population aged 15-24)	11.2	10.8	12.6	13.3	11.3	14.2	11.8	14.0	13.4
Employment rate (% population aged 25-29)	39.2	39.4	40.2	39.2	38.9	40.6	42.2	40.0	39.3
Employment rate (% population aged 25-54)	45.1	46.8	45.8	48.0	48.5	49.3	50.9	51.1	51.8
Employment rate (% population aged 55-64)	22.4	24.0	24.5	26.6	27.1	28.3	26.6	28.8	27.3
Employment rate for low skilled 15-64 (ISCED 0-2)	16.8	17.4	16.6	18.0	18.5	18.4	15.5	18.0	17.3
Employment rate for medium skilled 15-64 (ISCED 3-4)	42.4	43.0	43.1	45.8	44.4	45.3	46.6	47.1	47.0
Employment rate for high skilled 15-64 (ISCED 5-8)	67.2	65.8	64.2	64.1	66.0	69.6	69.6	69.2	67.9
Self-employed (% of total employment)	4.9	5.9	6.5	7.4	5.6	6.4	6.9	5.7	6.1
Part-time employment (% of total employment)	7.4	7.1	7.2	5.0	5.0	4.7	5.7	5.7	3.8
Temporary employment (% of total employees)	10.1	9.3	9.3	9.9	10.4	8.6	9.5	9.5	10.5
Activity rate (% population aged 15+)	44.0	44.7	44.3	45.8	45.3	44.9	43.8	44.6	44.3
Activity rate (% population aged 15-64)	50.4	51.2	50.8	52.7	52.5	52.0	50.8	51.9	51.7
Activity rate (% population aged 15-24)	24.0	23.9	26.2	27.1	25.1	25.1	23.0	25.7	23.9
Activity rate (% population aged 25-54)	65.0	65.8	64.4	66.0	66.4	65.3	64.8	65.1	65.7
Activity rate (% population aged 55-64)	30.2	31.7	31.2	34.5	33.5	34.2	31.0	33.0	31.4
Unemployment aged 15+ (1,000)	117	114	112	111	108	94	83	84	82
Unemployment rate (% labor force 15+)	32.2	30.8	30.3	29.0	28.6	25.1	22.7	22.5	22.1
Youth unemployment rate (% labor force 15-24)	53.3	54.8	51.8	51.0	55.0	43.3	48.8	45.6	44.1
NEET rate (% population aged 15-24)	25.9	25.5	24.2	25.2	26.8	24.9	25.1	.	.
Long-term unemployment rate (% labor force 15+)	26.7	24.9	24.5	23.8	23.8	20.1	17.8	17.7	17.2
Share of long-term unemployed (% of total)	82.7	81.0	80.7	82.2	83.1	80.2	78.2	78.7	78.0
Unemployment rate, low educated 15+ (ISCED 0-2)	36.7	33.9	32.2	32.1	30.9	26.8	26.3	22.1	17.0
Unemployment rate, medium educated 15+ (ISCED 3-4)	33.4	31.8	31.9	28.9	29.8	25.9	22.7	22.5	22.8
Unemployment rate, high educated 15+ (ISCED 5-8)	24.8	26.3	26.0	26.7	24.6	22.5	21.0	22.8	23.3

Earnings and unit labor costs

	2010	2011	2012	2013	2014	2015	2016	2017 Q1	2017 Q2
Average monthly gross wages, NCU	30,226	30,603	30,670	31,025	31,325	32,171	32,821	33,103	33,482
nominal annual growth in %	1.0	1.2	0.2	1.2	1.0	2.7	2.0	2.3	2.3
real annual growth in % (CPI deflated)	-0.6	-2.6	-3.0	-1.6	1.3	3.0	2.2	1.8	1.0
Average monthly gross wages, EUR	491	497	498	504	508	522	533	538	543
Average monthly gross wages, EUR (PPP)	1,235	1,197	1,219	1,193	1,223	1,254	1,239	.	.
Minimum wages as of January 1st									
Monthly gross minimum wages, NCU	.	.	12,266	12,268	13,140	13,482	14,739	.	.
Monthly gross minimum wages, EUR (ER)	.	.	199	199	214	219	239	.	.
Monthly gross minimum wages, EUR (PPP)	.	.	419	419	459	484	517	.	.
Unit labor costs (ULC)									
ULC, NCU in %	.	0.1	1.5	2.6	-0.9	1.2	1.6	.	.
ULC, EUR in %	.	0.0	1.5	2.5	-1.0	1.2	1.6	.	.

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	2011	2012	2013	2014	2015	2016	2017 Q1	2017 Q2
Total									
Total population (1,000)	619	620	621	621	622	622	622	.	.
Working-age population aged 15+ (1,000)	520	501	501	501	501	501	500	500	500
Employment aged 15+ (1,000)	209	196	201	202	216	222	224	223	233
Employment rate (% population aged 15+)	40.3	39.1	40.1	40.3	43.2	44.3	44.9	44.6	46.5
Employment rate (% population aged 15-64)	47.6	45.9	47.0	47.4	50.4	51.4	52.0	51.6	54.0
Employment rate (% population aged 20-64)	52.9	50.9	52.2	52.6	55.6	56.7	57.1	56.8	59.4
Employment rate (% population aged 15-24)	13.7	13.1	13.5	13.5	18.8	18.8	21.0	18.6	21.4
Employment rate (% population aged 25-29)	54.0	49.8	53.1	56.0	58.4	59.8	61.5	56.3	61.5
Employment rate (% population aged 25-54)	62.7	59.9	60.9	61.2	64.6	65.6	65.4	65.3	67.1
Employment rate (% population aged 55-64)	36.2	35.6	37.6	38.7	38.7	40.0	41.2	41.7	46.0
Employment rate for low skilled 15-64 (ISCED 0-2)	19.7	16.6	14.8	14.0	16.6	19.4	22.2	22.6	26.8
Employment rate for medium skilled 15-64 (ISCED 3-4)	50.4	49.3	50.0	49.4	52.6	53.0	52.9	52.0	54.6
Employment rate for high skilled 15-64 (ISCED 5-8)	75.8	73.1	75.8	78.9	77.6	78.2	77.1	78.5	80.2
Self-employed (% of total employment)	15.3	15.5	16.1	14.8	16.8	18.4	19.2	19.0	18.4
Part-time employment (% of total employment)	5.0	4.6	4.5	3.3	6.3	6.0	4.9	5.2	5.7
Temporary employment (% of total employees)	18.3	18.1	21.2	26.0	27.4	30.2	33.8	28.1	31.2
Activity rate (% population aged 15+)	50.1	48.7	50.0	50.1	52.7	53.7	54.5	53.9	54.8
Activity rate (% population aged 15-64)	59.3	57.3	58.7	58.9	61.6	62.6	63.4	62.7	63.8
Activity rate (% population aged 15-24)	25.1	20.8	24.0	23.2	29.2	30.2	32.7	28.6	30.1
Activity rate (% population aged 25-54)	76.6	74.4	75.3	75.4	77.9	78.5	78.9	78.9	79.2
Activity rate (% population aged 55-64)	40.1	40.5	41.3	43.3	43.4	44.9	45.0	45.4	49.0
Unemployment aged 15+ (1,000)	51	48	49	49	47	47	48	47	41
Unemployment rate (% labor force 15+)	19.7	19.7	19.7	19.5	18.0	17.5	17.7	17.4	15.1
Youth unemployment rate (% labor force 15-24)	45.5	37.1	43.7	41.6	35.8	37.6	35.9	35.0	28.9
NEET rate (% population aged 15-24)	19.6	16.3	16.9	17.9	17.7	19.1	18.4	.	.
Long-term unemployment rate (% labor force 15+)	15.5	15.7	15.6	16.0	13.9	13.5	13.4	14.0	12.1
Share of long-term unemployed (% of total)	78.8	79.7	79.1	82.3	77.5	76.8	75.6	80.4	80.0
Unemployment rate, low educated 15+ (ISCED 0-2)	25.9	29.7	35.9	41.5	31.8	28.1	24.2	25.8	19.6
Unemployment rate, medium educated 15+ (ISCED 3-4)	21.0	20.5	20.9	20.6	19.7	19.2	19.5	19.4	17.0
Unemployment rate, high educated 15+ (ISCED 5-8)	12.3	13.5	10.9	9.8	9.9	10.3	11.9	10.5	8.8
Male									
Total population (1,000)	306	306	307	307	307	308	308	.	.
Working-age population aged 15+ (1,000)	253	244	244	244	244	244	244	244	244
Employment aged 15+ (1,000)	119	110	112	111	119	121	123	124	130
Employment rate (% population aged 15+)	47.1	44.8	45.9	45.4	48.9	49.4	50.5	50.7	53.3
Employment rate (% population aged 15-64)	54.3	51.2	52.4	51.9	55.5	56.0	57.3	57.3	60.3
Employment rate (% population aged 20-64)	60.7	56.8	58.4	57.8	61.4	61.9	63.0	63.2	66.4
Employment rate (% population aged 15-24)	16.2	15.8	14.1	14.8	21.5	19.9	22.6	20.0	24.3
Employment rate (% population aged 25-29)	58.5	51.3	56.0	57.1	60.0	61.9	64.5	59.5	64.8
Employment rate (% population aged 25-54)	69.9	64.5	66.6	65.7	69.5	70.5	71.3	71.9	74.2
Employment rate (% population aged 55-64)	48.3	47.4	49.2	48.5	48.3	48.2	49.6	50.8	54.6
Employment rate for low skilled 15-64 (ISCED 0-2)	27.9	25.2	19.0	18.7	22.4	24.5	29.1	31.6	35.2
Employment rate for medium skilled 15-64 (ISCED 3-4)	56.9	53.8	55.2	54.4	58.5	57.7	58.6	58.2	62.1
Employment rate for high skilled 15-64 (ISCED 5-8)	76.7	73.2	77.5	78.8	77.5	78.7	77.8	79.5	81.1
Self-employed (% of total employment)	20.2	19.5	20.8	19.2	21.3	23.5	24.6	24.4	23.5
Part-time employment (% of total employment)	5.3	4.3	4.6	3.9	6.7	5.7	5.4	5.0	5.5
Temporary employment (% of total employees)	18.3	17.3	20.6	25.9	28.6	28.9	35.4	30.3	31.7
Activity rate (% population aged 15+)	58.1	55.7	56.9	56.8	59.5	60.1	61.8	61.1	62.4
Activity rate (% population aged 15-64)	67.1	63.8	65.1	65.1	67.7	68.3	70.2	69.3	70.9
Activity rate (% population aged 15-24)	29.1	24.6	26.1	26.3	33.7	33.2	35.7	32.0	33.3
Activity rate (% population aged 25-54)	84.2	80.1	81.6	81.4	83.4	84.2	86.4	85.9	87.1
Activity rate (% population aged 55-64)	54.6	54.0	54.4	54.6	54.6	54.4	54.6	55.5	59.0
Unemployment aged 15+ (1,000)	28	27	27	28	26	26	28	25	22
Unemployment rate (% labor force 15+)	18.9	19.5	19.3	20.1	17.8	17.7	18.2	17.0	14.6
Youth unemployment rate (% labor force 15-24)	44.4	35.6	46.1	43.8	36.0	39.9	36.9	37.4	27.0
NEET rate (% population aged 15-24)	19.7	17.0	17.2	19.3	18.9	19.9	18.7	.	.
Long-term unemployment rate (% labor force 15+)	14.9	15.0	15.2	16.8	13.8	13.6	13.8	13.6	12.0
Share of long-term unemployed (% of total)	78.5	77.3	79.1	84.0	77.7	76.7	75.8	80.3	82.0
Unemployment rate, low educated 15+ (ISCED 0-2)	23.7	25.0	33.6	39.8	31.0	26.3	24.9	21.8	18.5
Unemployment rate, medium educated 15+ (ISCED 3-4)	20.3	20.6	20.4	20.8	18.8	19.4	19.4	19.1	16.1
Unemployment rate, high educated 15+ (ISCED 5-8)	10.8	13.1	10.6	10.3	10.0	9.8	12.4	8.9	7.5

	2010	2011	2012	2013	2014	2015	2016	2017 Q1	2017 Q2
Female									
Total population (1,000)	314	314	314	314	314	315	315	.	.
Working-age population aged 15+ (1,000)	267	257	257	257	256	256	256	256	256
Employment aged 15+ (1,000)	90	86	89	91	97	101	101	99	103
Employment rate (% population aged 15+)	33.8	33.6	34.6	35.4	37.8	39.4	39.4	38.7	40.1
Employment rate (% population aged 15-64)	41.0	40.7	41.6	42.8	45.3	46.9	46.8	45.8	47.8
Employment rate (% population aged 20-64)	45.4	45.0	46.0	47.5	49.7	51.5	51.3	50.4	52.5
Employment rate (% population aged 15-24)	11.0	10.2	12.9	12.2	15.8	17.7	19.3	17.0	18.3
Employment rate (% population aged 25-29)	49.6	48.2	50.1	54.9	56.8	57.7	58.3	52.7	58.1
Employment rate (% population aged 25-54)	55.6	55.3	55.3	56.8	59.6	60.6	59.5	58.7	60.1
Employment rate (% population aged 55-64)	25.2	24.6	26.7	29.4	29.7	32.3	33.2	33.2	37.9
Employment rate for low skilled 15-64 (ISCED 0-2)	13.2	9.5	11.5	10.1	11.8	15.4	16.9	15.4	19.8
Employment rate for medium skilled 15-64 (ISCED 3-4)	43.3	44.3	44.4	44.0	46.1	47.5	46.2	44.7	45.8
Employment rate for high skilled 15-64 (ISCED 5-8)	74.9	73.1	74.1	79.0	77.7	77.8	76.5	77.8	79.5
Self-employed (% of total employment)	8.8	10.4	10.1	9.3	11.3	12.3	12.6	12.3	12.1
Part-time employment (% of total employment)	4.5	4.9	4.5	2.6	5.7	6.4	4.4	5.5	6.0
Temporary employment (% of total employees)	18.2	19.0	21.7	26.1	26.1	31.5	32.1	25.7	30.7
Activity rate (% population aged 15+)	42.6	42.1	43.4	43.6	46.2	47.6	47.6	47.2	47.5
Activity rate (% population aged 15-64)	51.7	50.9	52.3	52.8	55.4	56.9	56.6	56.1	56.8
Activity rate (% population aged 15-24)	20.8	16.7	21.7	19.8	24.4	27.0	29.5	25.0	26.7
Activity rate (% population aged 25-54)	69.0	68.8	69.1	69.5	72.4	72.8	71.4	72.0	71.4
Activity rate (% population aged 55-64)	27.0	27.9	29.1	32.8	32.9	35.9	35.9	35.9	39.5
Unemployment aged 15+ (1,000)	23	22	23	21	22	21	21	22	19
Unemployment rate (% labor force 15+)	20.6	20.0	20.3	18.8	18.2	17.3	17.1	17.9	15.6
Youth unemployment rate (% labor force 15-24)	47.1	39.3	40.7	38.5	35.4	34.5	34.6	31.7	31.5
NEET rate (% population aged 15-24)	19.4	15.6	16.6	16.3	16.4	18.3	18.0	.	.
Long-term unemployment rate (% labor force 15+)	16.3	16.5	16.1	15.1	14.1	13.3	12.8	14.4	12.1
Share of long-term unemployed (% of total)	79.1	82.7	79.1	79.9	77.3	76.9	75.2	80.5	77.6
Unemployment rate, low educated 15+ (ISCED 0-2)	29.5	38.2	38.8	43.8	33.0	30.0	23.3	31.2	21.2
Unemployment rate, medium educated 15+ (ISCED 3-4)	22.1	20.4	21.6	20.4	21.1	19.0	19.6	19.9	18.3
Unemployment rate, high educated 15+ (ISCED 5-8)	13.6	13.8	11.3	9.4	9.9	10.6	11.4	11.7	9.7

Earnings and unit labor costs

	2010	2011	2012	2013	2014	2015	2016	2017 Q1	2017 Q2
Average monthly gross wages, NCU	715	722	727	726	723	725	751	765	766
nominal annual growth in %	11.2	1.0	0.7	-0.1	-0.4	0.3	3.6	3.8	1.8
real annual growth in % (CPI deflated)	10.6	-2.2	-3.2	-1.9	0.1	-1.1	3.5	1.3	-0.6
Average monthly gross wages, EUR	715	722	727	726	723	725	751	765	766
Average monthly gross wages, EUR (PPP)	1,478	1,497	1,485	1,465	1,470	1,502	1,523	.	.
Minimum wages as of January 1st									
Monthly gross minimum wages, NCU	.	.	.	.	288	288	288	.	.
Monthly gross minimum wages, EUR (ER)	.	.	.	.	288	288	288	.	.
Monthly gross minimum wages, EUR (PPP)	.	.	.	.	528	546	535	.	.
Unit labor costs (ULC)									
ULC, NCU in %	.	.	6.2	-3.1	4.8	-0.6	1.8	.	.
ULC, EUR in %	.	.	6.2	-3.1	4.8	-0.6	1.8	.	.

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	2011	2012	2013	2014	2015	2016	2017 Q1	2017 Q2
Total									
Total population (1,000)	7,291	7,237	7,201	7,167	7,132	7,095	7,058	.	.
Working-age population aged 15+ (1,000)	6,335	6,298	6,268	6,121	6,099	6,060	6,018	5,995	5,988
Employment aged 15+ (1,000)	2,538	2,390	2,362	2,444	2,559	2,574	2,719	2,652	2,881
Employment rate (% population aged 15+)	40.1	37.9	37.7	39.9	42.0	42.5	45.2	44.2	48.1
Employment rate (% population aged 15-64)	48.2	46.4	46.4	48.5	50.7	52.0	55.2	54.3	58.8
Employment rate (% population aged 20-64)	52.4	50.4	50.0	52.3	54.7	55.9	59.1	58.3	63.0
Employment rate (% population aged 15-24)	15.4	14.2	14.7	14.7	14.9	16.6	19.7	17.6	20.8
Employment rate (% population aged 25-29)	48.8	48.9	50.7	49.2	52.4	53.5	56.2	53.9	60.5
Employment rate (% population aged 25-54)	63.7	62.1	61.7	63.3	65.9	67.1	69.2	68.1	72.9
Employment rate (% population aged 55-64)	33.6	32.1	32.3	35.1	36.7	37.3	42.7	42.9	47.4
Employment rate for low skilled 15-64 (ISCED 0-2)	32.0	30.5	30.4	32.3	32.9	33.9	37.3	34.3	39.6
Employment rate for medium skilled 15-64 (ISCED 3-4)	50.7	48.5	47.9	50.5	52.3	53.3	56.5	54.9	60.4
Employment rate for high skilled 15-64 (ISCED 5-8)	70.3	68.4	67.5	66.9	70.1	70.9	72.5	74.9	76.9
Self-employed (% of total employment)	23.8	21.7	22.4	24.1	23.4	22.0	23.7	24.6	26.1
Part-time employment (% of total employment)	8.6	8.2	7.8	10.5	12.2	11.8	13.0	12.4	12.9
Temporary employment (% of total employees)	11.9	12.9	14.6	16.1	18.8	21.8	23.7	20.9	22.7
Activity rate (% population aged 15+)	49.8	49.4	49.7	51.5	51.9	51.6	53.3	51.8	54.5
Activity rate (% population aged 15-64)	60.4	61.0	61.6	63.2	63.3	63.6	65.6	64.0	67.0
Activity rate (% population aged 15-24)	28.7	29.0	30.2	29.3	28.5	29.2	30.3	28.0	29.2
Activity rate (% population aged 25-54)	78.3	80.0	80.2	81.1	81.1	81.0	82.0	79.9	82.9
Activity rate (% population aged 55-64)	38.3	38.0	39.3	41.7	41.9	42.1	46.9	46.8	50.9
Unemployment aged 15+ (1,000)	615	724	755	708	608	552	489	453	384
Unemployment rate (% labor force 15+)	19.5	23.3	24.2	22.5	19.2	17.7	15.3	14.6	11.8
Youth unemployment rate (% labor force 15-24)	46.5	51.2	51.4	49.9	47.5	43.2	34.9	37.1	28.9
NEET rate (% population aged 15-24)	21.4	21.8	21.9	20.0	20.4	19.9	17.7	.	.
Long-term unemployment rate (% labor force 15+)	13.3	16.9	18.7	16.9	12.8	11.3	9.9	8.8	7.4
Share of long-term unemployed (% of total)	68.4	72.9	77.1	75.1	66.9	64.0	65.1	60.1	62.6
Unemployment rate, low educated 15+ (ISCED 0-2)	16.2	21.7	23.4	20.6	17.3	15.0	12.4	12.6	8.0
Unemployment rate, medium educated 15+ (ISCED 3-4)	22.5	26.1	26.8	24.5	21.2	19.4	16.7	16.4	12.9
Unemployment rate, high educated 15+ (ISCED 5-8)	13.4	16.3	17.3	18.6	15.4	15.3	13.9	12.0	11.7
Male									
Total population (1,000)	3,546	3,524	3,507	3,490	3,473	3,455	3,438	.	.
Working-age population aged 15+ (1,000)	3,046	3,037	3,028	2,956	2,941	2,922	2,902	2,891	2,888
Employment aged 15+ (1,000)	1,457	1,386	1,373	1,413	1,457	1,466	1,532	1,488	1,607
Employment rate (% population aged 15+)	47.8	45.6	45.3	47.8	49.5	50.2	52.8	51.5	55.6
Employment rate (% population aged 15-64)	55.6	53.6	53.6	56.2	57.7	59.1	61.9	60.6	65.2
Employment rate (% population aged 20-64)	60.3	57.9	57.8	60.6	62.3	63.6	66.3	65.2	69.9
Employment rate (% population aged 15-24)	19.0	19.1	19.6	19.3	19.0	21.2	24.9	21.5	26.2
Employment rate (% population aged 25-29)	55.4	55.5	56.3	57.1	58.4	59.3	61.7	60.2	66.0
Employment rate (% population aged 25-54)	71.0	68.3	68.3	70.9	72.4	73.3	74.8	73.7	78.5
Employment rate (% population aged 55-64)	44.7	43.5	43.1	45.8	47.7	48.9	53.8	53.5	57.3
Employment rate for low skilled 15-64 (ISCED 0-2)	42.2	40.4	39.8	41.3	41.7	42.3	44.3	41.0	47.1
Employment rate for medium skilled 15-64 (ISCED 3-4)	58.2	55.3	55.1	58.5	59.5	61.0	64.2	62.4	66.9
Employment rate for high skilled 15-64 (ISCED 5-8)	69.2	69.5	69.8	69.9	73.6	74.3	75.8	78.0	81.5
Self-employed (% of total employment)	30.0	27.7	28.7	30.9	30.8	29.9	31.0	31.1	31.1
Part-time employment (% of total employment)	8.1	7.5	7.2	10.0	11.6	11.2	12.0	11.5	11.9
Temporary employment (% of total employees)	12.9	14.2	16.2	17.3	20.0	23.2	25.8	21.6	23.9
Activity rate (% population aged 15+)	58.6	58.8	59.0	60.4	60.7	60.3	61.8	60.0	62.5
Activity rate (% population aged 15-64)	68.8	69.6	70.3	71.6	71.3	71.6	73.1	71.3	73.8
Activity rate (% population aged 15-24)	35.2	36.7	37.9	35.3	35.3	35.4	36.8	33.2	35.1
Activity rate (% population aged 25-54)	85.4	86.7	87.1	88.3	87.4	87.3	87.7	85.8	88.2
Activity rate (% population aged 55-64)	51.7	52.1	53.1	55.4	55.2	55.9	59.6	59.2	62.4
Unemployment aged 15+ (1,000)	329	401	414	372	327	296	262	248	198
Unemployment rate (% labor force 15+)	18.4	22.4	23.2	20.8	18.3	16.8	14.6	14.3	11.0
Youth unemployment rate (% labor force 15-24)	45.9	48.0	48.3	45.2	46.1	40.1	32.2	35.5	25.2
NEET rate (% population aged 15-24)	23.4	23.4	22.3	20.0	21.0	20.2	17.2	.	.
Long-term unemployment rate (% labor force 15+)	12.3	16.1	17.6	15.4	12.0	10.6	9.5	8.6	6.9
Share of long-term unemployed (% of total)	66.9	71.8	76.0	74.2	65.7	63.0	65.1	60.5	63.2
Unemployment rate, low educated 15+ (ISCED 0-2)	15.2	21.0	22.9	19.5	16.9	15.8	13.6	13.8	8.4
Unemployment rate, medium educated 15+ (ISCED 3-4)	20.7	24.5	25.3	22.2	20.1	17.9	15.4	15.6	12.1
Unemployment rate, high educated 15+ (ISCED 5-8)	13.4	15.9	15.8	17.5	13.7	14.1	12.8	11.1	9.5

	2010	2011	2012	2013	2014	2015	2016	2017 Q1	2017 Q2
Female									
Total population (1,000)	3,745	3,713	3,695	3,677	3,659	3,640	3,621	.	.
Working-age population aged 15+ (1,000)	3,289	3,261	3,240	3,166	3,158	3,138	3,115	3,104	3,100
Employment aged 15+ (1,000)	1,081	1,004	989	1,031	1,102	1,108	1,188	1,164	1,274
Employment rate (% population aged 15+)	32.9	30.8	30.5	32.6	34.9	35.3	38.1	37.5	41.1
Employment rate (% population aged 15-64)	40.9	39.3	39.0	40.9	43.7	44.9	48.4	48.0	52.3
Employment rate (% population aged 20-64)	44.6	42.7	42.2	44.1	47.1	48.2	51.9	51.4	56.0
Employment rate (% population aged 15-24)	11.6	8.9	9.5	9.7	10.6	11.7	14.2	13.5	15.0
Employment rate (% population aged 25-29)	41.3	41.3	44.1	41.3	46.1	47.5	50.4	47.3	54.8
Employment rate (% population aged 25-54)	56.5	55.8	54.9	55.8	59.5	60.9	63.6	62.5	67.4
Employment rate (% population aged 55-64)	22.9	21.2	22.0	25.1	26.6	26.6	32.5	33.3	38.2
Employment rate for low skilled 15-64 (ISCED 0-2)	23.9	22.5	22.7	24.9	25.8	26.7	31.4	28.6	33.4
Employment rate for medium skilled 15-64 (ISCED 3-4)	42.0	40.5	39.6	41.4	44.0	44.4	47.5	46.4	52.7
Employment rate for high skilled 15-64 (ISCED 5-8)	71.1	67.4	65.6	64.3	67.4	68.3	70.0	72.5	73.4
Self-employed (% of total employment)	15.3	13.4	13.6	14.9	13.7	11.6	14.1	16.4	19.8
Part-time employment (% of total employment)	9.3	9.1	8.5	11.1	13.0	12.7	14.2	13.5	14.2
Temporary employment (% of total employees)	10.6	11.2	12.6	14.7	17.4	20.2	21.4	20.1	21.3
Activity rate (% population aged 15+)	41.6	40.7	41.1	43.2	43.8	43.5	45.4	44.1	47.1
Activity rate (% population aged 15-64)	52.2	52.3	52.9	54.8	55.3	55.6	58.1	56.8	60.3
Activity rate (% population aged 15-24)	22.0	20.8	22.0	22.9	21.3	22.6	23.4	22.4	23.0
Activity rate (% population aged 25-54)	71.3	73.2	73.2	73.9	74.8	74.6	76.1	73.8	77.5
Activity rate (% population aged 55-64)	25.5	24.4	26.0	28.8	29.6	29.5	35.2	35.5	40.4
Unemployment aged 15+ (1,000)	285	324	341	336	281	256	228	205	186
Unemployment rate (% labor force 15+)	20.9	24.4	25.6	24.6	20.3	18.8	16.1	15.0	12.7
Youth unemployment rate (% labor force 15-24)	47.5	57.1	57.0	57.5	50.0	48.2	39.5	39.7	34.8
NEET rate (% population aged 15-24)	19.3	20.1	21.5	19.9	19.9	19.6	18.3	.	.
Long-term unemployment rate (% labor force 15+)	14.6	18.1	20.1	18.7	13.9	12.2	10.5	8.9	7.9
Share of long-term unemployed (% of total)	70.1	74.2	78.4	76.2	68.2	65.2	65.1	59.6	62.0
Unemployment rate, low educated 15+ (ISCED 0-2)	17.6	22.5	24.3	22.0	17.9	13.9	11.1	11.2	7.5
Unemployment rate, medium educated 15+ (ISCED 3-4)	25.4	28.4	29.3	28.0	23.0	21.6	18.6	17.6	14.1
Unemployment rate, high educated 15+ (ISCED 5-8)	13.5	16.7	18.6	19.5	16.8	16.4	14.8	12.7	13.5

Earnings and unit labor costs

	2010	2011	2012	2013	2014	2015	2016	2017 Q1	2017 Q2
Average monthly gross wages, NCU	47,450	52,733	57,430	60,708	61,426	61,145	63,474	62,591	66,988
nominal annual growth in %	7.5	11.1	8.9	5.7	1.2	-0.5	3.8	4.3	4.7
real annual growth in % (CPI deflated)	0.6	0.1	1.0	-1.9	-1.7	-2.4	2.6	1.2	1.0
Average monthly gross wages, EUR	460	517	508	537	524	506	516	505	545
Average monthly gross wages, EUR (PPP)	1,042	1,095	1,142	1,134	1,135	1,130	1,128	.	.
Minimum wages as of January 1st									
Monthly gross minimum wages, NCU	21,323	22,459	24,067	27,206	26,976	28,431	28,403	.	.
Monthly gross minimum wages, EUR (ER)	222	213	230	239	235	235	234	.	.
Monthly gross minimum wages, EUR (PPP)	411	411	430	458	455	484	464	.	.
Unit labor costs (ULC)									
ULC, NCU in %	.	3.2	8.8	6.6	7.9	-0.6	6.7	.	.
ULC, EUR in %	.	4.3	-2.0	6.6	4.1	-3.5	4.6	.	.

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.

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	2011	2012	2013	2014	2015	2016	2017 Q1	2017 Q2
Total									
Total population (1,000)	18,497	18,456	18,427	18,397	18,350	18,276	18,223	.	.
Working-age population aged 15+ (1,000)	.	.	14,515	14,465	14,455	14,432	14,335	.	14,251
Employment aged 15+ (1,000)	.	.	5,471	5,510	5,639	5,708	5,959	.	6,218
Employment rate (% population aged 15+)	.	.	37.7	38.1	39.0	39.6	41.6	.	43.6
Employment rate (% population aged 15-64)	.	.	44.4	44.8	45.9	46.9	49.3	.	51.9
Employment rate (% population aged 20-64)	.	.	.	.	.	51.4	53.9	.	.
Employment rate (% population aged 15-24)	.	.	15.6	14.6	14.2	15.3	17.1	.	18.8
Employment rate (% population aged 25-29)	.	.	.	.	.	49.1	51.6	.	.
Employment rate (% population aged 25-54)	.	.	57.6	58.2	59.7	60.4	62.6	.	.
Employment rate (% population aged 55-64)	.	.	35.3	36.4	37.3	38.1	41.1	.	.
Employment rate for low skilled 15-64 (ISCED 0-2)	.	.	30.9	30.2	30.5	31.8	34.1	.	.
Employment rate for medium skilled 15-64 (ISCED 3-4)	.	.	47.8	48.4	49.3	49.5	51.9	.	.
Employment rate for high skilled 15-64 (ISCED 5-8)	.	.	67.7	67.8	68.8	68.8	70.0	.	.
Self-employed (% of total employment)	.	.	.	.	.	22.0	24.0	.	25.3
Part-time employment (% of total employment)	.	.	.	.	.	12.5	12.7	.	12.2
Temporary employment (% of total employees)	.	.	.	.	.	.	.	.	.
Activity rate (% population aged 15+)	.	.	49.5	49.7	50.3	50.2	51.1	.	52.1
Activity rate (% population aged 15-64)	.	.	58.8	58.9	59.6	59.8	61.0	.	62.3
Activity rate (% population aged 15-24)	.	.	30.4	28.2	28.5	29.4	29.5	.	30.1
Activity rate (% population aged 25-54)	.	.	74.5	74.9	75.7	75.5	76.3	.	.
Activity rate (% population aged 55-64)	.	.	41.8	43.0	43.2	43.8	46.4	.	.
Unemployment aged 15+ (1,000)	.	.	1,721	1,682	1,628	1,532	1,369	.	1,201
Unemployment rate (% labor force 15+)	.	.	23.9	23.4	22.4	21.2	18.7	.	16.2
Youth unemployment rate (% labor force 15-24)	.	.	48.6	48.3	50.2	47.7	42.1	.	37.6
NEET rate (% population aged 15-24)	.	.	.	.	.	25.4	23.5	.	.
Long-term unemployment rate (% labor force 15+)	.	.	18.6	18.0	16.4	15.2	13.5	.	11.7
Share of long-term unemployed (% of total)	.	.	77.5	77.0	73.4	72.0	72.2	.	72.2
Unemployment rate, low educated 15+ (ISCED 0-2)	.	.	22.6	22.6	21.9	19.8	17.1	.	14.3
Unemployment rate, medium educated 15+ (ISCED 3-4)	.	.	26.6	25.6	24.5	23.3	20.4	.	17.7
Unemployment rate, high educated 15+ (ISCED 5-8)	.	.	17.7	18.0	17.1	17.1	16.0	.	14.3.
Male									
Total population (1,000)	9,118	9,100	9,090	9,079	9,059	9,020	8,989	.	.
Working-age population aged 15+ (1,000)	.	.	7,122	7,055	7,058	7,079	7,042	.	7,008
Employment aged 15+ (1,000)	.	.	3,269	3,273	3,342	3,378	3,517	.	3,656
Employment rate (% population aged 15+)	.	.	45.9	46.4	47.4	47.7	49.9	.	52.2
Employment rate (% population aged 15-64)	.	.	52.8	53.4	54.4	55.2	57.7	.	60.5
Employment rate (% population aged 20-64)	.	.	.	.	.	60.6	63.2	.	.
Employment rate (% population aged 15-24)	.	.	19.8	18.7	17.8	19.5	21.4	.	23.4.
Employment rate (% population aged 25-29)	.	.	.	.	.	55.8	58.6	.	.
Employment rate (% population aged 25-54)	.	.	66.9	67.9	69.1	69.4	71.6	.	.
Employment rate (% population aged 55-64)	.	.	46.8	47.4	49.0	50.0	53.2	.	.
Employment rate for low skilled 15-64 (ISCED 0-2)	.	.	40.6	40.3	40.7	41.7	44.1	.	.
Employment rate for medium skilled 15-64 (ISCED 3-4)	.	.	55.2	56.2	57.0	57.3	60.1	.	.
Employment rate for high skilled 15-64 (ISCED 5-8)	.	.	71.1	71.1	72.2	72.5	73.3	.	.
Self-employed (% of total employment)	.	.	.	.	.	28.4	29.6	.	29.8
Part-time employment (% of total employment)	.	.	.	.	.	11.0	11.1	.	10.6
Temporary employment (% of total employees)	.	.	.	.	.	.	.	.	.
Activity rate (% population aged 15+)	.	.	60.0	60.1	60.8	60.3	61.2	.	62.2
Activity rate (% population aged 15-64)	.	.	69.5	69.7	70.3	70.2	71.2	.	72.7
Activity rate (% population aged 15-24)	.	.	38.0	35.3	35.3	36.3	36.1	.	36.9
Activity rate (% population aged 25-54)	.	.	85.5	86.3	86.8	86.1	86.6	.	.
Activity rate (% population aged 55-64)	.	.	56.2	56.9	57.8	58.2	60.8	.	.
Unemployment aged 15+ (1,000)	.	.	1,006	969	946	890	794	.	705
Unemployment rate (% labor force 15+)	.	.	23.5	22.8	22.1	20.9	18.4	.	16.2
Youth unemployment rate (% labor force 15-24)	.	.	48.0	46.9	49.5	46.3	40.7	.	36.6
NEET rate (% population aged 15-24)	.	.	.	.	.	25.0	23.0	.	.
Long-term unemployment rate (% labor force 15+)	.	.	18.0	17.4	15.9	15.0	13.3	.	11.7
Share of long-term unemployed (% of total)	.	.	76.6	76.3	72.3	71.9	72.4	.	72.5
Unemployment rate, low educated 15+ (ISCED 0-2)	.	.	24.4	24.0	23.3	21.7	19.0	.	16.7
Unemployment rate, medium educated 15+ (ISCED 3-4)	.	.	25.3	24.2	23.5	22.1	19.5	.	17.3
Unemployment rate, high educated 15+ (ISCED 5-8)	.	.	15.1	16.2	15.2	15.2	14.2	.	11.8

	2010	2011	2012	2013	2014	2015	2016	2017 Q1	2017 Q2
Female								.	.
Total population (1,000)	9,379	9,359	9,337	9,318	9,291	9,255	9,234	.	.
Working-age population aged 15+ (1,000)	.	.	7,393	7,410	7,397	7,353	7,294	.	7,243
Employment aged 15+ (1,000)	.	.	2,201	2,238	2,297	2,331	2,442	.	2,563
Employment rate (% population aged 15+)	.	.	29.8	30.2	31.1	31.7	33.5	.	35.4
Employment rate (% population aged 15-64)	.	.	36.0	36.3	37.5	38.5	40.8	.	43.2
Employment rate (% population aged 20-64)	.	.	.	.	.	42.2	44.6	.	.
Employment rate (% population aged 15-24)	.	.	11.1	10.2	10.2	10.9	12.3	.	13.7
Employment rate (% population aged 25-29)	.	.	.	.	.	41.6	43.9	.	.
Employment rate (% population aged 25-54)	.	.	48.4	48.6	50.3	51.5	53.6	.	.
Employment rate (% population aged 55-64)	.	.	24.1	26.0	26.2	26.7	29.5	.	.
Employment rate for low skilled 15-64 (ISCED 0-2)	.	.	23.5	22.7	22.7	24.1	26.4	.	.
Employment rate for medium skilled 15-64 (ISCED 3-4)	.	.	38.5	38.7	39.6	39.7	41.5	.	.
Employment rate for high skilled 15-64 (ISCED 5-8)	.	.	64.5	64.9	65.9	65.8	67.2	.	.
Self-employed (% of total employment)	.	.	.	.	.	12.7	15.9	.	18.9
Part-time employment (% of total employment)	.	.	.	.	.	14.7	15.1	.	14.4
Temporary employment (% of total employees)	.	.	.	.	.	.	.	.	.
Activity rate (% population aged 15+)	.	.	39.5	39.8	40.3	40.4	41.4	.	42.2
Activity rate (% population aged 15-64)	.	.	48.0	48.1	48.9	49.4	50.7	.	51.9
Activity rate (% population aged 15-24)	.	.	22.2	20.8	21.1	21.8	22.2	.	22.5
Activity rate (% population aged 25-54)	.	.	63.5	63.7	64.7	65.0	65.9	.	.
Activity rate (% population aged 55-64)	.	.	27.8	29.7	29.5	30.0	32.6	.	.
Unemployment aged 15+ (1,000)	.	.	715	713	681	642	575	.	496
Unemployment rate (% labor force 15+)	.	.	24.5	24.2	22.9	21.6	19.1	.	16.2
Youth unemployment rate (% labor force 15-24)	.	.	49.8	50.9	51.5	50.3	44.6	.	39.3
NEET rate (% population aged 15-24)	.	.	.	.	.	25.7	24.1	.	.
Long-term unemployment rate (% labor force 15+)	.	.	19.3	18.8	17.1	15.5	13.7	.	11.6
Share of long-term unemployed (% of total)	.	.	78.9	78.0	74.9	72.0	72.1	.	71.7
Unemployment rate, low educated 15+ (ISCED 0-2)	.	.	20.0	20.8	19.9	16.9	14.5	.	11.2
Unemployment rate, medium educated 15+ (ISCED 3-4)	.	.	28.8	28.1	26.4	25.3	22.1	.	18.5.
Unemployment rate, high educated 15+ (ISCED 5-8)	.	.	20.2	19.6	18.8	18.8	17.7	.	16.5

Earnings and unit labor costs

	2010	2011	2012	2013	2014	2015	2016	2017 Q1	2017 Q2
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	.	.
Average monthly gross wages, EUR (PPP)	.	.	1,088	1,083	1,126	1,137	1,123	.	.
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	2.3	.	.

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 is a weighted average with employment data from LFS.

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

Austria: Labor market indicators

	2010	2011	2012	2013	2014	2015	2016	2017 Q1	2017 Q2
Total									
Total population (1,000)	8,363	8,392	8,430	8,479	8,542	8,633	8,731	.	.
Working-age population aged 15+ (1,000)	6,369	6,398	6,440	6,486	6,527	6,555	6,612	6,607	6,618
Employment aged 15+ (1,000)	4,004	4,040	4,071	4,092	4,098	4,133	4,204	4,167	4,247
Employment rate (% population aged 15+)	62.9	63.1	63.2	63.1	62.8	63.1	63.6	63.1	64.2
Employment rate (% population aged 15-64)	70.8	71.1	71.4	71.4	71.1	71.1	71.5	71.0	72.2
Employment rate (% population aged 20-64)	73.9	74.2	74.4	74.6	74.2	74.3	74.8	74.2	75.7
Employment rate (% population aged 15-24)	52.8	53.9	53.7	53.1	52.1	51.4	51.0	49.4	50.0
Employment rate (% population aged 25-29)	79.4	80.4	81.4	80.4	79.2	80.2	80.9	79.2	79.8
Employment rate (% population aged 25-54)	83.3	84.1	84.3	84.0	83.4	83.5	83.6	82.9	84.4
Employment rate (% population aged 55-64)	41.2	39.9	41.6	43.8	45.1	46.3	49.2	49.7	50.8
Employment rate for low skilled 15-64 (ISCED 0-2)	48.3	49.0	48.3	47.3	47.5	47.2	47.3	44.8	46.0
Employment rate for medium skilled 15-64 (ISCED 3-4)	75.7	75.7	75.8	76.2	73.8	73.5	73.8	73.2	74.7
Employment rate for high skilled 15-64 (ISCED 5-8)	84.6	85.3	86.2	85.3	83.3	83.3	84.0	84.2	85.0
Self-employed (% of total employment)	11.6	11.2	11.1	11.3	11.2	11.3	11.1	11.0	10.7
Part-time employment (% of total employment)	25.1	25.1	25.8	26.7	27.7	28.0	28.5	29.2	28.8
Temporary employment (% of total employees)	9.4	9.5	9.3	9.2	9.1	9.1	9.0	9.0	9.0
Activity rate (% population aged 15+)	66.1	66.2	66.5	66.7	66.5	66.9	67.7	67.1	67.8
Activity rate (% population aged 15-64)	74.4	74.6	75.1	75.5	75.4	75.5	76.2	75.5	76.3
Activity rate (% population aged 15-24)	58.3	59.2	59.2	58.8	58.0	57.4	57.5	55.2	54.9
Activity rate (% population aged 25-54)	87.1	87.6	88.1	88.3	88.0	88.0	88.4	87.8	88.9
Activity rate (% population aged 55-64)	42.2	41.4	43.1	45.5	46.9	48.6	51.7	52.3	53.2
Unemployment aged 15+ (1,000)	203	194	209	231	245	252	270	264	241
Unemployment rate (% labor force 15+)	4.8	4.6	4.9	5.4	5.6	5.7	6.0	6.0	5.4
Youth unemployment rate (% labor force 15-24)	9.5	8.9	9.4	9.7	10.3	10.6	11.2	10.4	9.0
NEET rate (% population aged 15-24)	7.4	7.3	6.8	7.3	7.7	7.5	7.7	.	.
Long-term unemployment rate (% labor force 15+)	1.2	1.2	1.2	1.3	1.5	1.7	1.9	1.9	1.8
Share of long-term unemployed (% of total)	25.4	26.3	24.9	24.6	27.2	29.2	32.3	32.0	32.8
Unemployment rate, low educated 15+ (ISCED 0-2)	9.2	9.1	9.8	10.3	11.4	11.2	12.7	14.7	12.9
Unemployment rate, medium educated 15+ (ISCED 3-4)	4.4	4.0	4.4	4.7	5.0	5.4	5.8	5.3	4.9
Unemployment rate, high educated 15+ (ISCED 5-8)	2.5	2.6	2.4	3.5	4.0	3.9	3.6	3.4	3.1
Male									
Total population (1,000)	4,073	4,089	4,111	4,140	4,175	4,230	4,291	.	.
Working-age population aged 15+ (1,000)	3,139	3,151	3,174	3,198	3,221	3,242	3,282	3,275	3,283
Employment aged 15+ (1,000)	2,139	2,154	2,163	2,171	2,164	2,183	2,223	2,183	2,248
Employment rate (% population aged 15+)	68.1	68.4	68.2	67.9	67.2	67.3	67.7	66.6	68.5
Employment rate (% population aged 15-64)	76.0	76.2	76.2	76.0	75.3	75.1	75.4	74.3	76.2
Employment rate (% population aged 20-64)	79.0	79.2	79.3	79.1	78.3	78.4	78.7	77.5	79.9
Employment rate (% population aged 15-24)	56.6	58.1	57.1	56.4	54.3	54.0	52.9	50.4	51.0
Employment rate (% population aged 25-29)	82.9	84.1	84.1	82.2	81.3	81.6	82.1	79.3	81.0
Employment rate (% population aged 25-54)	87.7	88.4	88.3	87.5	86.6	86.6	86.6	85.2	87.7
Employment rate (% population aged 55-64)	49.9	48.2	50.2	52.8	54.3	54.1	57.6	58.3	59.9
Employment rate for low skilled 15-64 (ISCED 0-2)	53.9	55.0	53.5	52.0	51.7	51.5	51.7	48.8	49.7
Employment rate for medium skilled 15-64 (ISCED 3-4)	79.3	79.3	79.2	79.7	77.5	76.7	77.1	75.5	78.7
Employment rate for high skilled 15-64 (ISCED 5-8)	88.4	88.5	89.4	88.1	85.4	85.8	86.2	86.7	87.5
Self-employed (% of total employment)	14.1	13.7	13.5	13.7	13.7	13.7	13.6	13.6	13.1
Part-time employment (% of total employment)	8.9	8.7	8.9	10.0	10.6	10.8	11.5	11.6	11.6
Temporary employment (% of total employees)	9.8	9.6	9.3	9.4	9.2	9.1	8.9	9.0	8.8
Activity rate (% population aged 15+)	71.7	71.6	71.7	71.7	71.4	71.7	72.4	71.4	72.7
Activity rate (% population aged 15-64)	80.0	79.9	80.2	80.4	80.0	80.1	80.7	79.6	81.0
Activity rate (% population aged 15-24)	62.6	63.6	63.1	62.3	60.7	60.7	60.2	57.3	56.7
Activity rate (% population aged 25-54)	91.9	92.0	92.3	92.1	91.5	91.6	91.8	90.7	92.7
Activity rate (% population aged 55-64)	51.4	50.3	52.3	55.1	56.8	57.4	61.2	61.6	63.0
Unemployment aged 15+ (1,000)	113	103	113	124	135	142	153	155	139
Unemployment rate (% labor force 15+)	5.0	4.6	5.0	5.4	5.9	6.1	6.5	6.6	5.8
Youth unemployment rate (% labor force 15-24)	9.6	8.8	9.5	9.4	10.6	11.1	12.1	12.2	10.0
NEET rate (% population aged 15-24)	7.2	7.3	6.6	7.2	8.0	7.7	8.0	.	.
Long-term unemployment rate (% labor force 15+)	1.4	1.3	1.3	1.4	1.7	1.9	2.2	2.2	2.0
Share of long-term unemployed (% of total)	27.9	27.8	26.0	25.9	28.2	31.8	34.3	33.9	34.7
Unemployment rate, low educated 15+ (ISCED 0-2)	10.6	9.9	11.0	11.6	13.0	12.9	14.7	17.1	14.7
Unemployment rate, medium educated 15+ (ISCED 3-4)	4.6	4.1	4.6	4.9	5.3	5.8	6.1	6.2	5.3
Unemployment rate, high educated 15+ (ISCED 5-8)	2.3	2.2	2.0	2.9	3.8	4.0	3.8	3.2	3.3

	2010	2011	2012	2013	2014	2015	2016	2017 Q1	2017 Q2
Female									
Total population (1,000)	4,291	4,303	4,319	4,340	4,366	4,403	4,440	.	.
Working-age population aged 15+ (1,000)	3,230	3,246	3,266	3,288	3,306	3,313	3,330	3,332	3,335
Employment aged 15+ (1,000)	1,865	1,886	1,909	1,921	1,934	1,950	1,981	1,984	1,998
Employment rate (% population aged 15+)	57.7	58.1	58.4	58.4	58.5	58.9	59.5	59.6	59.9
Employment rate (% population aged 15-64)	65.7	66.1	66.7	66.9	66.9	67.1	67.7	67.6	68.1
Employment rate (% population aged 20-64)	68.8	69.2	69.6	70.0	70.1	70.2	70.9	71.0	71.5
Employment rate (% population aged 15-24)	48.9	49.8	50.3	49.7	49.9	48.7	49.0	48.5	49.0
Employment rate (% population aged 25-29)	75.9	76.7	78.6	78.8	77.2	78.7	79.8	79.1	78.6
Employment rate (% population aged 25-54)	78.9	79.8	80.4	80.5	80.3	80.3	80.6	80.6	81.1
Employment rate (% population aged 55-64)	33.0	32.2	33.5	35.2	36.4	38.8	41.1	41.6	42.0
Employment rate for low skilled 15-64 (ISCED 0-2)	44.3	44.6	44.5	43.9	44.3	44.1	43.8	41.6	43.0
Employment rate for medium skilled 15-64 (ISCED 3-4)	71.9	71.9	72.2	72.6	69.8	69.9	70.1	70.6	70.3
Employment rate for high skilled 15-64 (ISCED 5-8)	80.1	81.4	82.5	82.1	81.3	80.7	81.8	81.8	82.5
Self-employed (% of total employment)	8.8	8.4	8.4	8.6	8.5	8.6	8.4	8.1	8.0
Part-time employment (% of total employment)	43.7	44.0	45.0	45.5	46.8	47.3	47.6	48.5	48.1
Temporary employment (% of total employees)	8.9	9.4	9.3	9.0	9.1	9.0	9.1	9.1	9.3
Activity rate (% population aged 15+)	60.5	60.9	61.4	61.7	61.8	62.2	63.0	62.8	63.0
Activity rate (% population aged 15-64)	68.9	69.3	70.1	70.7	70.8	70.9	71.7	71.4	71.6
Activity rate (% population aged 15-24)	54.0	54.8	55.4	55.3	55.4	54.1	54.6	53.0	53.2
Activity rate (% population aged 25-54)	82.4	83.2	84.0	84.5	84.5	84.4	84.9	84.9	85.0
Activity rate (% population aged 55-64)	33.6	33.0	34.5	36.4	37.5	40.2	42.7	43.3	43.8
Unemployment aged 15+ (1,000)	91	91	96	108	110	110	117	109	103
Unemployment rate (% labor force 15+)	4.6	4.6	4.8	5.3	5.4	5.3	5.6	5.2	4.9
Youth unemployment rate (% labor force 15-24)	9.4	9.1	9.2	10.0	9.9	10.0	10.2	8.4	7.8
NEET rate (% population aged 15-24)	7.7	7.2	7.0	7.4	7.4	7.3	7.4	.	.
Long-term unemployment rate (% labor force 15+)	1.0	1.1	1.1	1.2	1.4	1.4	1.7	1.5	1.5
Share of long-term unemployed (% of total)	22.4	24.5	23.7	23.1	25.9	25.9	29.7	29.4	30.2
Unemployment rate, low educated 15+ (ISCED 0-2)	8.0	8.3	8.8	9.3	10.0	9.6	10.9	12.3	11.2
Unemployment rate, medium educated 15+ (ISCED 3-4)	4.1	3.9	4.2	4.6	4.7	5.0	5.4	4.3	4.5
Unemployment rate, high educated 15+ (ISCED 5-8)	2.8	3.2	2.8	4.2	4.2	3.7	3.4	3.6	2.9

Earnings and unit labor costs

	2010	2011	2012	2013	2014	2015	2016	2017 Q1	2017 Q2
Average monthly gross wages, NCU	2,709	2,763	2,839	2,899	2,950	3,013	3,087	3,067	3,219
nominal annual growth in %	1.1	2.0	2.7	2.1	1.8	2.1	2.5	1.8	1.7
real annual growth in % (HICP deflated)	-0.6	-1.5	0.2	0.0	0.3	1.3	1.5	-0.3	-0.4
Average monthly gross wages, EUR	2,709	2,763	2,839	2,899	2,950	3,013	3,087	3,067	3,219
Average monthly gross wages, EUR (PPP)	2,461	2,507	2,636	2,671	2,721	2,847	2,839	.	.
Minimum wages as of January 1st									
Monthly gross minimum wages, NCU	.	.	.	.	.	.	.	.	.
Monthly gross minimum wages, EUR (ER)	.	.	.	.	.	.	.	.	.
Monthly gross minimum wages, EUR (PPP)	.	.	.	.	.	.	.	.	.
Unit labor costs (ULC)									
ULC, NCU in %	.	0.0	2.8	2.6	1.1	1.9	2.7	.	.
ULC, EUR in %	.	0.0	2.8	2.6	1.1	1.9	2.7	.	.

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	2011	2012	2013	2014	2015	2016	2017 Q1	2017 Q2
Total									
Total population (1,000)	7,396	7,348	7,306	7,265	7,224	7,178	7,128	.	.
Working-age population aged 15+ (1,000)	5,827	5,766	5,698	5,649	5,609	5,563	5,510	5,468	5,461
Employment aged 15+ (1,000)	3,073	2,962	2,931	2,932	2,978	3,029	3,014	3,034	3,168
Employment rate (% population aged 15+)	52.7	51.4	51.4	51.9	53.1	54.4	54.7	55.5	58.0
Employment rate (% population aged 15-64)	59.8	58.4	58.8	59.5	61.0	62.9	63.4	64.3	67.2
Employment rate (% population aged 20-64)	64.7	62.9	63.0	63.5	65.1	67.1	67.7	68.6	71.7
Employment rate (% population aged 15-24)	24.3	22.1	21.9	21.2	20.7	20.3	19.8	20.4	23.2
Employment rate (% population aged 25-29)	66.7	63.9	63.7	61.4	64.2	66.6	64.7	65.1	70.1
Employment rate (% population aged 25-54)	75.1	73.3	73.1	73.3	74.5	76.1	76.2	77.0	79.8
Employment rate (% population aged 55-64)	44.9	44.6	45.7	47.4	50.0	53.0	54.5	55.2	58.3
Employment rate for low skilled 15-64 (ISCED 0-2)	29.7	27.5	27.4	27.8	29.7	29.6	29.6	28.9	34.3
Employment rate for medium skilled 15-64 (ISCED 3-4)	65.3	63.5	63.4	63.6	65.2	67.2	67.8	69.5	72.1
Employment rate for high skilled 15-64 (ISCED 5-8)	82.7	81.2	81.1	80.7	81.7	84.0	84.2	84.6	85.7
Self-employed (% of total employment)	11.5	11.1	10.7	11.4	11.8	11.4	11.1	11.0	11.1
Part-time employment (% of total employment)	2.4	2.3	2.4	2.6	2.6	2.4	2.2	2.3	2.6
Temporary employment (% of total employees)	4.5	4.1	4.5	5.6	5.3	4.4	4.2	3.5	5.1
Activity rate (% population aged 15+)	58.8	57.9	58.6	59.6	59.9	59.9	59.2	59.6	61.9
Activity rate (% population aged 15-64)	66.7	65.9	67.1	68.4	69.0	69.3	68.7	69.2	71.8
Activity rate (% population aged 15-24)	31.2	29.4	30.4	29.6	27.2	26.0	23.9	23.4	26.8
Activity rate (% population aged 25-54)	82.9	81.9	82.3	83.1	83.3	83.2	82.0	82.5	85.0
Activity rate (% population aged 55-64)	49.3	48.9	51.1	54.1	56.6	58.0	58.8	59.3	61.9
Unemployment aged 15+ (1,000)	352	376	410	436	385	305	247	224	214
Unemployment rate (% labor force 15+)	10.3	11.3	12.3	13.0	11.4	9.2	7.6	6.9	6.3
Youth unemployment rate (% labor force 15-24)	21.9	25.0	28.1	28.4	23.8	21.7	17.2	12.7	13.2
NEET rate (% population aged 15-24)	21.0	21.8	21.5	21.6	20.2	19.3	18.2	.	.
Long-term unemployment rate (% labor force 15+)	4.7	6.3	6.8	7.4	6.9	5.6	4.5	3.7	3.5
Share of long-term unemployed (% of total)	46.1	55.7	55.2	57.3	60.4	61.2	59.1	54.4	55.3
Unemployment rate, low educated 15+ (ISCED 0-2)	22.7	26.4	28.0	29.9	28.3	25.1	22.2	22.5	18.4
Unemployment rate, medium educated 15+ (ISCED 3-4)	9.7	10.5	11.7	12.3	10.7	8.3	6.7	5.8	5.4
Unemployment rate, high educated 15+ (ISCED 5-8)	4.6	5.1	5.8	6.4	5.1	4.0	3.4	2.8	2.8
Male									
Total population (1,000)	3,601	3,578	3,556	3,535	3,513	3,490	3,464	.	.
Working-age population aged 15+ (1,000)	2,869	2,842	2,808	2,785	2,766	2,743	2,717	2,695	2,693
Employment aged 15+ (1,000)	1,638	1,565	1,540	1,545	1,575	1,606	1,606	1,623	1,679
Employment rate (% population aged 15+)	57.1	55.1	54.8	55.5	56.9	58.5	59.1	60.2	62.3
Employment rate (% population aged 15-64)	63.3	61.2	61.3	62.1	63.9	65.9	66.7	68.1	70.5
Employment rate (% population aged 20-64)	68.6	66.0	65.8	66.4	68.1	70.4	71.3	72.6	75.2
Employment rate (% population aged 15-24)	27.3	25.1	24.9	24.0	24.0	24.0	23.1	24.2	26.6
Employment rate (% population aged 25-29)	71.9	68.3	68.6	67.0	69.4	71.5	71.7	73.6	79.3
Employment rate (% population aged 25-54)	77.6	74.7	74.3	75.0	76.4	78.5	79.2	80.4	82.7
Employment rate (% population aged 55-64)	51.3	50.5	50.8	51.9	54.5	56.8	58.3	59.5	62.2
Employment rate for low skilled 15-64 (ISCED 0-2)	34.5	31.6	31.2	31.7	34.3	34.6	35.4	34.2	40.5
Employment rate for medium skilled 15-64 (ISCED 3-4)	70.0	67.4	66.9	67.2	69.1	71.5	72.3	74.4	76.2
Employment rate for high skilled 15-64 (ISCED 5-8)	85.3	83.1	82.9	83.1	84.5	86.7	86.7	87.7	88.4
Self-employed (% of total employment)	14.0	13.7	13.5	14.4	14.9	14.4	13.7	13.8	13.9
Part-time employment (% of total employment)	2.1	2.1	2.1	2.1	2.3	2.0	1.9	2.1	2.2
Temporary employment (% of total employees)	5.0	4.5	4.9	6.2	5.7	4.8	4.5	3.9	5.4
Activity rate (% population aged 15+)	64.1	62.8	63.4	64.4	64.9	64.9	64.3	64.6	67.0
Activity rate (% population aged 15-64)	71.1	69.9	71.0	72.2	72.9	73.2	72.7	73.1	75.7
Activity rate (% population aged 15-24)	35.5	33.9	35.3	34.3	31.5	30.5	28.0	27.4	30.9
Activity rate (% population aged 25-54)	86.1	84.5	84.8	85.7	86.2	86.4	85.7	86.0	88.4
Activity rate (% population aged 55-64)	56.6	55.8	57.3	59.9	62.5	62.7	63.4	64.1	66.6
Unemployment aged 15+ (1,000)	200	219	241	250	222	174	142	119	124
Unemployment rate (% labor force 15+)	10.9	12.3	13.5	13.9	12.3	9.8	8.1	6.8	6.9
Youth unemployment rate (% labor force 15-24)	23.2	26.0	29.5	30.2	23.8	21.2	17.4	11.7	13.9
NEET rate (% population aged 15-24)	20.3	21.8	21.6	22.1	19.2	18.6	17.1	.	.
Long-term unemployment rate (% labor force 15+)	5.0	7.0	7.7	8.1	7.7	6.1	4.8	3.9	4.1
Share of long-term unemployed (% of total)	46.0	56.9	56.7	58.3	62.4	62.4	59.2	57.2	59.0
Unemployment rate, low educated 15+ (ISCED 0-2)	22.4	26.1	28.2	30.3	28.5	24.3	21.4	20.1	17.9
Unemployment rate, medium educated 15+ (ISCED 3-4)	9.9	11.2	12.6	12.8	10.8	8.5	6.8	5.8	5.5
Unemployment rate, high educated 15+ (ISCED 5-8)	4.6	5.3	6.3	6.5	5.5	4.0	3.5	2.3	3.5

	2010	2011	2012	2013	2014	2015	2016	2017 Q1	2017 Q2
Female									
Total population (1,000)	3,794	3,770	3,750	3,730	3,710	3,688	3,664	.	.
Working-age population aged 15+ (1,000)	2,958	2,925	2,890	2,865	2,843	2,820	2,794	2,773	2,769
Employment aged 15+ (1,000)	1,435	1,397	1,392	1,388	1,403	1,423	1,408	1,411	1,489
Employment rate (% population aged 15+)	48.5	47.8	48.2	48.4	49.4	50.5	50.4	50.9	53.8
Employment rate (% population aged 15-64)	56.2	55.6	56.3	56.8	58.2	59.8	60.0	60.6	63.9
Employment rate (% population aged 20-64)	60.8	59.8	60.2	60.7	62.0	63.8	64.0	64.6	68.1
Employment rate (% population aged 15-24)	21.2	19.0	18.7	18.4	17.3	16.5	16.3	16.4	19.6
Employment rate (% population aged 25-29)	61.1	59.1	58.5	55.4	58.8	61.4	57.2	56.1	60.4
Employment rate (% population aged 25-54)	72.5	71.9	71.8	71.5	72.5	73.6	73.0	73.5	76.8
Employment rate (% population aged 55-64)	39.2	39.4	41.3	43.4	46.0	49.5	51.0	51.3	54.7
Employment rate for low skilled 15-64 (ISCED 0-2)	24.8	23.2	23.6	23.7	24.8	24.2	23.4	23.3	27.7
Employment rate for medium skilled 15-64 (ISCED 3-4)	59.7	59.0	59.2	59.2	60.3	61.9	62.3	63.5	67.2
Employment rate for high skilled 15-64 (ISCED 5-8)	81.2	79.9	80.0	79.1	79.9	82.3	82.6	82.6	84.0
Self-employed (% of total employment)	8.6	8.1	7.6	8.1	8.3	7.9	8.1	7.9	7.9
Part-time employment (% of total employment)	2.6	2.6	2.7	3.2	3.0	2.8	2.5	2.6	3.1
Temporary employment (% of total employees)	4.0	3.7	4.0	5.1	4.9	4.1	3.7	3.1	4.7
Activity rate (% population aged 15+)	53.7	53.2	54.0	54.9	55.1	55.1	54.2	54.7	57.0
Activity rate (% population aged 15-64)	62.2	61.9	63.2	64.5	65.0	65.4	64.6	65.1	67.8
Activity rate (% population aged 15-24)	26.6	24.8	25.3	24.7	22.6	21.2	19.6	19.2	22.4
Activity rate (% population aged 25-54)	79.6	79.3	79.8	80.3	80.2	79.8	78.2	78.8	81.3
Activity rate (% population aged 55-64)	42.9	42.8	45.5	49.0	51.4	53.8	54.6	54.9	57.7
Unemployment aged 15+ (1,000)	153	157	169	187	163	131	106	106	90
Unemployment rate (% labor force 15+)	9.6	10.1	10.8	11.8	10.4	8.4	7.0	7.0	5.7
Youth unemployment rate (% labor force 15-24)	20.1	23.6	26.0	25.7	23.7	22.2	17.0	14.2	12.3
NEET rate (% population aged 15-24)	21.8	21.9	21.5	21.1	21.4	20.0	19.4	.	.
Long-term unemployment rate (% labor force 15+)	4.4	5.5	5.7	6.6	6.0	5.0	4.1	3.6	2.9
Share of long-term unemployed (% of total)	46.2	54.1	53.0	55.9	57.6	59.6	58.9	51.3	50.2
Unemployment rate, low educated 15+ (ISCED 0-2)	23.1	26.8	27.7	29.3	28.1	26.3	23.5	26.0	19.1
Unemployment rate, medium educated 15+ (ISCED 3-4)	9.5	9.5	10.4	11.7	10.4	8.0	6.6	5.9	5.4
Unemployment rate, high educated 15+ (ISCED 5-8)	4.5	5.0	5.5	6.4	4.8	3.9	3.3	3.1	2.4

Earnings and unit labor costs

	2010	2011	2012	2013	2014	2015	2016	2017 Q1	2017 Q2
Average monthly gross wages, NCU	648	686	731	775	822	878	948	1,006	1,041
nominal annual growth in %	6.4	5.8	6.6	6.0	6.0	6.8	8.0	9.2	9.9
real annual growth in % (HICP deflated)	3.3	2.3	4.1	5.6	7.7	8.0	9.4	8.4	8.4
Average monthly gross wages, EUR	331	351	374	396	420	449	485	514	532
Average monthly gross wages, EUR (PPP)	732	738	797	837	906	969	1,021	.	.
Minimum wages as of January 1st									
Monthly gross minimum wages, NCU	240	240	270	310	340	360	420	.	.
Monthly gross minimum wages, EUR (ER)	123	123	138	159	174	184	215	.	.
Monthly gross minimum wages, EUR (PPP)	236	240	275	321	367	394	450	.	.
Unit labor costs (ULC)									
ULC, NCU in %	.	0.1	5.5	5.1	6.3	4.9	3.4	.	.
ULC, EUR in %	.	0.1	5.5	5.1	6.3	4.9	3.4	.	.

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	2011	2012	2013	2014	2015	2016	2017 Q1	2017 Q2
Total									
Total population (1,000)	4,296	4,283	4,269	4,254	4,236	4,208	4,172	.	.
Working-age population aged 15+ (1,000)	3,298	3,284	3,271	3,258	3,243	3,210	3,185	3,170	3,164
Employment aged 15+ (1,000)	1,683	1,616	1,558	1,518	1,562	1,582	1,587	1,543	1,631
Employment rate (% population aged 15+)	51.0	49.2	47.6	46.6	48.2	49.3	49.8	48.7	51.6
Employment rate (% population aged 15-64)	57.4	55.2	53.5	52.5	54.6	56.0	56.9	55.9	59.2
Employment rate (% population aged 20-64)	62.1	59.8	58.1	57.2	59.2	60.6	61.4	60.5	63.8
Employment rate (% population aged 15-24)	24.3	20.6	17.4	14.9	18.3	19.1	25.6	22.8	28.3
Employment rate (% population aged 25-29)	68.3	63.2	61.8	61.5	64.5	66.0	66.2	68.7	70.0
Employment rate (% population aged 25-54)	72.6	70.6	69.2	68.3	71.2	72.3	72.4	72.4	74.8
Employment rate (% population aged 55-64)	39.1	38.2	37.5	37.8	36.2	39.2	38.1	36.1	40.0
Employment rate for low skilled 15-64 (ISCED 0-2)	35.2	32.7	29.5	27.5	26.7	28.0	27.4	23.7	23.1
Employment rate for medium skilled 15-64 (ISCED 3-4)	60.9	59.0	56.7	55.5	57.0	58.0	59.5	59.4	63.7
Employment rate for high skilled 15-64 (ISCED 5-8)	80.2	77.4	76.5	75.7	78.4	78.7	79.7	78.9	81.5
Self-employed (% of total employment)	19.0	18.7	17.1	16.2	14.0	13.6	12.4	11.0	11.3
Part-time employment (% of total employment)	8.3	8.4	6.7	6.2	6.0	6.8	6.4	5.1	5.0
Temporary employment (% of total employees)	12.8	13.5	13.3	14.5	16.9	20.3	22.3	18.7	21.5
Activity rate (% population aged 15+)	57.8	57.0	56.7	56.3	58.2	58.8	57.4	56.7	57.9
Activity rate (% population aged 15-64)	65.1	64.1	63.9	63.7	66.1	66.9	65.6	65.1	66.6
Activity rate (% population aged 15-24)	35.8	32.5	30.1	29.9	33.6	33.2	37.2	34.8	35.5
Activity rate (% population aged 25-54)	80.8	80.6	80.9	80.8	84.1	84.5	82.0	82.2	83.7
Activity rate (% population aged 55-64)	41.8	41.4	41.8	41.9	41.0	44.3	42.2	41.5	43.4
Unemployment aged 15+ (1,000)	222	258	297	318	327	306	240	253	254
Unemployment rate (% labor force 15+)	11.7	13.7	16.0	17.3	17.3	16.2	13.1	14.1	11.0
Youth unemployment rate (% labor force 15-24)	32.4	36.7	42.1	50.0	45.5	42.3	31.3	34.4	20.5
NEET rate (% population aged 15-24)	15.7	16.2	16.6	19.6	19.3	18.1	16.9	.	.
Long-term unemployment rate (% labor force 15+)	6.6	8.4	10.2	11.0	10.1	10.2	6.7	5.9	6.5
Share of long-term unemployed (% of total)	56.3	61.3	63.7	63.6	58.4	63.1	50.7	41.7	46.6
Unemployment rate, low educated 15+ (ISCED 0-2)	13.0	17.4	18.6	21.5	25.7	21.5	17.4	26.8	20.3
Unemployment rate, medium educated 15+ (ISCED 3-4)	12.4	14.3	17.3	18.7	18.7	18.1	14.6	14.2	11.1
Unemployment rate, high educated 15+ (ISCED 5-8)	8.4	9.2	10.6	11.3	9.6	9.2	7.8	8.6	7.5
Male									
Total population (1,000)	2,072	2,066	2,059	2,053	2,044	2,031	2,014	.	.
Working-age population aged 15+ (1,000)	1,618	1,612	1,607	1,602	1,596	1,579	1,567	1,560	1,558
Employment aged 15+ (1,000)	916	888	852	818	847	854	858	841	889
Employment rate (% population aged 15+)	56.6	55.1	53.0	51.1	53.1	54.1	54.8	53.9	57.1
Employment rate (% population aged 15-64)	62.7	60.9	58.5	56.5	59.1	60.3	61.4	60.9	64.7
Employment rate (% population aged 20-64)	67.9	66.1	63.7	61.6	64.2	65.4	66.2	65.9	69.9
Employment rate (% population aged 15-24)	27.9	23.8	20.0	17.4	21.2	22.4	28.9	26.3	30.2
Employment rate (% population aged 25-29)	69.6	67.6	65.8	64.2	69.0	71.3	70.3	68.0	76.6
Employment rate (% population aged 25-54)	76.4	75.1	73.0	71.6	74.5	75.4	76.3	76.0	79.7
Employment rate (% population aged 55-64)	50.5	49.6	48.0	45.0	45.8	48.2	45.1	46.0	49.8
Employment rate for low skilled 15-64 (ISCED 0-2)	40.7	37.6	33.7	32.3	30.3	32.2	33.0	29.8	30.1
Employment rate for medium skilled 15-64 (ISCED 3-4)	66.4	65.0	62.1	59.5	62.5	63.1	64.2	64.3	69.4
Employment rate for high skilled 15-64 (ISCED 5-8)	80.2	77.6	77.3	76.5	78.4	79.0	81.0	82.4	84.0
Self-employed (% of total employment)	20.9	20.9	19.7	19.2	17.4	17.3	15.7	13.3	13.3
Part-time employment (% of total employment)	6.1	6.4	5.5	5.3	4.8	5.6	5.2	4.1	4.1
Temporary employment (% of total employees)	11.7	13.1	13.2	14.8	16.7	20.5	22.0	18.2	22.2
Activity rate (% population aged 15+)	63.7	63.9	63.1	62.1	63.5	64.0	62.6	62.3	63.6
Activity rate (% population aged 15-64)	70.6	70.7	69.8	68.9	70.9	71.6	70.3	70.3	72.1
Activity rate (% population aged 15-24)	40.7	37.8	34.6	34.7	38.5	38.2	41.9	39.3	38.9
Activity rate (% population aged 25-54)	84.1	85.4	85.2	84.7	86.6	86.9	85.2	85.7	88.1
Activity rate (% population aged 55-64)	54.4	54.2	53.9	51.0	52.1	54.9	50.7	51.6	53.5
Unemployment aged 15+ (1,000)	114	141	162	176	167	157	123	130	131
Unemployment rate (% labor force 15+)	11.1	13.7	16.0	17.7	16.5	15.6	12.5	13.4	10.2
Youth unemployment rate (% labor force 15-24)	31.5	37.1	42.1	49.9	44.9	41.4	31.3	33.2	22.2
NEET rate (% population aged 15-24)	17.1	17.8	17.9	20.6	21.9	20.5	19.0	.	.
Long-term unemployment rate (% labor force 15+)	5.9	8.4	10.1	11.3	9.6	10.1	6.8	5.9	7.0
Share of long-term unemployed (% of total)	53.4	61.3	63.6	63.8	58.3	64.8	54.0	43.9	52.6
Unemployment rate, low educated 15+ (ISCED 0-2)	15.1	19.3	19.7	22.8	24.9	21.4	17.0	25.4	21.3
Unemployment rate, medium educated 15+ (ISCED 3-4)	11.0	13.7	16.9	18.9	17.3	16.6	13.7	12.9	10.1
Unemployment rate, high educated 15+ (ISCED 5-8)	7.8	8.7	9.9	10.5	8.9	9.2	6.8	9.2	5.6

	2010	2011	2012	2013	2014	2015	2016	2017 Q1	2017 Q2
Female									
Total population (1,000)	2,225	2,217	2,210	2,201	2,192	2,177	2,159	.	.
Working-age population aged 15+ (1,000)	1,680	1,672	1,664	1,657	1,647	1,631	1,618	1,609	1,606
Employment aged 15+ (1,000)	767	728	706	700	715	728	729	702	742
Employment rate (% population aged 15+)	45.6	43.5	42.4	42.3	43.4	44.6	45.0	43.6	46.2
Employment rate (% population aged 15-64)	52.1	49.5	48.5	48.5	50.0	51.6	52.4	51.0	53.7
Employment rate (% population aged 20-64)	56.4	53.6	52.6	52.8	54.2	55.9	56.6	55.0	57.7
Employment rate (% population aged 15-24)	20.4	17.2	14.7	12.4	15.3	15.7	22.2	19.2	26.2
Employment rate (% population aged 25-29)	66.9	58.6	57.7	58.7	59.8	60.5	62.0	69.4	63.4
Employment rate (% population aged 25-54)	68.8	66.1	65.2	64.9	67.9	69.3	68.5	68.8	69.9
Employment rate (% population aged 55-64)	28.5	27.7	27.7	31.0	27.3	30.7	31.6	26.8	30.8
Employment rate for low skilled 15-64 (ISCED 0-2)	31.0	28.9	26.3	23.7	23.8	24.8	22.9	18.5	17.1
Employment rate for medium skilled 15-64 (ISCED 3-4)	54.5	51.9	50.5	50.9	50.6	52.0	54.0	53.7	57.1
Employment rate for high skilled 15-64 (ISCED 5-8)	80.2	77.3	75.9	75.1	78.3	78.4	78.7	76.2	79.7
Self-employed (% of total employment)	16.7	16.1	14.0	12.8	9.9	9.3	8.4	8.3	8.9
Part-time employment (% of total employment)	10.9	10.7	8.2	7.3	7.5	8.2	7.9	6.2	6.1
Temporary employment (% of total employees)	14.1	14.0	13.4	14.1	17.2	20.1	22.5	19.4	20.7
Activity rate (% population aged 15+)	52.1	50.5	50.5	50.8	53.1	53.7	52.3	51.2	52.4
Activity rate (% population aged 15-64)	59.6	57.6	58.0	58.5	61.3	62.3	60.9	59.9	61.0
Activity rate (% population aged 15-24)	30.7	26.9	25.3	24.8	28.5	28.0	32.3	30.0	32.1
Activity rate (% population aged 25-54)	77.4	75.8	76.6	76.8	81.5	82.1	78.8	78.6	79.3
Activity rate (% population aged 55-64)	30.2	29.6	30.6	33.4	30.6	34.4	34.2	32.0	33.9
Unemployment aged 15+ (1,000)	108	116	135	142	160	149	117	122	123
Unemployment rate (% labor force 15+)	12.4	13.8	16.1	16.8	18.3	16.9	13.8	14.8	11.8
Youth unemployment rate (% labor force 15-24)	33.6	36.0	41.9	50.1	46.4	43.7	31.3	36.0	18.3
NEET rate (% population aged 15-24)	14.1	14.6	15.2	18.6	16.7	15.6	14.6	.	.
Long-term unemployment rate (% labor force 15+)	7.3	8.5	10.2	10.6	10.7	10.4	6.5	5.8	6.0
Share of long-term unemployed (% of total)	59.3	61.4	63.7	63.2	58.6	61.3	47.2	39.3	40.6
Unemployment rate, low educated 15+ (ISCED 0-2)	10.8	15.5	17.4	19.9	26.5	21.7	17.9	28.6	18.9
Unemployment rate, medium educated 15+ (ISCED 3-4)	14.5	14.9	17.9	18.5	20.6	20.0	15.9	16.0	12.5
Unemployment rate, high educated 15+ (ISCED 5-8)	8.8	9.6	11.3	11.9	10.2	9.3	8.6	8.2	8.9

Earnings and unit labor costs

	2010	2011	2012	2013	2014	2015	2016	2017 Q1	2017 Q2
Average monthly gross wages, NCU	7,679	7,796	7,875	7,939	7,953	8,055	7,753	7,983	8,044
nominal annual growth in %	-0.4	1.5	1.0	0.8	0.2	1.3	1.9	2.9	3.8
real annual growth in % (HICP deflated)	-1.5	-0.7	-2.3	-1.5	0.0	1.6	2.5	1.8	2.7
Average monthly gross wages, EUR	1,053	1,048	1,047	1,048	1,042	1,058	1,029	1,069	1,082
Average monthly gross wages, EUR (PPP)	1,517	1,567	1,624	1,631	1,657	1,702	1,620	.	.
Minimum wages as of January 1st									
Monthly gross minimum wages, NCU	2,814	2,814	2,814	2,814	3,018	3,030	3,120	.	.
Monthly gross minimum wages, EUR (ER)	385	381	373	372	396	396	408	.	.
Monthly gross minimum wages, EUR (PPP)	526	529	544	546	601	624	627	.	.
Unit labor costs (ULC)									
ULC, NCU in %	.	-2.2	-0.4	-1.1	3.1	0.2	-0.9	.	.
ULC, EUR in %	.	-4.2	-1.5	-1.9	2.4	0.5	0.2	.	.

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	2011	2012	2013	2014	2015	2016	2017 Q1	2017 Q2
Total									
Total population (1,000)	10,000	9,972	9,920	9,893	9,866	9,843	9,814	.	.
Working-age population aged 15+ (1,000)	7,663	7,649	7,636	7,610	7,573	7,538	7,508	7,484	7,465
Employment aged 15+ (1,000)	3,732	3,759	3,827	3,893	4,101	4,211	4,352	4,368	4,420
Employment rate (% population aged 15+)	48.7	49.1	50.1	51.2	54.1	55.9	58.0	58.4	59.2
Employment rate (% population aged 15-64)	54.9	55.4	56.7	58.1	61.8	63.9	66.5	67.1	68.1
Employment rate (% population aged 20-64)	59.9	60.4	61.6	63.0	66.7	68.9	71.5	72.1	73.2
Employment rate (% population aged 15-24)	18.3	18.0	18.4	20.1	23.5	25.7	28.1	28.4	28.9
Employment rate (% population aged 25-29)	65.8	67.0	67.4	69.0	73.0	73.6	75.5	75.6	77.7
Employment rate (% population aged 25-54)	72.5	73.0	74.6	75.7	79.2	80.6	82.2	82.7	83.7
Employment rate (% population aged 55-64)	33.6	35.3	36.1	37.9	41.8	45.3	49.8	50.1	51.2
Employment rate for low skilled 15-64 (ISCED 0-2)	25.4	25.5	26.0	26.9	31.5	33.9	36.6	37.4	37.9
Employment rate for medium skilled 15-64 (ISCED 3-4)	60.7	60.8	61.9	63.3	66.7	68.8	71.5	72.1	73.3
Employment rate for high skilled 15-64 (ISCED 5-8)	77.5	78.5	78.5	78.8	80.8	82.1	84.4	83.8	84.2
Self-employed (% of total employment)	12.0	11.7	11.3	10.9	10.6	10.6	10.4	10.1	9.9
Part-time employment (% of total employment)	5.9	6.8	7.1	6.8	6.4	6.0	5.2	5.0	4.9
Temporary employment (% of total employees)	9.8	9.1	9.5	10.9	10.8	11.4	9.7	8.6	9.2
Activity rate (% population aged 15+)	54.8	55.2	56.3	57.0	58.7	59.9	61.1	61.1	61.8
Activity rate (% population aged 15-64)	61.9	62.4	63.7	64.7	67.0	68.6	70.1	70.3	71.1
Activity rate (% population aged 15-24)	24.8	24.3	25.7	27.4	29.5	31.0	32.3	31.7	32.4
Activity rate (% population aged 25-54)	80.9	81.3	82.9	83.3	85.0	85.8	86.1	86.2	86.9
Activity rate (% population aged 55-64)	36.5	38.8	39.5	41.2	44.6	48.1	52.1	52.4	53.3
Unemployment aged 15+ (1,000)	469	466	473	441	343	308	235	207	196
Unemployment rate (% labor force 15+)	11.2	11.0	11.0	10.2	7.7	6.8	5.1	4.5	4.3
Youth unemployment rate (% labor force 15-24)	26.4	26.0	28.2	26.6	20.4	17.3	12.9	10.3	11.0
NEET rate (% population aged 15-24)	12.6	13.2	14.8	15.5	13.6	11.6	11.0	.	.
Long-term unemployment rate (% labor force 15+)	5.5	5.3	5.0	4.9	3.7	3.1	2.4	1.9	1.8
Share of long-term unemployed (% of total)	49.0	47.6	45.3	48.6	47.5	45.6	46.5	42.9	42.0
Unemployment rate, low educated 15+ (ISCED 0-2)	25.1	25.0	24.8	23.7	18.5	17.4	13.2	12.3	11.9
Unemployment rate, medium educated 15+ (ISCED 3-4)	10.5	10.6	10.7	10.0	7.4	6.4	4.8	4.0	3.8
Unemployment rate, high educated 15+ (ISCED 5-8)	4.6	4.3	4.5	3.9	3.1	2.4	1.8	1.9	1.5
Male									
Total population (1,000)	4,750	4,734	4,720	4,710	4,700	4,692	4,683	.	.
Working-age population aged 15+ (1,000)	3,674	3,672	3,676	3,668	3,654	3,641	3,632	3,623	3,614
Employment aged 15+ (1,000)	1,993	2,021	2,049	2,104	2,221	2,284	2,363	2,378	2,418
Employment rate (% population aged 15+)	54.2	55.0	55.7	57.4	60.8	62.7	65.0	65.6	66.9
Employment rate (% population aged 15-64)	59.9	60.7	61.6	63.7	67.8	70.3	73.0	73.8	75.1
Employment rate (% population aged 20-64)	65.5	66.4	67.3	69.3	73.5	75.8	78.6	79.5	81.0
Employment rate (% population aged 15-24)	19.9	19.7	19.8	23.0	26.4	28.1	31.5	31.2	32.6
Employment rate (% population aged 25-29)	73.6	75.8	74.7	76.4	82.3	83.2	84.4	83.5	87.4
Employment rate (% population aged 25-54)	78.0	79.5	80.2	81.4	85.3	86.8	88.2	89.0	90.3
Employment rate (% population aged 55-64)	38.6	39.3	41.4	44.8	49.6	54.4	59.7	60.6	62.0
Employment rate for low skilled 15-64 (ISCED 0-2)	28.1	29.0	30.0	30.8	36.3	39.9	42.5	42.3	43.8
Employment rate for medium skilled 15-64 (ISCED 3-4)	66.1	66.4	66.8	69.1	73.1	75.2	78.2	79.0	80.3
Employment rate for high skilled 15-64 (ISCED 5-8)	81.8	83.7	84.4	85.3	87.1	88.6	90.5	91.1	91.7
Self-employed (% of total employment)	15.0	15.0	14.1	13.6	13.4	13.0	12.7	11.9	11.7
Part-time employment (% of total employment)	4.0	4.8	4.7	4.5	4.5	4.4	3.5	3.3	3.2
Temporary employment (% of total employees)	10.2	9.7	10.5	11.4	11.2	11.6	9.3	8.0	8.8
Activity rate (% population aged 15+)	61.4	61.9	62.9	63.9	65.7	67.2	68.6	68.6	69.7
Activity rate (% population aged 15-64)	67.8	68.4	69.6	71.0	73.4	75.3	76.9	77.2	78.3
Activity rate (% population aged 15-24)	27.5	27.0	27.9	31.0	33.0	34.4	36.1	35.1	36.6
Activity rate (% population aged 25-54)	87.3	88.2	89.4	89.5	91.2	92.0	92.4	92.5	93.5
Activity rate (% population aged 55-64)	42.2	43.7	45.4	49.0	53.2	57.8	62.4	63.1	64.0
Unemployment aged 15+ (1,000)	262	252	262	239	182	162	128	109	100
Unemployment rate (% labor force 15+)	11.6	11.1	11.3	10.2	7.6	6.6	5.1	4.4	4.0
Youth unemployment rate (% labor force 15-24)	27.8	27.0	29.1	25.6	20.0	18.3	12.9	11.0	10.8
NEET rate (% population aged 15-24)	11.7	12.1	13.6	13.6	12.0	10.4	8.9	.	.
Long-term unemployment rate (% labor force 15+)	5.7	5.2	5.2	5.0	3.6	3.1	2.3	1.9	1.7
Share of long-term unemployed (% of total)	49.4	47.3	45.5	48.6	48.0	47.1	45.8	42.7	42.6
Unemployment rate, low educated 15+ (ISCED 0-2)	27.2	25.5	25.3	24.5	18.4	16.8	13.7	12.5	11.3
Unemployment rate, medium educated 15+ (ISCED 3-4)	10.5	10.4	10.9	9.8	7.0	6.0	4.5	3.7	3.4
Unemployment rate, high educated 15+ (ISCED 5-8)	4.9	4.1	4.2	3.4	2.8	2.2	1.8	1.6	1.5

	2010	2011	2012	2013	2014	2015	2016	2017 Q1	2017 Q2
Female									
Total population (1,000)	5,250	5,234	5,200	5,183	5,167	5,151	5,131	.	.
Working-age population aged 15+ (1,000)	3,989	3,977	3,960	3,942	3,919	3,897	3,876	3,861	3,851
Employment aged 15+ (1,000)	1,740	1,738	1,778	1,789	1,880	1,927	1,989	1,990	2,002
Employment rate (% population aged 15+)	43.6	43.7	44.9	45.4	48.0	49.5	51.3	51.5	52.0
Employment rate (% population aged 15-64)	50.2	50.3	51.9	52.6	55.9	57.8	60.2	60.6	61.1
Employment rate (% population aged 20-64)	54.6	54.7	56.2	56.9	60.2	62.1	64.6	65.0	65.6
Employment rate (% population aged 15-24)	16.5	16.2	17.0	17.0	20.5	23.1	24.6	25.4	25.0
Employment rate (% population aged 25-29)	57.8	58.1	59.9	61.4	63.3	63.5	66.1	67.2	67.5
Employment rate (% population aged 25-54)	67.0	66.6	69.0	70.0	73.2	74.4	76.2	76.4	77.1
Employment rate (% population aged 55-64)	29.4	31.9	31.7	32.1	35.2	37.7	41.5	41.2	42.1
Employment rate for low skilled 15-64 (ISCED 0-2)	23.3	22.5	22.6	23.7	27.3	28.7	31.5	33.2	32.9
Employment rate for medium skilled 15-64 (ISCED 3-4)	54.7	54.7	56.5	56.8	59.6	61.6	63.9	64.4	65.3
Employment rate for high skilled 15-64 (ISCED 5-8)	74.3	74.6	74.3	74.2	76.1	77.3	80.0	78.4	78.8
Self-employed (% of total employment)	8.5	7.9	8.2	7.8	7.4	7.7	7.8	8.0	7.7
Part-time employment (% of total employment)	8.1	9.1	9.8	9.4	8.6	8.0	7.3	7.0	6.8
Temporary employment (% of total employees)	9.3	8.4	8.5	10.4	10.3	11.1	10.2	9.3	9.8
Activity rate (% population aged 15+)	48.8	49.1	50.2	50.5	52.1	53.2	54.1	54.1	54.5
Activity rate (% population aged 15-64)	56.3	56.6	58.0	58.6	60.7	62.2	63.5	63.6	64.1
Activity rate (% population aged 15-24)	22.0	21.5	23.4	23.6	25.9	27.5	28.2	28.0	28.1
Activity rate (% population aged 25-54)	74.6	74.4	76.5	77.1	78.8	79.6	79.8	79.9	80.3
Activity rate (% population aged 55-64)	31.7	34.8	34.5	34.7	37.4	39.9	43.5	43.2	44.1
Unemployment aged 15+ (1,000)	208	215	211	202	162	146	107	98	96
Unemployment rate (% labor force 15+)	10.7	11.0	10.6	10.1	7.9	7.0	5.1	4.7	4.6
Youth unemployment rate (% labor force 15-24)	24.7	24.7	27.1	27.9	20.9	15.9	12.9	9.3	11.2
NEET rate (% population aged 15-24)	13.4	14.3	16.0	17.4	15.3	12.8	13.3	.	.
Long-term unemployment rate (% labor force 15+)	5.2	5.3	4.8	4.9	3.7	3.1	2.4	2.0	1.9
Share of long-term unemployed (% of total)	48.5	47.9	45.0	48.5	46.8	44.0	47.3	43.1	41.3
Unemployment rate, low educated 15+ (ISCED 0-2)	22.8	24.5	24.4	22.7	18.7	18.1	12.7	12.0	12.6
Unemployment rate, medium educated 15+ (ISCED 3-4)	10.6	11.0	10.5	10.3	7.9	6.9	5.1	4.2	4.3
Unemployment rate, high educated 15+ (ISCED 5-8)	4.3	4.4	4.7	4.3	3.4	2.6	1.8	2.3	1.5

Earnings and unit labor costs

	2010	2011	2012	2013	2014	2015	2016	2017 Q1	2017 Q2
Average monthly gross wages, NCU	202,525	213,094	223,060	230,714	237,695	247,924	263,171	281,912	298,775
nominal annual growth in %	1.3	5.2	4.7	3.4	3.0	4.3	6.1	11.1	14.0
real annual growth in % (HICP deflated)	-3.2	1.3	-1.0	1.7	3.0	4.2	5.7	8.2	11.6
Average monthly gross wages, EUR	735	763	771	777	770	800	845	912	964
Average monthly gross wages, EUR (PPP)	1,226	1,293	1,342	1,356	1,355	1,417	1,440	.	.
Minimum wages as of January 1st									
Monthly gross minimum wages, NCU	73,500	78,000	93,000	98,000	101,500	105,000	111,000	.	.
Monthly gross minimum wages, EUR (ER)	272	281	296	335	342	333	351	.	.
Monthly gross minimum wages, EUR (PPP)	421	451	531	556	568	588	598	.	.
Unit labor costs (ULC)									
ULC, NCU in %	.	4.2	8.4	3.0	4.1	3.6	7.3	.	.
ULC, EUR in %	.	2.8	4.7	0.4	0.1	3.2	6.8	.	.

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.
Average monthly gross wages refer to enterprises with 5 and more employees.

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

View this report online:

http://SEEJobsGateway.net