

# The European Higher Education Area in 2018

*Bologna Process  
Implementation Report*

## **Chapter 6: Relevance of the Outcomes and Employability**



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Implementation Report**

This document is published by the Education, Audiovisual and Culture Executive Agency (EACEA, Education and Youth Policy Analysis).

**Please cite this publication as:**

European Commission/EACEA/Eurydice, 2018. *The European Higher Education Area in 2018: Bologna Process Implementation Report*. Luxembourg: Publications Office of the European Union.

Printed version	EC-01-18-252-EN-C	ISBN 978-92-9492-739-2	doi:10.2797/63509
PDF	EC-01-18-252-EN-N	ISBN 978-92-9492-740-8	doi:10.2797/265898
Epub	EC-01-18-252-EN-E	ISBN 978-92-9492-741-5	doi:10.2797/091435

This document is also available on the Internet (<http://ec.europa.eu/eurydice>).

Text completed in April 2018.

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Education, Audiovisual and Culture Executive Agency  
Education and Youth Policy Analysis  
Avenue du Bourget 1 (J-70 – Unit A7)  
BE-1049 Brussels  
Tel. +32 2 299 50 58  
Fax +32 2 292 19 71  
E-mail: [eacea-eurydice@ec.europa.eu](mailto:eacea-eurydice@ec.europa.eu)  
Website: <http://ec.europa.eu/eurydice>

# FOREWORD

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The Bologna Process has brought us a long way towards achieving the goals for European higher education set two decades ago. This third edition of the Bologna Process Implementation Report provides clear evidence of change in the higher education landscape. It shows where progress has been made, but also points to the gaps that need to be filled if we are to strengthen European higher education cooperation on the basis of quality and mutual trust.

Higher education has been evolving rapidly to respond to fast changing demands. Overall in Europe, we are becoming better educated, as more students have the opportunity to develop the high-level skills and knowledge that our societies require. Thanks to the Bologna Process and the Erasmus+ programme, students have become more mobile, and can benefit from study and employment opportunities abroad. Yet we also face challenges in this changing environment: How do we recognise and reward good teaching as well as good research? How do we ensure that young people from disadvantaged backgrounds can access and successfully complete higher education? How do we remove burdensome recognition procedures to ensure that students and graduates can be mobile? And how do we increase the relevance of higher education programmes for a labour market that is in a state of permanent transformation? The Bologna Process provides a space for countries to discuss these challenges, and this dialogue remains critical.

Twenty years ago four countries signed the Sorbonne Declaration, initiating a wave of coordinated higher education reform through the Bologna Process. Now ministers from 48 European countries will gather in Paris to take stock of our current situation, and to discuss the path forward. This geographical evolution illustrates the impact the Bologna Process has had – and it highlights Europe's potential to set high standards for modern and relevant educational provision. The Bologna Process has not only inspired change within European higher education, but also across other world regions. This is important to recognise, as today, more than ever, Europeans have to embrace an increasingly complex and inter-connected global reality.

We should of course be proud of our achievements. But we must not be complacent. We need to redouble our efforts to bring Europe's higher education institutions, researchers and students even closer together. The technical goals of the Bologna Process – converging degree structures, shared standards for quality assurance and common recognition practice – were never ends in themselves. Rather they were the preconditions for ensuring that we understand and trust each other's higher education provision, enabling us to work together in a more seamless way. This is what our young people demand, this is what our economies require and this is what our societies need.

The European Commission's role is to support, but also to drive positive change. And this is why we have been working on proposals to create a European Education Area by 2025. Our ambition is to

enable EU Member States to intensify and accelerate their cooperation in areas such as mobility, multilingualism, innovation and mutual recognition of diplomas, and thus also to provide inspiration to non-EU countries to follow. Our vision for 2025 is of a Europe in which learning, studying and doing research will not be hampered by borders and in which people have a strong sense of their identity as Europeans.

Where the Bologna Process has provided stable foundations, we must now build on them. Yet where the foundations are still not stable, we must secure them. The Commission's actions will aim both at working jointly with the EU Member States towards the European Education Area and at strengthening the Bologna process with all partner countries.

Tibor Navracsics

Commissioner for  
Education, Culture, Youth and Sport

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# EXECUTIVE SUMMARY

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The Bologna Process Implementation Report provides a wide-ranging and detailed picture of how the European Higher Education Area (EHEA) has been moving forward since the Yerevan Conference in 2015. This has not been a period of radical change. Instead, for most countries, the recent years have focused on consolidating the implementation of reforms.

The Bologna Follow Up Group has identified **three key commitments** that underpin the EHEA. These commitments concern the implementation of the three-cycle degree structure, recognition of qualifications and quality assurance. They can be considered as the foundations of the EHEA: if these foundations are not in place, further European higher education cooperation is undermined.

In addition to the implementation of these commitments, the priorities of the Bologna Process as set out in the Yerevan Communiqué are learning and teaching, social inclusion and employability – all topics addressed centrally in this report. In Yerevan, ministers also pledged to continue to foster mobility and internationalisation, and called for attention to the values of the EHEA.

## Three-cycle degree structures

Implementation of the Bologna three-cycle degree commitments is improving, with most countries having made the necessary reforms in line with Bologna guidelines. The main Bologna tools – ECTS, Diploma Supplement and national qualifications frameworks – are also well implemented in most countries. Nevertheless, there remains a minority of countries where this is not the case. These countries still need to implement further reforms to ensure that their degree programmes are coherent with those in other EHEA countries.

The dominant European model is now a clearly structured three-cycle degree system. However, although Bologna commitments have mostly been met, there remain significant differences in degree structures across the EHEA as a whole.

In around half of the EHEA countries, the majority of first-cycle graduates continue to study in a second-cycle programme while in a quarter of countries it is less than 25 % that move directly into the second cycle. This may suggest significant differences in labour market recognition of first-cycle qualifications across the EHEA.

Alongside the three main cycles, around half of all EHEA countries offer short-cycle higher education programmes. These programmes are usually vocational, offered at ISCED 5 level, and most often have a workload of 120 ECTS. In around half of the countries with such programmes, learning achievements can be fully recognised within first-cycle studies in the same field, while in the other half recognition is less substantial. Comparing short-cycle higher education programmes across the EHEA is further complicated by the existence in many countries of 'short-cycle tertiary education' programmes, which are not recognised within the national higher education systems.

Most EHEA countries also offer other programmes outside the three-cycle-degree structure. 'Integrated' or 'long' programmes of at least five years duration leading directly to a second-cycle degree exist in most EHEA countries, usually in regulated professional fields. They involve fewer than 5 % of students in some countries, but more than 20 % in others. In around a quarter of EHEA countries, there are also other programmes outside the main three-cycle degree framework.

There has been good progress since 2015 in the implementation of the Diploma Supplement. Indeed, most EHEA countries now comply with all the commonly agreed principles. The Diploma Supplement

is also commonly issued after short-cycle higher education programmes, but is far from being the norm in the third cycle.

Good progress can also be observed in the implementation of national qualifications frameworks (NQFs). Most countries have established a national qualifications framework for higher education, self-certified it to the Framework for Qualifications of the European Higher Education Area (QF-EHEA) and it is used by national authorities in public policy. In most countries, NQFs for higher education are integrated into NQFs for lifelong learning, which suggests widespread efforts in using NQFs for coordinating qualifications across sectors and levels of education.

Although many countries have now completed their NQF, there remain a few where development is slow or not moving. These countries are missing the opportunity to increase the transparency of their qualifications system both within and outside the country.

### Recognition of qualifications

Formal compliance with most aspects of the Lisbon Recognition Convention (LRC) at national level is well established across the EHEA, as the content of national legislation and regulations is generally coherent with the international legal framework. However, work still needs to be done to ensure that appropriate procedures are established and followed for recognition of qualifications of refugees, displaced persons and persons in a refugee-like situation as specified in Article VII of the LRC.

Nevertheless recognition problems are reported to be still prevalent. This could be because higher education institutions, who are usually responsible for recognition decisions for academic purposes, may not always follow all the required principles of good recognition practice.

With regard to the goal of securing more 'automatic recognition' – understood as system-level recognition for the purposes of further academic study – considerable effort is still required to agree on a common understanding of the concept, and to make it a reality.

### Quality assurance

Quality assurance continues to be an area of dynamic development in European higher education. The requirement for higher education institutions to develop and publish quality assurance strategies and evaluation reports is becoming increasingly established, while external quality assurance is almost always undertaken by independent agencies working in line with the Standards and Guidelines for European Quality Assurance (ESG). Indeed the adoption and integration of the ESG in national practice has been widely addressed and achieved.

Nevertheless, there are still areas where attention is needed. Some countries still need to take action to ensure that students are fully involved in all quality assurance processes as equal partners. It is also worth noting that improvement-oriented models of external quality assurance are far less prevalent in the EHEA than supervisory models. Higher education institutions in many countries are also restricted to using national quality assurance agencies to fulfil their external quality assurance obligations, rather than benefitting from the work of other suitable EQAR-registered European agencies. In addition, the European Approach to the Quality Assurance of Joint Programmes, although adopted in Yerevan, has hardly been implemented. Indeed it is not yet permitted by national legislation in many countries, and in particular in those where programme accreditation is required. These are precisely the countries where the European Approach to the Quality Assurance of Joint Programmes potentially offers the greatest potential benefit as a more appropriate, effective and efficient form of quality assurance.



## Learning and teaching

Improving learning and teaching is among the most fundamental objectives of the Bologna Process. Strategies to achieve this objective are now quite widespread across the EHEA, both at national level and within higher education institutions. Steering commonly promotes the development of international opportunities, academic staff development and measures to improve teaching. Digitally enabled teaching and learning is also increasingly addressed strategically at national and institutional levels.

In most countries ECTS has been integrated as both a credit accumulation and transfer system, with learning outcomes and student workload increasingly used as the basis for credit allocation. This provides common foundations for the understanding of European higher education programmes. However, there is a need to ensure that the 2015 ECTS Users Guide adopted by ministers is the basis for correct implementation of the system. To this end, around a third of the countries could take action to encourage quality assurance processes to pay attention to this issue.

Higher education teachers are the key players in enabling students' learning, and appropriate training in teaching skills both before being employed and throughout careers is an essential pre-requisite for a high quality system. Yet, regulations rarely require academics to hold a teaching qualification, and the development of teaching skills is often left to ad hoc measures.

## Opening higher education

Social dimension challenges have accompanied the Bologna Process throughout its existence. Yet, disadvantaged learners still face access barriers to higher education: students from low and medium-educated families are strongly under-represented, and are more likely to enter higher education with a delay; gender imbalances, if improving slightly, still persist and remain marked in some discipline areas with significant implications for the labour market and society; and life-long learning is not a reality for learners in many countries.

In addition to barriers to access, disadvantaged students also face difficulties in completing higher education, dropping out in higher proportions. Despite evidence of these trends over a number of years, and commitments re-iterated in several ministerial communiqués, only a few countries have introduced measures in recent years to improve the conditions for under-represented groups to access and complete higher education.

## Employability

Employment of recent graduates has improved as countries recover from the economic crisis. Nevertheless, graduate unemployment remains a significant problem in some parts of Europe, as not all countries have recovered to the same extent and at the same speed. There is also a gender aspect to employment issues, as in some countries women face more difficulties than men in finding employment after graduation.

Systematic efforts to improve the relationship between higher education and the labour market still need to be better developed and implemented. Action could include using labour market forecasts, involving employers in curriculum planning and higher education governance, providing incentives to include work placements in higher education programmes, improving career guidance services, as well as encouraging student mobility.

## Internationalisation

The trend for internationalisation is growing across the EHEA. However, mobility flows and the level of engagement in internationalisation activities vary considerably from country to country. There has been a significant increase in the use of targets to support and monitor progress in student mobility with only one quarter of all countries now having no targets for either incoming or outgoing student mobility.

There continue to be substantial differences between countries with regard to portability of domestic student financial support. Only around one-third of EHEA countries enable domestic financial support to be portable for credit and degree mobility. Moreover there is almost no support facilitating the mobility of students from under-represented groups in the majority of countries. Staff mobility targets are also reported by almost half of all EHEA countries, but often refer only to a general objective of increasing the numbers of mobile staff.

## Values

The Yerevan Communiqué emphasises shared values as the foundation of a renewed vision of the European Higher Education Area. Specifically, the ministers highlight academic freedom and autonomy of higher education institutions, while EHEA values also include student and other stakeholder participation in the democratic governance and management of higher education.

While concerns have been raised about violations of values in some EHEA countries, it is difficult to find causal explanations related to the different systems of higher education governance in operation across the EHEA. There is nevertheless a continuing need to discuss the values that unite higher education systems, and to be vigilant that robust legal protection is in place – including defining and limiting the role of governments in the organisation and management of higher education institutions.

# INTRODUCTION

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## The Bologna Process

The Bologna Declaration was signed in 1999 by ministers responsible for higher education from 29 European countries. However its origins lie a year further back in the Sorbonne Conference and Declaration of 1998. These events and texts set in motion a European cooperation process that has radically changed higher education. Reforms have affected countries within and beyond Europe, and the number of official signatory countries has risen to 48, with Belarus the most recent state to join in 2015.

The chart below outlines the main milestones and commitments of the ministerial conferences within the Bologna Process up to 2015. It illustrates that several main themes can be followed throughout the process – mobility of students and staff, a common degree system, the social dimension, lifelong learning, a European system of credits, quality assurance and the development of Europe as an attractive knowledge region. Learning and teaching was added as an explicit priority in the Yerevan Communiqué.

The Yerevan Communiqué sets out a streamlined and updated policy agenda focusing on four key policy areas: implementation of key commitments; learning and teaching; employability; and social inclusion. These goals and objectives are all addressed in the report, and the combined analysis across the seven chapters aims to present a picture of the current reality of the European Higher Education Area (EHEA).

## The Bologna Process: from Sorbonne to Yerevan, 1998-2015

<b>Mobility of students and teachers</b>	Mobility also for researchers and administrative staff	Social dimension of mobility	Portability of loans and grants	Attention to visa and work permits	Attention also to pension systems and recognition	Benchmark of 20 % by 2020 for student mobility	Explore path to automatic recognition of academic qualifications	Implementation of key commitments
<b>A common two-cycle degree system</b>	Easily readable and comparable degrees	Fair recognition Development of joint degrees	Inclusion of doctoral level as third cycle	QF-EHEA adopted National Qualifications Frameworks (NQFs) launched	NQFs by 2010	NQFs by 2012	Roadmaps for countries without NQF	Implementation of key commitments
		<b>Social dimension</b>	Equal access	Reinforcement of the social dimension	Commitment to national action plans	National targets for the social dimension to be measured by 2020	Widening access and completion rates	Social inclusion
		<b>Lifelong learning (LLL)</b>	Alignment of national LLL policies Recognition of Prior Learning (RPL)	Flexible learning paths	Partnerships to improve employability	LLL as a public responsibility Focus on employability	Enhance employability, LLL and entrepreneurial skills through cooperation with employers	Employability
<b>Use of credits</b>	A system of credits (ECTS)	ECTS and Diploma Supplement (DS)	ECTS for credit accumulation		Coherent use of tools and recognition practices	Implementation of Bologna tools	Ensure that Bologna tools are based on learning outcomes	Adoption of ECTS Users Guide
	<b>European cooperation in quality assurance (QA)</b>	Cooperation between QA and recognition professionals	QA at institutional, national and European level	European Standards and Guidelines for quality assurance (ESG) adopted	Creation of the European Quality Assurance Register (EQAR)	Quality as an overarching focus for EHEA	Allow EQAR registered agencies to perform their activities across the EHEA	Adoption of revised ESG and European Approach to QA of joint programmes
<b>Europe of Knowledge</b>	European dimensions in higher education	Attractiveness of the EHEA	Links between higher education and research areas	International cooperation on the basis of values and sustainable development	Strategy to improve the global dimension of the Bologna Process adopted	Enhance global policy dialogue through Bologna Policy Fora	Evaluate implementation of 2007 global dimension strategy	
								<b>Learning and Teaching: Relevance and quality</b>
1998 Sorbonne Declaration	1999 Bologna Declaration	2001 Prague Communiqué	2003 Berlin Communiqué	2005 Bergen Communiqué	2007 London Communiqué	2009 Leuven/ Louvain-la-Neuve Communiqué	2012 Bucharest Communiqué	2015 Yerevan Communiqué

## Report outline

This report has been prepared for the European Ministerial Conference in Paris, France, on 24-25 May 2018. It provides a snapshot of the state of implementation of the Bologna Process from various perspectives using data collected mostly in the first half of 2017. It provides both qualitative information and statistical data, and covers all main aspects of higher education reforms aiming at a well-functioning EHEA.

The report is a successor to the two Bologna Process Implementation Reports (2012 and 2015) and has been developed through collaboration between the Bologna Follow-up Group (BFUG) and Eurostat, Eurostudent and Eurydice. For the first time, it also includes some indicators collected by the European Students Union (ESU), the European University Association (EUA), and the European Quality Assurance Register for higher education (EQAR).

The development of the report has been overseen by the Bologna Follow-up Group (BFUG), and specifically by a working group established to guide all aspects of the reporting process. The group was co-chaired by Tone Flood Strøm (Norway), Andrejs Rauhvargers (Latvia) and David Crosier (Eurydice). Close collaboration was also established with all BFUG advisory and working groups.

Qualitative information was gathered through two extensive questionnaires (an Excel questionnaire and an on-line questionnaire) addressed to BFUG members. These were submitted, after consultation with all relevant national actors, by the Bologna representatives in all 48 countries between March and December 2017. For the United Kingdom and Belgium, two responses each were submitted. The United Kingdom (England, Wales and Northern Ireland) is therefore treated as a separate higher education system to that of Scotland, while the Flemish and French Communities of Belgium are also considered as distinct higher education systems. However where statistical data is combined for Belgium and the United Kingdom in Eurostat's database, it is presented in a combined form in this report.

The qualitative data is based mainly on official information about legislation, regulations and national policies, and in some cases country representatives are asked to report on their perception of specific aspects of higher education reality. The data refers to higher education institutions that are directly or indirectly administered by a public education authority, which means public and publicly-subsidised private higher education institutions.

With regard to statistical data, the European Union's Education, Audiovisual and Culture Executive Agency (EACEA), working through a consortium led by Sogeti, Luxembourg, undertook a specific data collection in 2017 for the EHEA countries that are not part of regular Eurostat data gathering exercises.

The report draws upon a number of additional data sources. Eurostudent data is provided by the Eurostudent VI survey and focuses on the social and economic conditions of student life in Europe. The reference year for the data is 2016/17, and the report covers 28 of the 48 EHEA countries.

Information from the European University Association's Trends 2018 report is used substantially in Chapter 2 on learning and teaching. This report provides an institutional perspective on higher education developments in Europe. The reference year for this survey is 2017, and it involves 303 higher education institutions from 43 of the EHEA systems.

Certain indicators throughout the report are provided by the European Student Union (ESU) member organisations. This data was collected through an online survey to European student unions in the second half of 2017, and will also be used in ESU's 2018 edition of Bologna with Student Eyes.

The European Quality Assurance Register (EQAR) also hosted a short survey on cross border higher education quality assurance, and the responses to this questionnaire are used for the report's information on cross border quality assurance.

The reference year 2016/17 is applicable for qualitative data throughout the report, as well as for Eurostudent indicators. Eurostat statistical indicators generally use 2015 as the most recent reference year, with other years shown where relevant to provide a picture of trends.

The report is divided into seven thematic chapters, with a structure that aims to maintain coherence with the previous Bologna Process Implementation Reports, but also to reflect the most recent political priorities set in Yerevan in 2015. Each chapter has an introduction presenting the relevance of the topic in the Bologna Process, the commitments made in the Yerevan Communiqué, and the main findings of the 2015 Bologna Process Implementation Report, where relevant. The chapter then presents information through comparative indicators whose purpose is to describe the state of implementation in all countries from various perspectives. The text explains main developments, highlights issues regarding implementation, and provides examples of practice that may be of general interest.

The majority of indicators were developed for the 2012 Bologna Process Implementation Report, were updated in 2015 and have again been updated in this report, sometimes with substantial modification. A number of new indicators have also been developed, particularly to investigate more recent policy priorities.

Among the indicators presented in the report are 13 'scorecard indicators' that are designed to track country progress in implementing Bologna Process policy commitments. These scorecard indicators were already used in the 2015 edition of the Bologna Process Implementation Report to cover all but one of the issues assessed, although in some cases there have been significant revisions to the indicators for this edition. The new scorecard indicator in this report focuses on system level (automatic) recognition for academic purposes.

## CHAPTER 6:

# RELEVANCE OF THE OUTCOMES AND EMPLOYABILITY

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### The Yerevan Communiqué

Employability of graduates has been an important focus of the Bologna Process from the very beginning and continues to be so. The Yerevan Communiqué reiterates the goal of enhancing employability of the previous ministerial conference in Bucharest.

The Yerevan Communiqué states that 'fostering the employability of graduates throughout their working lives in rapidly changing labour markets ... is a major goal for the EHEA'. The ministers supported 'higher education institutions in exploring diverse measures to reach these goals, e.g. by strengthening their dialogue with employers, implementing programmes with a good balance between theoretical and practical components, fostering the entrepreneurship and innovation skills of students and following graduates' career developments' <sup>(111)</sup>.

### The 2015 Bologna Process Implementation Report

The data from the 2015 Bologna Implementation showed that higher education graduates had been hit hard by the economic crisis in terms of their employment prospects. Unemployment ratios had grown proportionally more for them than for their peers with lower levels of education; their income advantages slightly decreased; and their over-qualification rates increased in the period between 2010 and 2013. And while unemployment ratios were still the lowest for young people with high educational attainment in most countries, this was not true everywhere within the EHEA. In fact, in one third of the countries with available data, higher education graduates did not have the most secure position in the labour market.

In addition, the economic crisis had a different impact on the unemployment ratios of women and men, hitting male dominated sectors faster and more severely. In contrast to pre-crisis years, men with low educational attainment had higher unemployment ratios than their female counterparts, while unemployment ratios were similar for both sexes among the highly educated.

All these developments highlighted the need for higher education policy-makers to (re-)focus attention on the employability of graduates. While almost all EHEA countries recognised employability as a policy concern, systematic efforts including several policy elements (using labour market forecasting, involving employers, providing incentives to include work placements in many higher education programmes, improving career guidance services, monitoring performance with established feedback-mechanisms, but also encouraging student mobility or the implementation of Bologna tools) were still not applied everywhere. Nevertheless, many countries introduced new policies and monitoring tools such as graduate surveys in order to improve graduate employment. However, employment-related difficulties faced by under-represented groups were largely neglected by top-level policies.

### Chapter outline

This chapter examines the issue of graduates' employability. Firstly it discusses the current labour market situation of higher education graduates, highlighting recent trends to which higher education institutions need to respond. Secondly, it looks at how EHEA countries try to enhance the employability of graduates through various types of policies, and their monitoring and evaluation.

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<sup>(111)</sup> Yerevan Communiqué, adopted at the EHEA Ministerial Conference in Yerevan, 14-15 May 2015, p. 2.

## 6.1. Graduates on the labour market: transition from education to work

Several indicators can describe graduates' transition from education to work. Section 6.1 looks at graduates' labour market situation in EHEA countries based on unemployment rates, income levels, as well as qualification mismatch – which usually means 'over qualification' (holding a qualification which is above the level required to gain entry to a job) and 'skills underutilisation' (being in a job which does not make use of acquired knowledge and skills). Income levels and qualification mismatch can serve as indicators for job quality (the 'meaningfulness' of a job).

### 6.1.1. Graduates on the labour market: transition from education to work

Unemployment rates comparing the unemployment situation of people aged 20-34 with different educational attainment provide valuable information on the relative value of tertiary education degrees.

Unemployment can be measured by both the unemployment rate and the unemployment ratio. The unemployment rate shows the share of those who are looking for a job but cannot find one, taking the labour force as the denominator in the calculation. In contrast, the unemployment ratio compares the unemployed to the total population instead of the labour force, thus indicating the proportion of the unemployed within the total population of a given age group. Hence, the unemployment ratio is lower than the unemployment rate. In addition, countries with similar unemployment rates can have different unemployment ratios depending on their inactivity rate. For example, countries with a higher share of young people aged 20-34 in education (and thus a higher share of inactive young people) will have lower unemployment ratios.

Figure 6.1.A shows the difference in unemployment rate and unemployment ratio of people with a higher education degree. As can be seen, the variation in both unemployment rate and ratio is large. The lowest unemployment rate and ratio can be found in Andorra (1.8 % and 1.5 % respectively), and the highest in Bosnia and Herzegovina (37.6 % and 31.7 % respectively). If Azerbaijan and Finland are compared, both have almost the same unemployment rate (7.4 % and 7.3 % respectively), but the unemployment ratios are quite different (3.8 % and 6.3 % respectively). This implies that in Finland there is a higher proportion of inactive population. Also, in Switzerland, Moldova and Estonia the unemployment rate is the same (4.3 %), but the unemployment ratios are 3.9 %, 2.3 % and 3.4 % respectively.

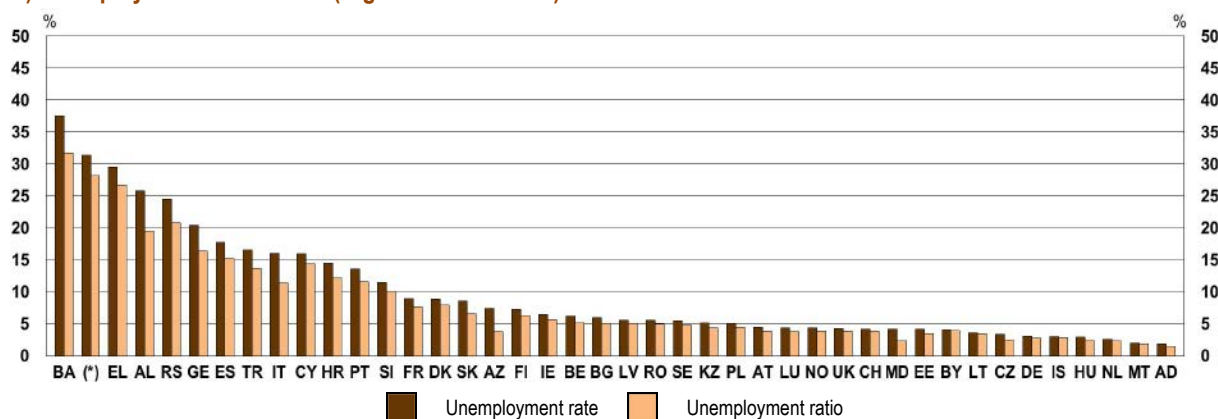
Figure 6.1.B shows the unemployment rate of people with low, medium and high education attainment, with the higher education category divided into Bachelor and Masters-levels. The EHEA median of unemployment rates for young people with low educational attainment (at most lower secondary education) is 20.0 %, for those with medium educational attainment (at most post-secondary non-tertiary education) it is 10.6 %, while it is 7.1 % and 5.6 % for people with Bachelor and Masters-degree. In most cases, the higher the education level, the lower the unemployment, when low and medium education level is compared with either the Bachelor or Masters-level of education.

The biggest gaps between the unemployment rates of young people with Masters-level and low educational attainment are in Slovakia (8.2 % vs. 39.0 %), Ireland (5.8 % vs. 29.7 %), France (7.5 % vs. 29.8 %) and Croatia (16.3 % vs. 37.9 %). These are the countries where staying in education improves young people's labour market prospects the most. Gaps between the unemployment rates of high and the medium skilled are much less pronounced but still relatively wide. Countries with the largest differences between Masters-level and medium skilled are Spain (14.7 % vs. 26.4 %), Greece (22.4 % vs. 33.9 %), and France (7.5 % vs. 17.4 %), whereas the largest differences between Bachelor level and medium skilled can be found in Luxembourg (3.7 % vs. 12.5 %), Lithuania (4.0 % vs. 12.4 %) and France (9.6 % vs. 17.4 %).



Figure 6.1: Unemployment rate and unemployment ratio of people aged 20-34 by educational attainment level (%), 2016

A) Unemployment rate vs ratio (High education level):

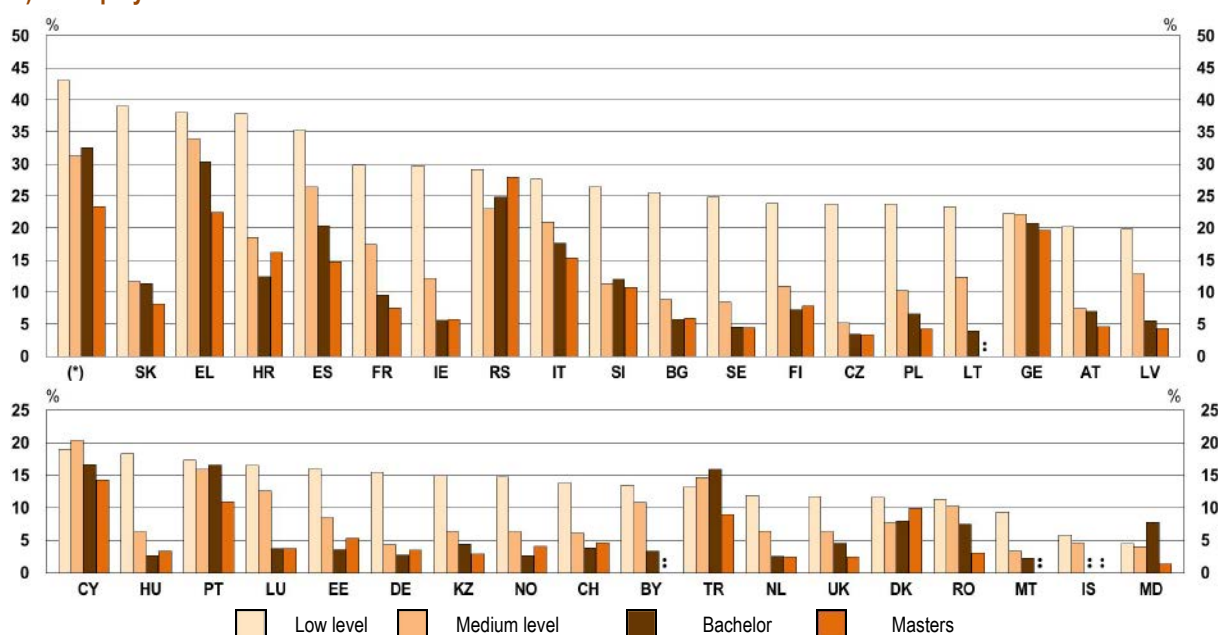


(\*): the former Yugoslav Republic of Macedonia

	BA (*)	EL	AL	RS	GE	ES	TR	IT	CY	HR	PT	SI	FR	DK	SK	AZ	FI	IE	BE	BG	LV
Unemployment rate	37.6	31.4	29.5	25.8	24.5	20.5	17.7	16.6	16.1	16.0	14.5	13.6	11.5	8.9	8.9	8.6	7.4	7.3	6.5	6.2	5.6
Unemployment ratio	31.7	28.2	26.8	19.5	20.8	16.4	15.2	13.7	11.4	14.4	12.2	11.6	10.1	7.7	8.0	6.5	3.8	6.3	5.6	5.1	5.0
	RO	SE	KZ	PL	AT	LU	NO	UK	CH	MD	EE	BY	LT	CZ	DE	IS	HU	NL	MT	AD	EHEA
Unemployment rate	5.5	5.5	5.1	5.0	4.4	4.4	4.4	4.3	4.2	4.2	4.2	4.1	3.6	3.3	3.1	3.0	2.9	2.6	2.0	1.8	5.8
Unemployment ratio	4.9	4.8	4.4	4.4	3.8	3.8	3.9	3.9	3.9	2.3	3.4	3.9	3.4	2.5	2.8	2.9	2.4	2.3	1.8	1.5	5.0

Source: Eurostat, Labour Force Survey (LFS) and additional collection for the other EHEA countries.

B) Unemployment rate:



(\*): the former Yugoslav Republic of Macedonia

	(*)	SK	EL	HR	ES	FR	IE	RS	IT	SI	BG	SE	FI	CZ	PL	LT	GE	AT	LV
Low level	43.1	39.0	38.0	37.9	35.3	29.8	29.7	29.1	27.7	26.4	25.6	24.8	23.9	23.7	23.7	23.3	22.3	20.1	19.9
Medium level	31.2	11.6	33.9	18.5	26.4	17.4	12.1	23.0	20.9	11.3	8.9	8.4	10.9	5.2	10.3	12.4	22.2	7.4	12.9
Bachelor	32.5	11.3	30.3	12.4	20.4	9.6	5.6	24.8	17.6	12.0	5.7	4.5	7.2	3.5	6.6	4.0	20.7	7.0	5.5
Masters	23.4	8.2	22.4	16.3	14.7	7.5	5.8	27.9	15.3	10.8	6.0	4.5	7.9	3.4	4.3	:	19.8	4.6	4.4
	CY	HU	PT	LU	EE	DE	KZ	NO	CH	BY	TR	NL	UK	DK	RO	MT	IS	MD	EHEA
Low level	19.0	18.3	17.3	16.5	16.0	15.5	15.0	14.7	13.8	13.5	13.1	11.9	11.7	11.5	11.3	9.3	5.8	4.5	20.0
Medium level	20.4	6.3	15.9	12.5	8.4	4.3	6.4	6.3	6.1	10.8	14.6	6.4	6.3	7.6	10.2	3.3	4.6	4.0	10.6
Bachelor	16.7	2.7	16.6	3.7	3.6	2.7	4.4	2.7	3.8	3.3	15.9	2.5	4.5	8.0	7.4	2.2	:	7.7	7.1
Masters	14.2	3.3	11.0	3.8	5.3	3.5	2.9	4.1	4.7	:	9.1	2.5	2.5	9.9	3.1	0.7	:	1.4	5.6

Source: Eurostat, Labour Force Survey (LFS) and additional collection for the other EHEA countries.

### Notes:

The unemployment rate means the absolute number of unemployed persons aged between 20 and 34 with a given educational attainment level divided into the total population having the same educational attainment level and sex, regardless of the employment and activity status.

The unemployment ratio is calculated as the share of the unemployed in the total population of a given educational attainment level and age group. High educational attainment: ISCED 5-6, Medium educational attainment: ISCED 3-4 and Low educational attainment: ISCED 0-2.

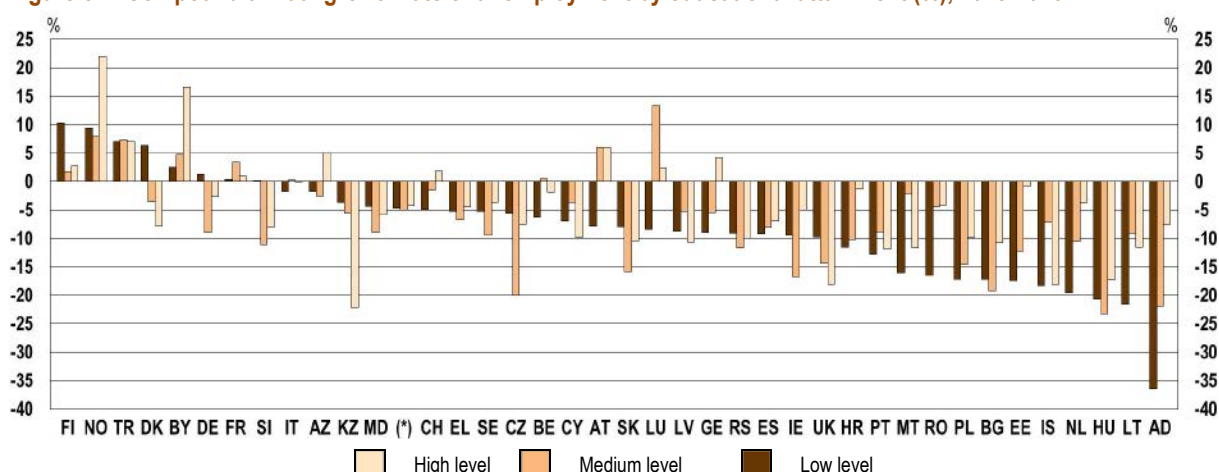
EHEA: Refers to the EHEA median, which was calculated based on countries with available data for all levels of education.

As expected, the smallest differences in unemployment rates can be found between the medium skilled and Bachelor-level educated, but in general, having a Bachelor-level degree protects against unemployment better than upper secondary level education. However, in seven countries (Denmark, the former Yugoslav Republic of Macedonia, Moldova, Portugal, Serbia, Slovenia and Turkey), graduates with Bachelor degrees are more likely (albeit not always by much) to be unemployed than those with upper secondary education, and in Serbia and Denmark even graduates with a Master degree are in a similar situation.

Graduates with a Bachelor degree in Moldova and Turkey are in a more vulnerable labour market situation than people with low level educational attainment. In these two countries, however, people with a Master degree have the lowest unemployment rates among the different groups.

Figure 6.2 shows the compound annual growth of unemployment rates by educational attainment level.

**Figure 6.2: Compound annual growth rate of unemployment by educational attainment (%), 2013-2016**



(\*): the former Yugoslav Republic of Macedonia

	%	FI	NO	TR	DK	BY	DE	FR	SI	IT	AZ	KZ	MD	(*)	CH	EL	SE	CZ	BE	CY	AT	SK
High		10.3	9.4	7.1	6.4	2.6	1.2	0.4	0.0	-1.7	-1.7	-3.6	-4.4	-4.7	-4.9	-5.2	-5.3	-5.6	-6.3	-7.0	-7.8	-8.0
Medium		1.8	7.9	7.4	-3.5	4.7	-8.9	3.5	-11.1	0.2	-2.6	-5.6	-9.0	-5.0	-1.5	-6.8	-9.4	-20.0	0.5	-3.7	6.1	-15.8
Low		2.8	22.0	7.0	-7.8	16.7	-2.7	1.0	-8.1	-0.1	5.0	-22.2	-5.9	-4.2	1.8	-4.4	-3.7	-7.5	-1.8	-9.9	6.0	-10.4
	%	LU	LV	GE	RS	ES	IE	UK	HR	PT	MT	RO	PL	BG	EE	IS	NL	HU	LT	AD	EHEA	
High		-8.4	-8.7	-8.9	-9.1	-9.2	-9.5	-9.8	-11.6	-12.8	-16.1	-16.5	-17.2	-17.2	-17.5	-18.3	-19.5	-20.8	-21.6	-36.4	-7.9	
Medium		13.4	-5.2	-5.5	-11.7	-8.1	-16.8	-14.3	-10.2	-8.8	-2.2	-4.5	-14.6	-19.2	-12.2	-7.2	-10.6	-23.2	-9.1	-21.9	-7.0	
Low		2.5	-10.6	4.2	-10.1	-7.0	-5.1	-18.1	-1.3	-11.9	-11.6	-4.1	-9.9	-10.8	-0.7	-18.1	-3.8	-17.3	-11.6	-7.6	-4.8	

Source: Eurostat, Labour Force Survey (LFS) and additional collection for the other EHEA countries.

### Notes:

The unemployment ratio is calculated as the share of the unemployed at the total population of a given educational attainment level and age group.

Data are sorted by the growth rate of unemployment of the highly educated.

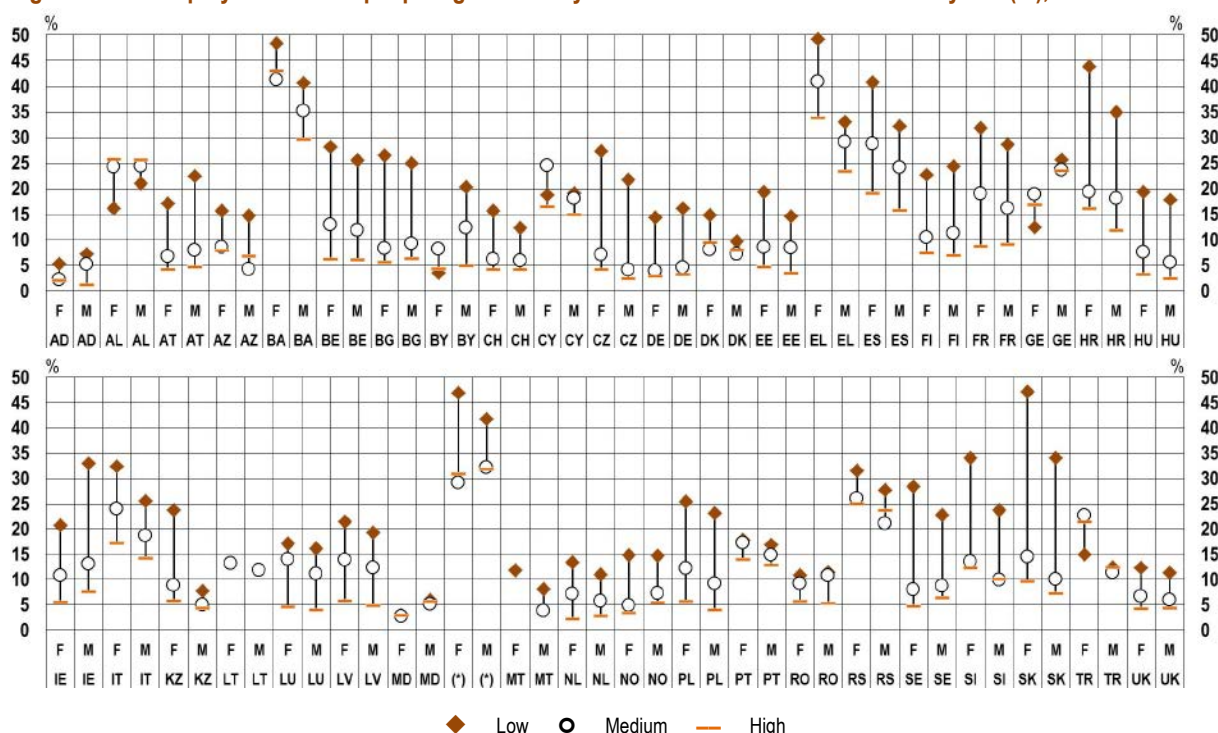
EHEA: Refers to the EHEA median, which was calculated based on countries with available data for all levels of education.

In the previous Bologna Process Implementation Report in 2015, most of the countries experienced an increase in unemployment between 2008 and 2013. This can be explained by the deep economic crisis that started in 2008. When looking at the following years (2013 to 2016), the situation has improved considerably. The majority of countries experienced a decrease in unemployment during these years. In fact, Andorra, Bulgaria, Croatia, Estonia, Iceland, Lithuania, Malta, the Netherlands, Romania, Poland and Portugal had a negative growth rate of over 10 % during these years. However, looking at different education levels, there are some exceptions to the overall positive situation. Denmark, Finland, Norway and Turkey and had more than 6 % growth of unemployment among the highly educated, while Belarus and Norway had more than 16 % increase among people with low educational attainment.

In general, obtaining a higher level qualification lowers the probability of becoming unemployed for both women and men. In 2016, the unemployment rates of young women and men were relatively similar in three-quarters of EHEA countries among the highly educated, (with less than six percentage points difference in the rate between men and women). As Figure 6.3 shows, the extreme cases were Bosnia and Herzegovina (13.3 percentage points higher unemployment rate for women), Greece (10.5 percentage points) and Turkey (9 percentage points). At the other extreme, the unemployment rate for men was 6.6 percentage points higher for men in Georgia.

The difference is more pronounced in the case of young people with low educational attainment. As Figure 6.3 also depicts, in 12 countries, the unemployment rate is more than 5 percentage points higher for women than men.

**Figure 6.3: Unemployment rate of people aged 20-34 by educational attainment level and by sex (%), 2016**



(\*): the former Yugoslav Republic of Macedonia

Source: Eurostat, Labour Force Survey (LFS) and additional collection for the other EHEA countries.

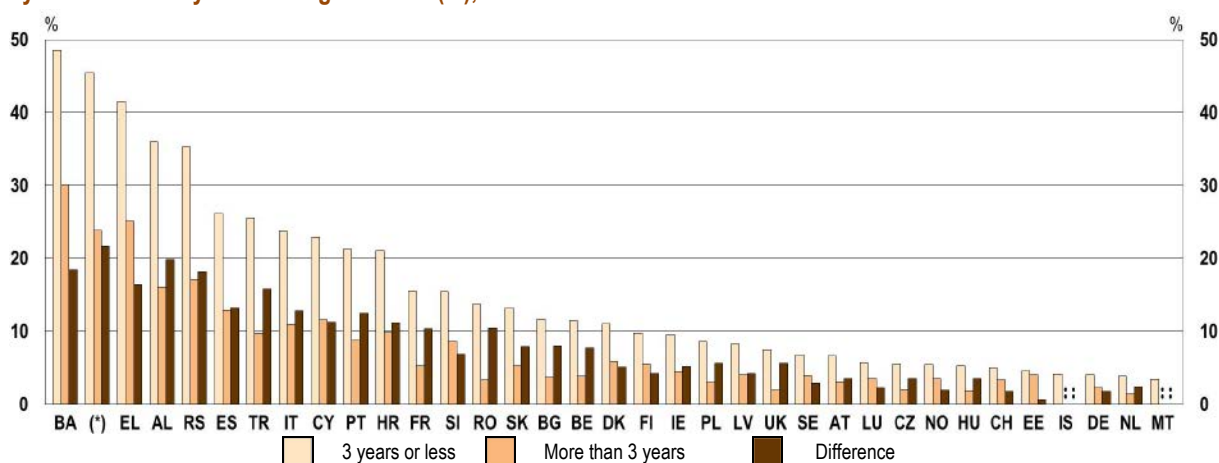
#### Notes:

The unemployment ratio is calculated as the share of the unemployed at the total population of a given educational attainment level and age group. Data are based on small sample size in most medium and small countries.

Figure 6.4 shows that the unemployment rate of tertiary education graduates aged 20-34 by the number of years since graduation. It differentiates between young people who graduated three years or less before data collection (recent graduates), and those whose graduation was more than three years before data collection (experienced graduates). This indicator thus captures the labour market entry prospects of recent graduates in comparison to their more experienced peers.

Figure 6.4 shows that the unemployment rate of recent graduates in countries analysed is considerably higher than that of those who have been in the labour market for a longer period. The unemployment rate of graduates with less than three years of experience is over 20 % in 11 countries, and over 10 % in about half of the countries. In five countries, the unemployment rate is less than five per cent for recent graduates. Countries with the largest difference in unemployment rates between recent and more experienced graduates are the former Yugoslav Republic of Macedonia (21.6 percentage points), Albania (19.9 percentage points) and Bosnia and Herzegovina (18.4 percentage points).

**Figure 6.4: Unemployment rate of tertiary education graduates aged 20-34, by the number of years since graduation (%), 2016**



(\*): the former Yugoslav Republic of Macedonia

%	BA	(*)	EL	AL	RS	ES	TR	IT	CY	PT	HR	FR	SI	RO	SK	BG	BE	DK
3 years or less	48.5	45.4	41.5	36	35.3	26.1	25.5	23.7	22.9	21.2	21	15.6	15.5	13.7	13.2	11.7	11.5	11
More than 3 years	30.1	23.8	25.1	16.1	17.1	12.9	9.7	10.9	11.6	8.8	9.8	5.3	8.6	3.3	5.3	3.7	3.8	5.9
Difference	18.4	21.6	16.4	19.9	18.2	13.2	15.8	12.8	11.3	12.4	11.2	10.3	6.9	10.4	7.9	8	7.7	5.1
%	FI	IE	PL	LV	UK	SE	AT	LU	CZ	NO	HU	CH	EE	IS	DE	NL	MT	EHEA
3 years or less	9.7	9.6	8.6	8.2	7.5	6.8	6.6	5.7	5.5	5.4	5.3	5	4.6	4.1	4	3.8	3.4	11.5
More than 3 years	5.5	4.4	3	4	1.9	3.9	3.1	3.5	2	3.5	1.8	3.3	4	:	2.3	1.4	:	4.4
Difference	4.2	5.2	5.6	4.2	5.6	2.9	3.5	2.2	3.5	1.9	3.5	1.7	0.6	:	1.7	2.4	:	6.9

Source: Eurostat, Labour Force Survey (LFS) and additional collection for the other EHEA countries.

#### Notes:

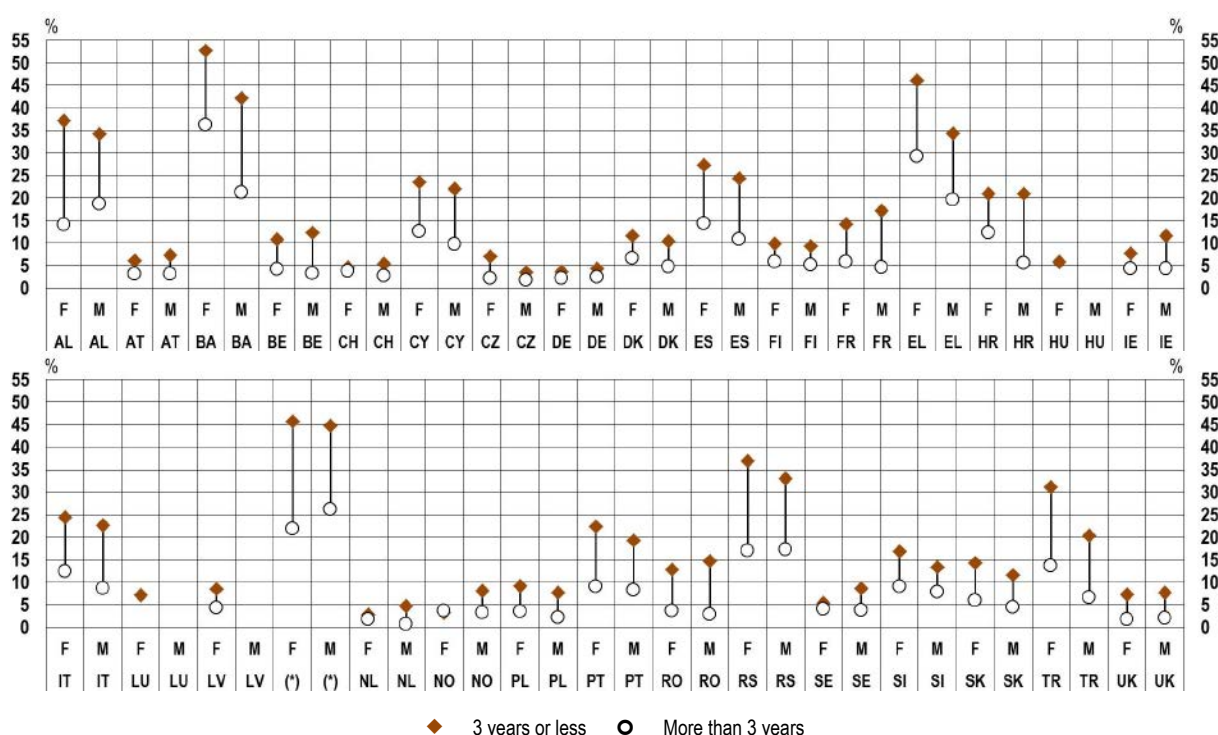
Data are based on small sample size in most medium and small countries. Data are sorted by the unemployment ratio of recent graduates (graduated 3 years or less before the data collection).

EHEA: Refers to the EHEA median, which was calculated based on countries with complete data.

Figure 6.5 breaks down the differences shown in the previous figure to show the situation for men and women. Among men, the highest differences in unemployment rates between recent graduates and those in the labour market for a longer period are to be found in Bosnia and Herzegovina (21 percentage points higher), the former Yugoslav Republic of Macedonia (18.6 percentage points), and Serbia (15.7 percentage points). Among women, the highest differences are in the former Yugoslav Republic of Macedonia (23.8 percentage points), Albania (23.1 percentage points) and Serbia (19.9 percentage points).

When comparing men and women with less than three years' employment experience, the unemployment rate of women is over 10 percentage points higher than that of men in Greece, Turkey and Bosnia and Herzegovina. In Norway, Ireland and France men's unemployment is more than three percentage points higher than women's. For men and women with more than three years' experience, the female unemployment rate is 15 percentage points higher in Bosnia and Herzegovina and 9.5 percentage points higher in Greece. In Albania and the former Yugoslav Republic of Macedonia, the unemployment rate of men is over four percentage points higher.

**Figure 6.5: Unemployment rate of tertiary education graduates aged 20-34, by the number of years since graduation and by sex (%), 2016**



(\*): the former Yugoslav Republic of Macedonia

Source: Eurostat, Labour Force Survey (LFS) and additional collection for the other EHEA countries.

#### Notes:

Data are based on small sample size in most medium and small countries.

The category '3 years and less since graduation' excludes the first year after graduation.

Overall, unemployment rates are highest in South-eastern Europe. While having a higher education degree provides better labour market opportunities, the unemployment rate is over 20 % in some of these countries (see Figure 6.1.B). The situation is worse for recent graduates with rates exceeding 40 % in Bosnia and Herzegovina, the former Yugoslav Republic of Macedonia and Greece (see Figure 6.4). It is also alarming that the situation is even more precarious for recent female graduates. Their unemployment rate is over 50 % in Bosnia and Herzegovina, and over 45 % in Greece and the former Yugoslav Republic of Macedonia (see Figure 6.5).

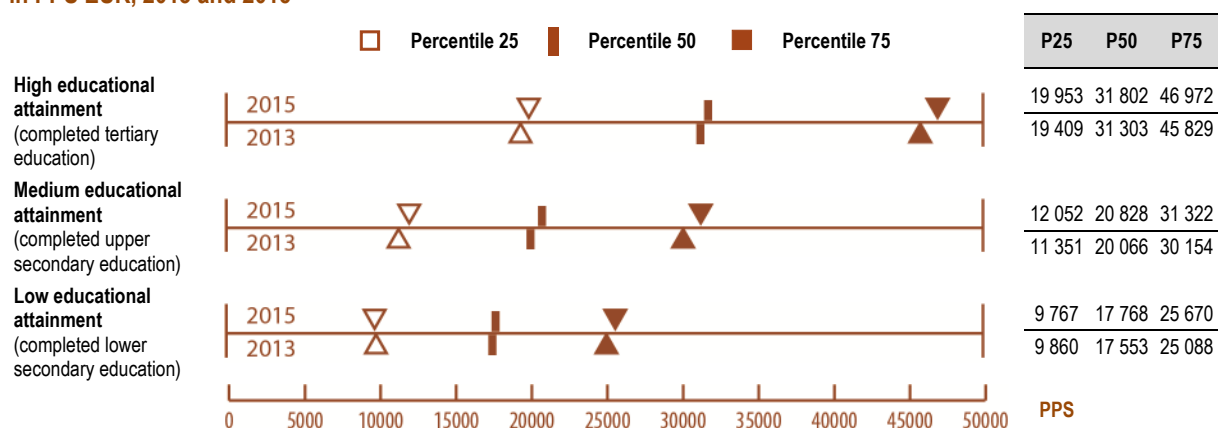


## 6.1.2. Income and educational attainment

The expected income of people with tertiary qualifications also forms part of graduates' labour market prospects. The assumption is that higher educational attainment – and thus higher levels of investment in education – should be compensated by better paid jobs after graduation.

Figures 6.6 and 6.7 show the relative income advantage of employees with higher education. Figure 6.6 shows the median as well as the lower and upper quartile of employee income by educational attainment in 2013 and 2015.

**Figure 6.6: 25, 50 and 75 percentiles of annual gross income of employees by educational attainment, EU-28, in PPS EUR, 2013 and 2015**



Source: Eurostat, EU-SILC (Statistics on Income and Living conditions).

Income distributions confirm that the gross income of most tertiary qualified employees is higher than those of lower qualified employees. In 2015, the median income of employees with tertiary qualifications was around EUR 31 000 in Purchasing Power Standard (PPS), whereas the median income was approximately PPS 21 000 for employees with upper secondary education and around PPS 18 000 for those with lower secondary education.

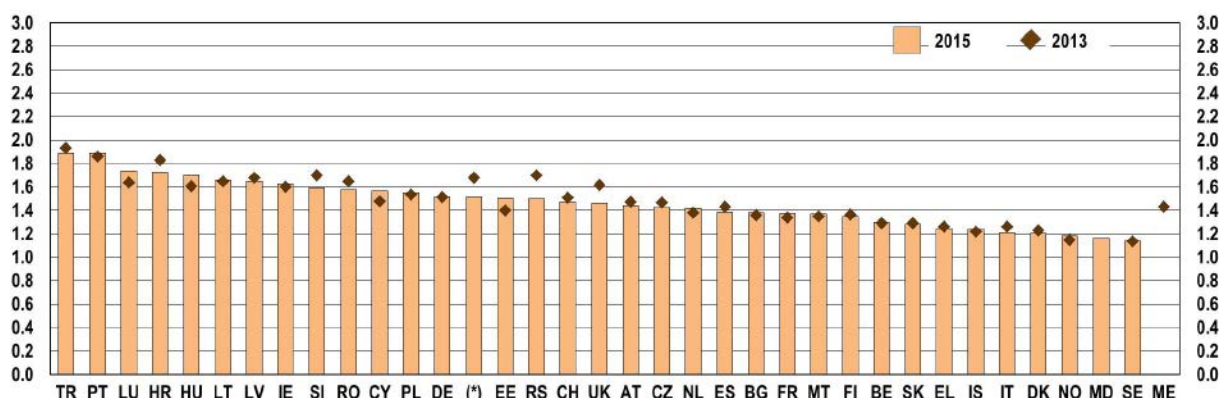
While there is much overlap in the income distributions of employees who attained lower and upper secondary educational attainment levels, the majority of employees with tertiary education tend to benefit considerably from obtaining this qualification level. However, attaining a tertiary qualification does not inevitably translate into higher income levels. Within each qualification level, the upper quartile (percentile 75) of the income distribution is more than twice as high as the lower quartile (percentile 25). Twenty-five per cent of employees who completed only lower secondary schooling earned more than 25 000 PPS (upper quartile) in 2015, whereas the quarter of the tertiary qualified at the lower end of the income distribution earned less than 20 000 PPS. Comparing the years between 2013 and 2015, people with a medium education level had the highest increases in annual gross income in all percentiles.

The annual gross income increased in all percentiles and education levels, except in the lower quartile of people with low education level, making the lowest earners even worse off, albeit not by a large amount. The increases of the highest earners (percentile 75) with a high or medium education level were twice as high as for people with a low education level.

The ratio of the median annual gross income of employees with tertiary qualification to lower levels of education is depicted in Figure 6.7. In 2015, tertiary qualified employees in every country analysed had an income advantage. According to Figure 6.7A, the ratio of tertiary qualification to upper secondary education ranges from 1.9 in Portugal and Turkey – which means that the median annual gross income of tertiary qualified employees is almost twice as high as the income of upper secondary qualified employees – and 1.7 in Croatia, Hungary, Luxembourg, and Lithuania to 1.1 in Sweden.

**Figure 6.7: Ratio of median annual gross income of employees with tertiary education to the median annual gross income of employees with lower levels of education, 2013 and 2015**

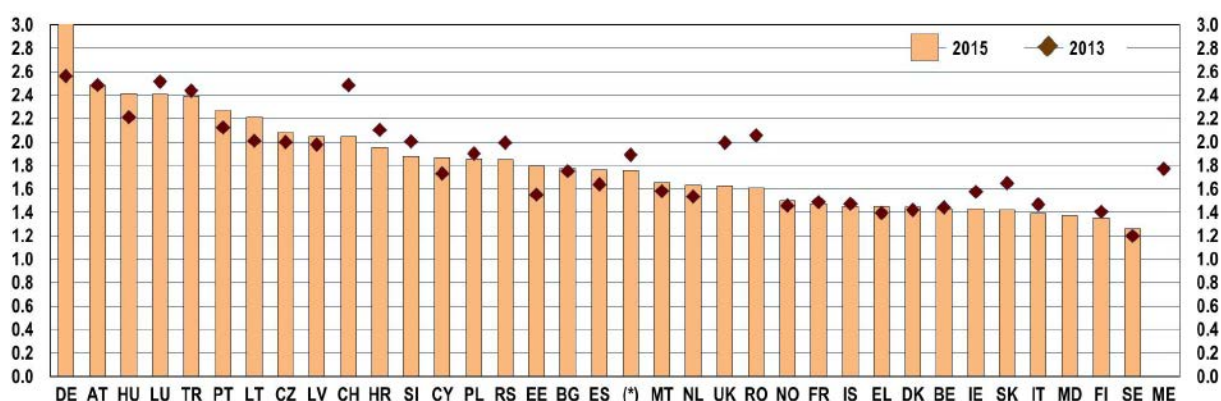
**A) Tertiary education compared to upper secondary education**



(\*): the former Yugoslav Republic of Macedonia

	TR	PT	LU	HR	HU	LT	LV	IE	SI	RO	CY	PL	DE	(*)	EE	RS	CH	UK	AT
2013	1.93	1.86	1.64	1.83	1.60	1.65	1.68	1.60	1.70	1.65	1.48	1.53	1.51	1.68	1.40	1.70	1.51	1.62	1.47
2015	1.89	1.89	1.73	1.73	1.70	1.66	1.65	1.63	1.59	1.58	1.57	1.55	1.51	1.51	1.50	1.50	1.47	1.46	1.44
	CZ	NL	ES	BG	FR	MT	FI	BE	SK	EL	IS	IT	DK	NO	MD	SE	ME	EHEA	
2013	1.47	1.38	1.43	1.36	1.34	1.35	1.36	1.29	1.29	1.26	1.22	1.26	1.23	1.15	:	1.14	1.43	1.48	
2015	1.42	1.41	1.38	1.38	1.38	1.37	1.35	1.30	1.28	1.24	1.24	1.21	1.20	1.18	1.16	1.14	:	1.47	

**B) Tertiary education compared to lower secondary education**



(\*): the former Yugoslav Republic of Macedonia

	DE	AT	HU	LU	TR	PT	LT	CZ	LV	CH	HR	SI	CY	PL	RS	EE	BG	ES	(*)
2013	2.56	2.48	2.21	2.52	2.44	2.12	2.01	2.00	1.98	2.48	2.10	2.00	1.73	1.90	2.00	1.55	1.75	1.64	1.89
2015	3.07	2.48	2.41	2.41	2.39	2.27	2.21	2.08	2.04	2.04	1.95	1.88	1.86	1.86	1.85	1.79	1.77	1.76	1.76
	MT	NL	UK	RO	NO	FR	IS	EL	DK	BE	IE	SK	IT	MD	FI	SE	ME	EHEA	
2013	1.58	1.53	1.99	2.05	1.46	1.49	1.47	1.39	1.42	1.44	1.58	1.65	1.47	:	1.40	1.20	1.77	1.82	
2015	1.65	1.63	1.63	1.61	1.50	1.47	1.45	1.45	1.45	1.43	1.43	1.42	1.39	1.37	1.35	1.26	:	1.77	

Source: Eurostat, EU-SILC (Statistics on Income and Living conditions).

**Notes:**

Calculation based on the variables 'Employee cash or near cash income' and 'Non-Cash employee income' which were added up to create the gross cash and non-cash employee personal income of individuals who were at least 6 months employed during the income reference period.

The age group covered is 16+.

Data are sorted by ratio between the median annual gross income of employees with tertiary education to the median annual income of employees with upper secondary education.

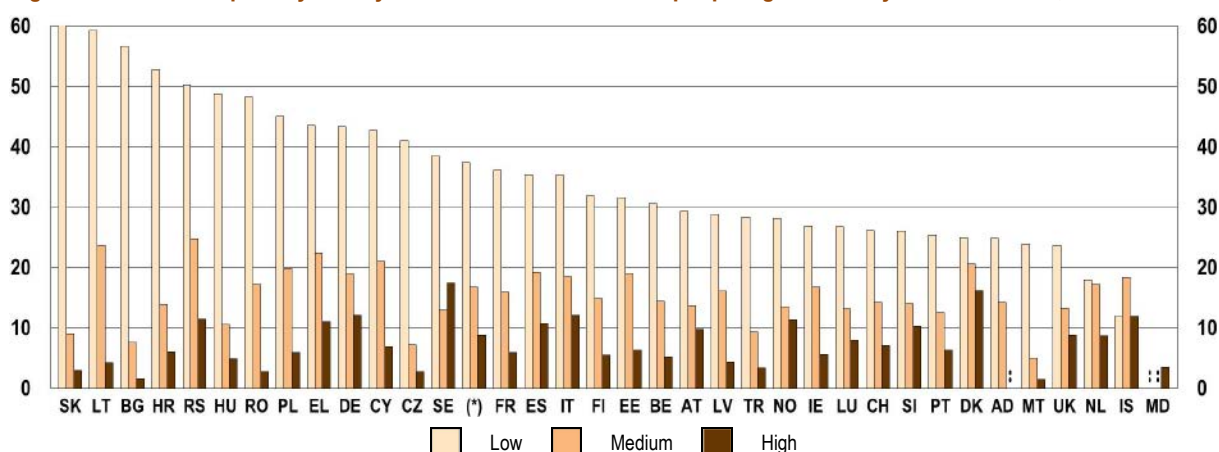
EHEA: Refers to the EHEA median, which was calculated based on countries with available data for both reference years.

The impact of completing tertiary education instead of only lower secondary schooling on the median annual gross income is more pronounced in several countries (see Figure 6.7.B). The ratio exceeds 3 in Germany and 2.4 in Austria, Hungary and Luxembourg. In a number of other countries, the ratio is around two, indicating a high wage premium when gaining a tertiary degree. The income inequality between the low and the highly educated is lowest in Sweden and Finland.

Regarding changes in the median gross annual income since 2013 (see Figure 6.7), though the relative ratios have been rather stable, the decrease in income advantage of the highly educated (both compared to employees with upper and lower secondary education) can be observed in the around same number of countries as increases. Compared to employees with upper secondary qualifications, employees with tertiary education qualifications lost the most in Serbia; while compared to those with lower secondary education, advantages of the highly qualified decreased the most in Romania, Slovakia, Switzerland and the United Kingdom.

Figure 6.8 shows the risk of being in poverty by educational attainment. The difference in the at-risk-rate between education levels shows the effect that education level has on the risk of a person to have an income below the poverty line (see explanatory note). In general, the lower the education level, the more risk there is to have income below the poverty line. The largest differences between low and high education level can be found in Croatia, Bulgaria, Hungary, Lithuania, Romania and Slovakia, and between medium and high education level in Cyprus, Lithuania, Poland, Romania and Serbia.

**Figure 6.8: At-risk-of-poverty rate by educational attainment for people aged 25-34 by education level, 2015**



(\*): the former Yugoslav Republic of Macedonia

	SK	LT	BG	HR	RS	HU	RO	PL	EL	DE	CY	CZ	SE	(*)	FR	ES	IT	FI
<b>Low</b>	60.4	59.3	56.7	52.8	50.2	48.8	48.2	45.0	43.6	43.3	42.8	41.0	38.5	37.3	36.1	35.3	35.2	31.9
<b>Medium</b>	8.9	23.6	7.6	13.9	24.8	10.5	17.2	19.8	22.4	19.0	21.0	7.2	12.9	16.7	15.9	19.3	18.4	14.8
<b>High</b>	2.9	4.2	1.5	6.0	11.4	4.9	2.7	5.8	11.1	12.1	6.9	2.7	17.4	8.8	5.8	10.7	12.1	5.4
	EE	BE	AT	LV	TR	NO	IE	LU	CH	SI	PT	DK	AD	MT	UK	NL	IS	MD
<b>Low</b>	31.6	30.5	29.3	28.8	28.3	28.1	26.8	26.7	26.1	26.1	25.3	25.0	24.8	23.9	23.7	17.9	11.9	:
<b>Medium</b>	19.0	14.3	13.7	16.0	9.4	13.5	16.7	13.0	14.2	14.0	12.5	20.6	14.2	5.0	13.1	17.2	18.4	:
<b>High</b>	6.3	5.2	9.7	4.3	3.3	11.3	5.6	7.9	7.0	10.3	6.2	16.2	:	1.4	8.8	8.6	11.9	3.4

Source: EU-SILC (Statistics on Income and Living conditions) specific extraction.

#### Note:

The at-risk-of-poverty rate is the share of people with an equivalised disposable income (after social transfer) below the at-risk-of-poverty threshold, which is set at 60 % of the national median equivalised disposable income after social transfers.



Overall, the large variation in poverty risk at different education levels indicates that having higher education degree reduces the likelihood of poverty significantly. The lowest differences between low and high education level can be found in Denmark, Iceland, the Netherlands and the United Kingdom. Interestingly, the risk of poverty is actually equal between these education levels. The lowest differences between medium and high level can be found in Austria, Malta, Norway and Slovenia. While in almost all cases the risk of poverty is higher with lower education level, the case of Sweden is anomalous, as the risk of being in poverty is higher with a higher education degree than with medium level education. Moreover, in Iceland, the risk of poverty with low and high levels of education is equal.

Comparing the risk of poverty to the unemployment rate (see Figure 6.1B) shows that in some countries where there is relatively low unemployment among higher education graduates (Denmark, Iceland, Norway and Sweden), there is a relatively high chance (over 10 %) of being in poverty (defined as being below the 60 % of median income). This could potentially be explained by income equality, i.e. that there are proportionally not that many very high nor very low earners in the Nordic countries.

### 6.1.3. Qualification mismatches

Another common indicator of the labour market prospects of graduates is vertical mismatch, which occurs when there is a discrepancy between graduates' level of education or skills and the level of education or skills required by their job (Cedefop 2010, p. 13). Such vertical mismatch can occur in terms of *qualifications* or *skills*, and conclusions can be very different depending on which one is being examined.

Qualification and skills mismatches can be measured based on several different indicators. In general, self-assessment is regarded as the most accurate measurement of vertical mismatch, particularly skills mismatch. However, European comparative graduate survey data is not yet available <sup>(112)</sup>. An alternative indicator assigns a fixed educational level to a given occupational category. While such an indicator has many limitations (e.g. its rigidity or the need for detailed job-category lists which are not always feasible to compile), it can serve as a starting point for further analysis.

This sub-section looks at over-qualification rates defined as the percentage of young people with tertiary education occupying a post not traditionally regarded as requiring a tertiary qualification (International Standard Classification of Occupations (ISCO) occupation level 4 to 9, including clerks, service workers, agricultural and fishery workers, craft and related trades workers, plant and machine operators or elementary occupations <sup>(113)</sup>). Figure 6.9 shows the distribution of people aged 25-34 with tertiary education qualifications and employed in ISCO 1 or 2 (legislators, senior officials, managers and professionals), in ISCO 3 (technicians and associate professionals) and in ISCO 4 to 9.

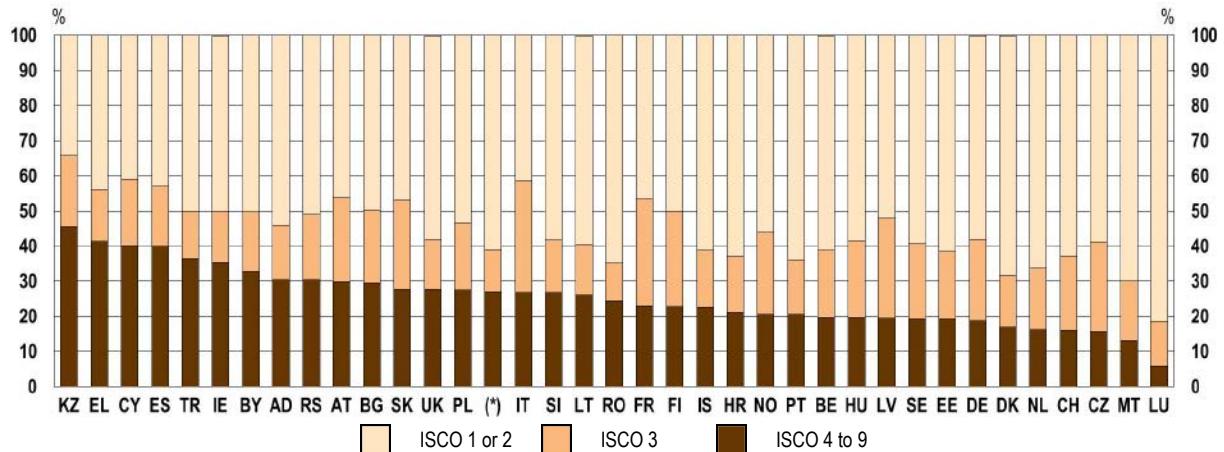
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<sup>(112)</sup> For further information, see the European Commission's proposal for a Council Recommendation on tracking graduates (COM/2017/0249 final).

<sup>(113)</sup> See the Glossary and Methodological Notes for more details.

In 2016, the median over-qualification rate was 24.4 %, compared to 21.9 % in the last report for the year 2013, so overall the proportion of over-qualified people has increased (Figure 6.9). This means that in half of the countries, almost a quarter of young graduates were employed in occupations for which a lower qualification level should be sufficient. The countries with the highest over-qualification rates (above 30 %) are Kazakhstan (45.5 %), Greece (41.5 %), Cyprus (40.2 %), Spain (40.1 %), Turkey (36.6 %), Ireland (35.5 %), Belarus (32.8 %), Andorra (30.5 %) and Serbia (30.5 %). In contrast, the countries with relatively low over-qualification rates (below 15 %) are Malta (13.2 %) and Luxembourg (6 %).

**Figure 6.9: Distribution of people with tertiary education (ISCED 5-8) aged 25-34 and employed in ISCO 1 or 2 (legislators, senior officials, managers and professionals), in ISCO 3 (technicians and associate professionals) and in ISCO 4-9 (%), 2016**



(\*): the former Yugoslav Republic of Macedonia

%	KZ	EL	CY	ES	TR	IE	BY	AD	RS	AT	BG	SK	UK	PL	(*)	IT	SI	LT	RO
ISCO 1 or 2	34.2	43.8	41.0	42.8	49.9	49.9	50.1	54.1	50.8	46.2	49.7	46.8	57.8	53.5	61.0	41.3	58.1	59.3	64.8
ISCO 3	20.3	14.8	18.8	17.1	13.5	14.5	17.1	15.5	18.7	23.9	20.7	25.3	14.3	18.9	11.9	31.8	15.0	14.3	10.8
ISCO 4 to 9	45.5	41.5	40.2	40.1	36.6	35.5	32.8	30.5	30.5	29.9	29.6	27.9	27.8	27.7	27.1	27.0	26.9	26.3	24.4

%	FR	FI	IS	HR	NO	PT	BE	HU	LV	SE	EE	DE	DK	NL	CH	CZ	MT	LU
ISCO 1 or 2	46.6	49.9	61.1	62.7	56.0	64.0	61.0	58.4	51.9	59.3	61.6	57.8	68.1	66.1	62.8	58.6	69.9	81.4
ISCO 3	30.3	27.3	16.2	16.1	23.3	15.4	19.0	21.8	28.4	21.3	19.1	23.4	14.8	17.7	21.1	25.6	16.9	12.6
ISCO 4 to 9	23.1	22.8	22.7	21.2	20.7	20.7	19.9	19.8	19.7	19.5	19.4	18.7	17.0	16.2	16.1	15.8	13.2	6.0

Source: Eurostat, Labour Force Survey (LFS) and additional collection for the other EHEA countries.

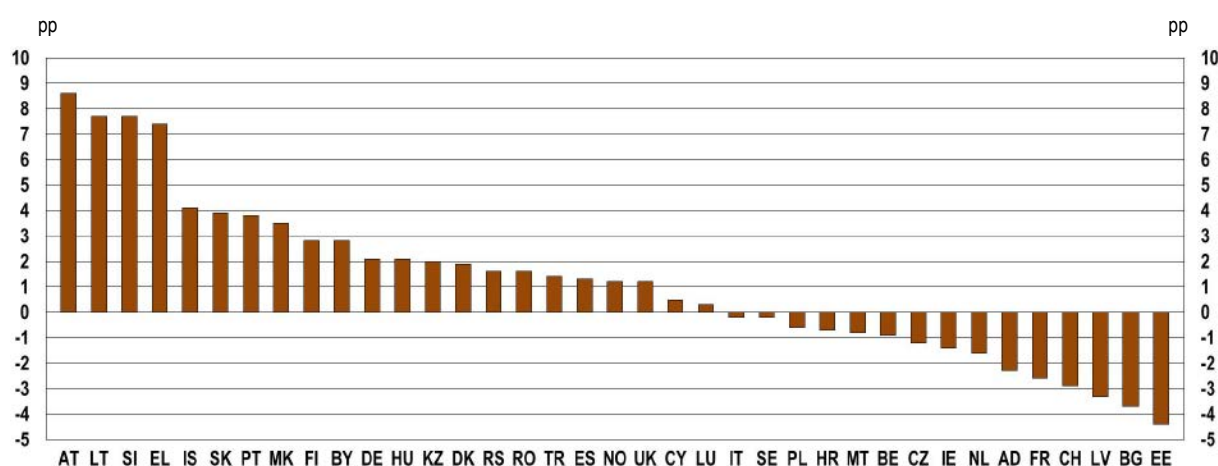
**Notes:**

ISCO 0 (armed forces) and ISCO missing excluded.

Data are sorted by the percentage of people working in ISCO 4 to 9.

Figure 6.10 illustrates the change in the share of over-qualified young graduates between 2013 and 2016 by country. Even though the median of overqualified graduates was higher in 2016 than 2013, the median change was lower in 2016 than 2013 (1.2 and 3.8 respectively). In 2016, more countries experienced a decrease in overqualified graduates than in 2013, while the increases at the extreme end were lower than in 2013. The largest increases took place in Austria, Lithuania, Slovenia and Greece (over 7 percentage points), while the largest decreases happened in Estonia, Bulgaria, Latvia, Switzerland, France and Andorra (over 2 percentage points).

**Figure 6.10: Change in percentage points (pp) of the share of people with tertiary education (ISCED 5-8) aged 25-34 and employed in ISCO 4-9, 2013 to 2016**



(\*): the former Yugoslav Republic of Macedonia

	pp	AT	LT	SI	EL	IS	SK	PT	(*)	FI	BY	DE	HU	KZ	DK	RS	RO	TR	ES	NO
2013		21.3	18.6	19.2	34.1	18.6	24.0	16.9	23.6	20.0	30.0	16.6	17.7	43.5	15.1	28.9	22.8	35.2	38.8	19.5
2016		29.9	26.3	26.9	41.5	22.7	27.9	20.7	27.1	22.8	32.8	18.7	19.8	45.5	17.0	30.5	24.4	36.6	40.1	20.7
Change		8.6	7.7	7.7	7.4	4.1	3.9	3.8	3.5	2.8	2.8	2.1	2.1	2.0	1.9	1.6	1.6	1.4	1.3	1.2
	pp	UK	CY	LU	IT	SE	PL	HR	MT	BE	CZ	IE	NL	AD	FR	CH	LV	BG	EE	EHEA
2013		26.6	39.7	5.7	27.2	19.7	28.3	21.9	14.0	20.8	17.0	36.9	17.8	32.8	25.7	19.0	23.0	33.3	23.8	22.8
2016		27.8	40.2	6.0	27.0	19.5	27.7	21.2	13.2	19.9	15.8	35.5	16.2	30.5	23.1	16.1	19.7	29.6	19.4	24.4
Change		1.2	0.5	0.3	-0.2	-0.2	-0.6	-0.7	-0.8	-0.9	-1.2	-1.4	-1.6	-2.3	-2.6	-2.9	-3.3	-3.7	-4.4	1.2

Source: Eurostat, Labour Force Survey (LFS) and additional collection for the other EHEA countries.

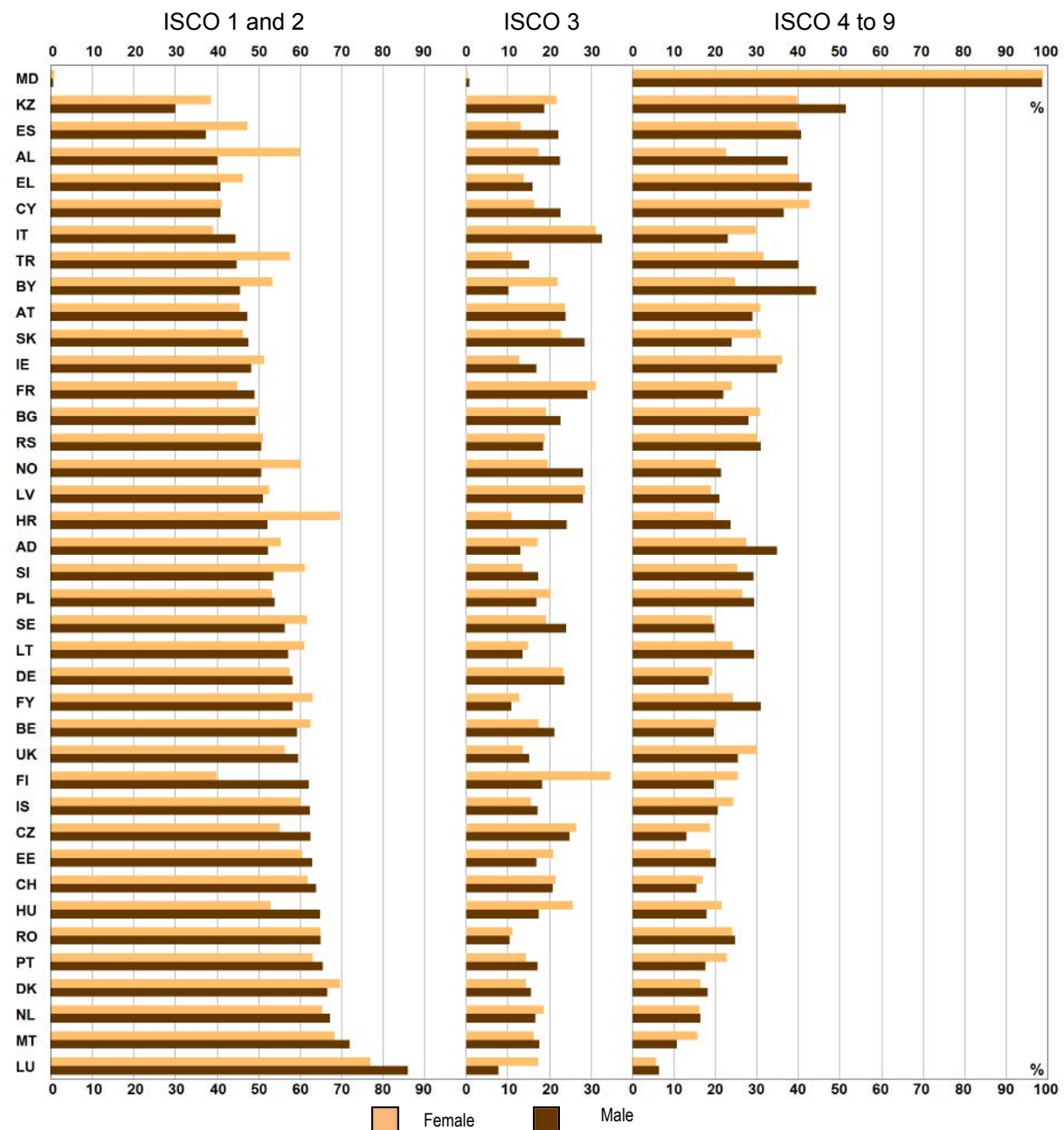
#### Notes:

Data are sorted by the change in percentage points between 2013 and 2016.

EHEA: Refers to the EHEA median, which was calculated based on countries with available data for both reference years.

Differences between the over-qualification rates of female and male graduates are relatively small, though women are more likely to get jobs under the level of their qualifications (see Figure 6.11). However, countries differ a lot in this regard. The biggest differences between female and male over-qualification rates are on the one hand in Belarus, Albania, Kazakhstan, Turkey and Andorra (with higher over-qualification rates for men) and on the other hand in Slovakia, Italy, Cyprus, Finland, the Czech Republic and Portugal (with higher over-qualification rates for women). As was reported in 2015, there are also now more countries with higher over-qualification rates for women, and the differences tend to be bigger between the sexes in these cases than in countries with higher over-qualification rates for men.

**Figure 6.11: Distribution of people with tertiary education (ISCED 5-6) aged 25-34 and employed in ISCO 1 or 2 (legislators, senior officials, managers and professionals), in ISCO 3 (technicians and associate professionals) and in ISCO 4-9, by sex (%)**



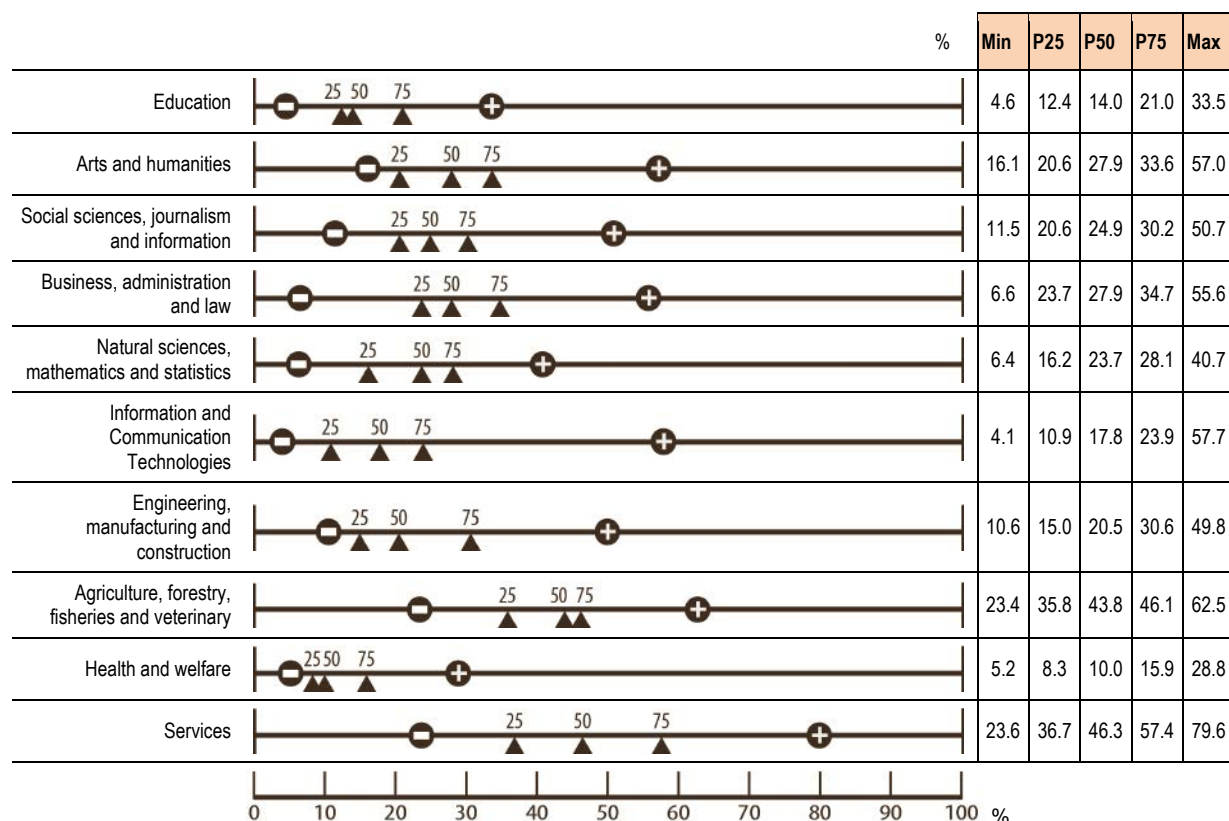
Source: Eurostat, Labour Force Survey (LFS) and additional collection for the other EHEA countries.

**Notes:**

ISCO 0 (armed forces) and ISCO missing excluded.

Over-qualification rates might also be very different for young people graduating in different study fields <sup>(114)</sup>. Figure 6.12 depicts the percentage of young graduates who are vertically mismatched by field of study. The data shows that young people with a qualification in services <sup>(115)</sup> and in agriculture and veterinary are the most likely to take up jobs under their qualification level: in services, more than 46.3 % of graduates are over-qualified in this field in half of the countries covered, while the median rate is 43.8 % in agriculture, forestry, fisheries and veterinary. However, differences between countries are substantial: over-qualification rates in services range from 23.6 % (Estonia) to 79.6 % (Cyprus), and in agriculture, forestry, fisheries and veterinary from 23.4 % (Turkey) to 62.5 % (Greece).

**Figure 6.12: Percentage of people aged 25-34 with tertiary education (ISCED 5-6) who are vertically mismatched (in ISCO 4-9) by field of study, 2016**



Source: Eurostat, Labour Force Survey (LFS) and additional collection for the other EHEA countries.

Study fields with the lowest over-qualification rates are health and welfare (median: 10 %) and teacher training and education science (median: 14.0 %). However, countries again show some variation. Over-qualification rates in health and welfare range from 5.2 % (France) to 28.8 % (Slovakia); in teacher training and education science from 4.6 % (Croatia) to 33.5 % (Spain and the former Yugoslav Republic of Macedonia). However, it has to be stressed again that data are not available for all countries in all study fields. In addition, limitations of the figures stemming from potential discrepancies between qualifications and the skill levels as well as from the reliance on the ISCO classification have to be kept in mind.

<sup>(114)</sup> Data comparison with the previous report is not possible, as the data for this report was obtained through different methodology.

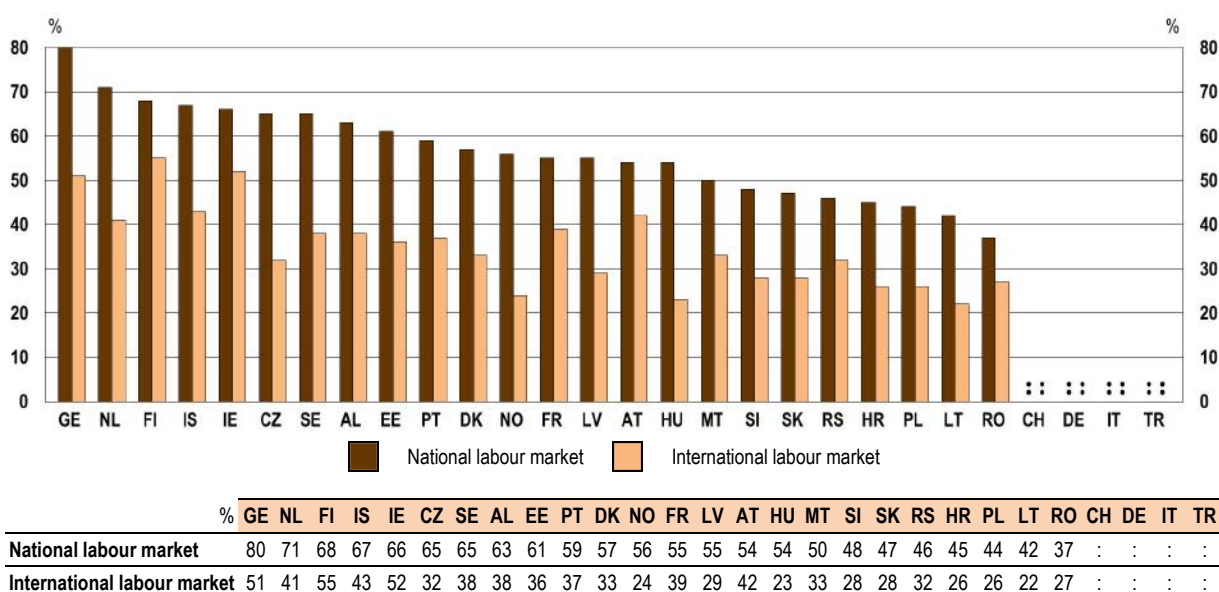
<sup>(115)</sup> 'Services' include a wide range of occupations from restaurant and tourism to defence and military services (for more details, see the ISCED classification for fields of education, e.g. Andersson and Olsson, 1999). Sample based on 25 countries.

## 6.2. Policies for enhancing graduates' employability

When looking at policies with the primary aim of improving graduates' employability prospects, two main policy perspectives can be distinguished. The first focuses on the needs of the labour market – the demand-side – to which higher education institutions need to respond. The second emphasises employable graduates and thus implies a more supply-side perspective: what higher education institutions need to achieve in terms of output, e.g. providing graduates with a set of relevant skills and competences. In this regard, most discussions centre on the role of higher education institutions and how they should function in 21st century knowledge societies. The role of educational authorities in this context is to facilitate the transformation of their higher education sector. Therefore, since this report focuses on national policy approaches, it can only present a limited picture on the on-going transformations.

This section shows examples of both demand-side and supply-side policy approaches. Regarding the objective of responding to labour market needs, an important question is where higher education institutions can look for relevant labour market information. The two most widespread possibilities are labour market and skills forecasting on the one hand, and involving labour market representatives (i.e. employers) in higher education governance on the other. Concerning graduates' adequate skills, one prevalent way to ensure that graduates gain the necessary competences is to include work placements in higher education programmes. Finally, this section also looks at how the employability of graduates is monitored and evaluated in EHEA countries and whether there are any incentives given to higher education institutions linked to their performance.

**Figure 6.13: Students' self-assessment of their chances on the national and international labour market based on the competences gained during studies (for all students and/or different focus groups), 2017**



Source: Eurostudent VI.

The skills that graduates gain through studies are an important indicator of employability on the supply-side. The Eurostudent survey asked students how well they feel their studies prepare them for national and international labour market. According to the data in Figure 6.13, more than half of the students in 15 countries feel that their studies prepare them well for the national labour market, the figure being highest in Georgia (80 %). The lowest figures can be found in Lithuania and Romania (42 % and 37 % respectively). Looking at preparation for the international labour market, only in Finland, Georgia and Ireland do more than half of the students feel that their studies prepare them well.

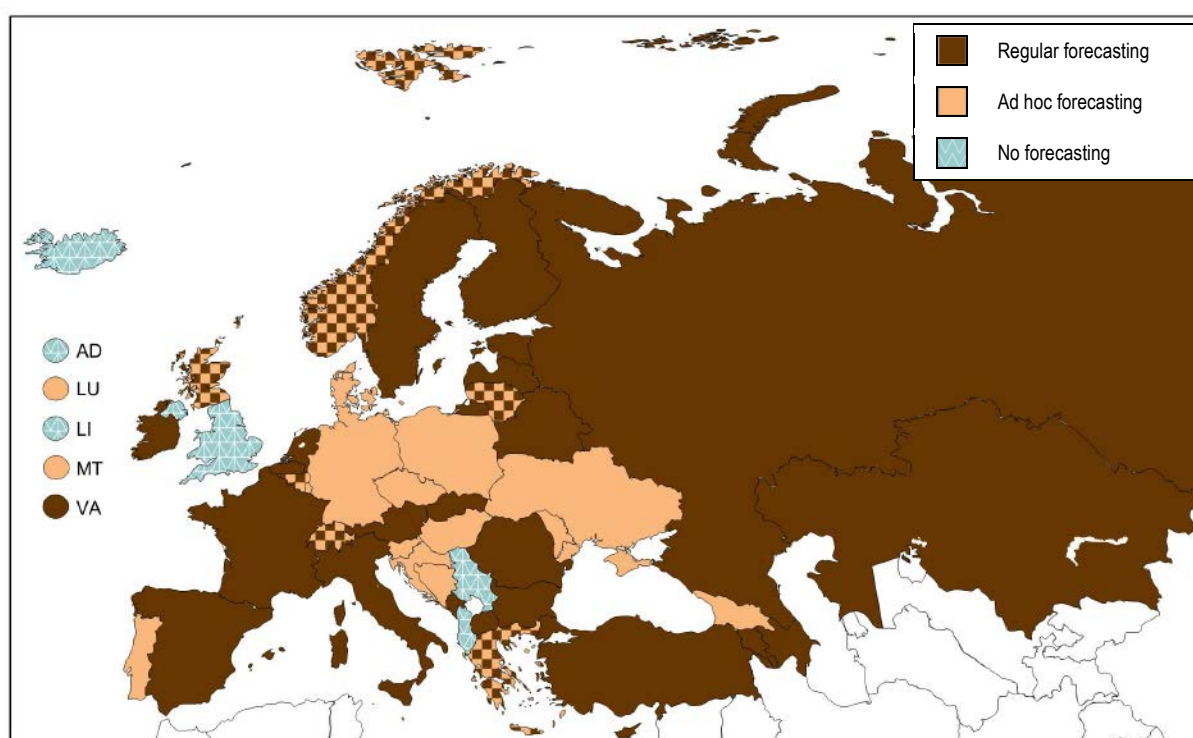


### 6.2.1. Labour-market and skills forecasting as an information source

In order to be able to respond to labour market demand, governments and higher education institutions need information on labour market trends. Despite its limitations (see European Commission/EACEA/Eurydice, 2014a), labour market forecasting is a common way to anticipate labour market needs in terms of skills demand and supply. On the one hand, labour market forecasting can inform policy planning, for example the planning and designing of study programmes, the fixing of the number of state funded places, or the allocation of public funding. On the other hand, guidance and information services can use labour market information to guide (potential) students in orienting themselves towards more 'demanded' fields of study. Labour market forecasting is usually conducted by occupation and qualification levels.

In the majority of EHEA countries, labour market and skills forecasting is undertaken regularly at national or regional level (see Figure 6.14). Such forecasting exercises are conducted on an ad hoc basis in 20 education systems, sometimes in addition to the regular forecast in place. There is no labour market forecasting in eight countries.

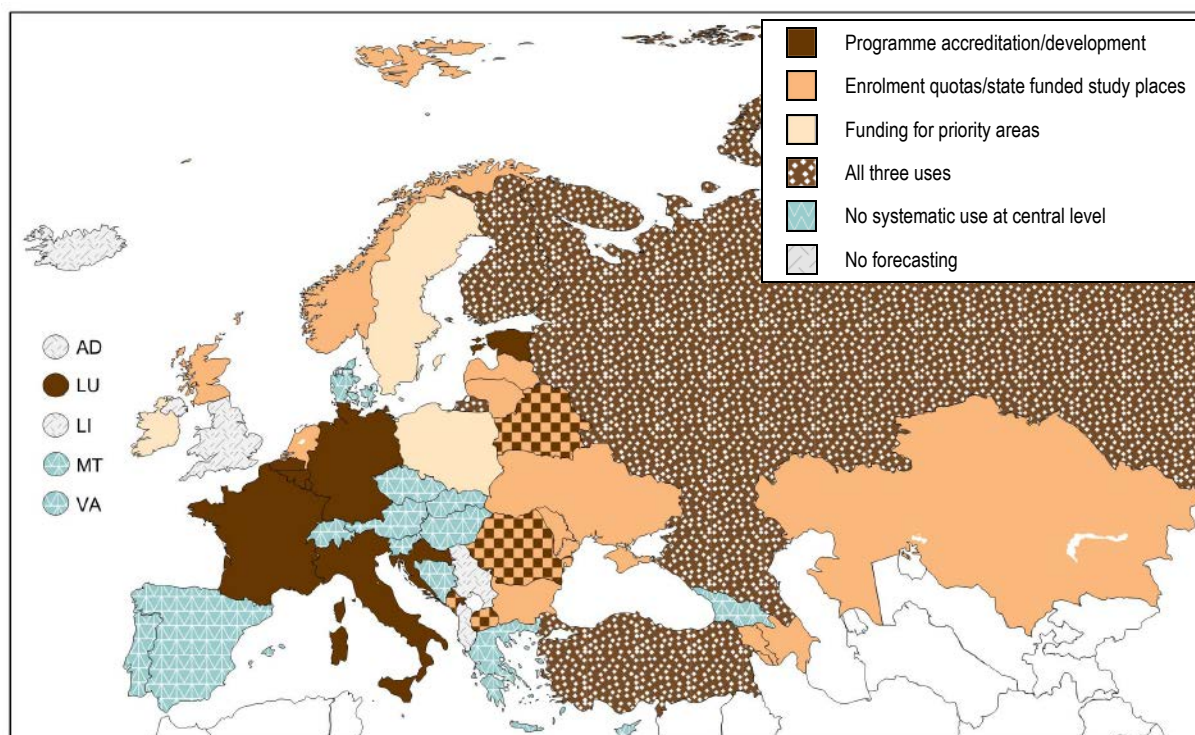
Figure 6.14: Labour-market and skills forecasting at national level, 2016/17



Source: BFUG data collection.

Most countries conducting labour market forecasts make efforts to take their results into account in higher education planning at central level (see Figure 6.15). In 18 countries, labour market information is used to determine enrolment quotas or state-funded study places in all or certain higher education study fields (seven more countries than in the 2015 report). In 12 others, such forecasts are taken into account when deciding on the accreditation of new study programmes and/or when adapting the content of existing programmes to labour market needs. Six countries also reported on how labour market forecasts are used to identify priority areas for additional funding.

**Figure 6.15: Using labour-market and skills forecasting in central planning, 2016/17**



Source: BFUG data collection.

### 6.2.2. Cooperation between employers and higher education institutions

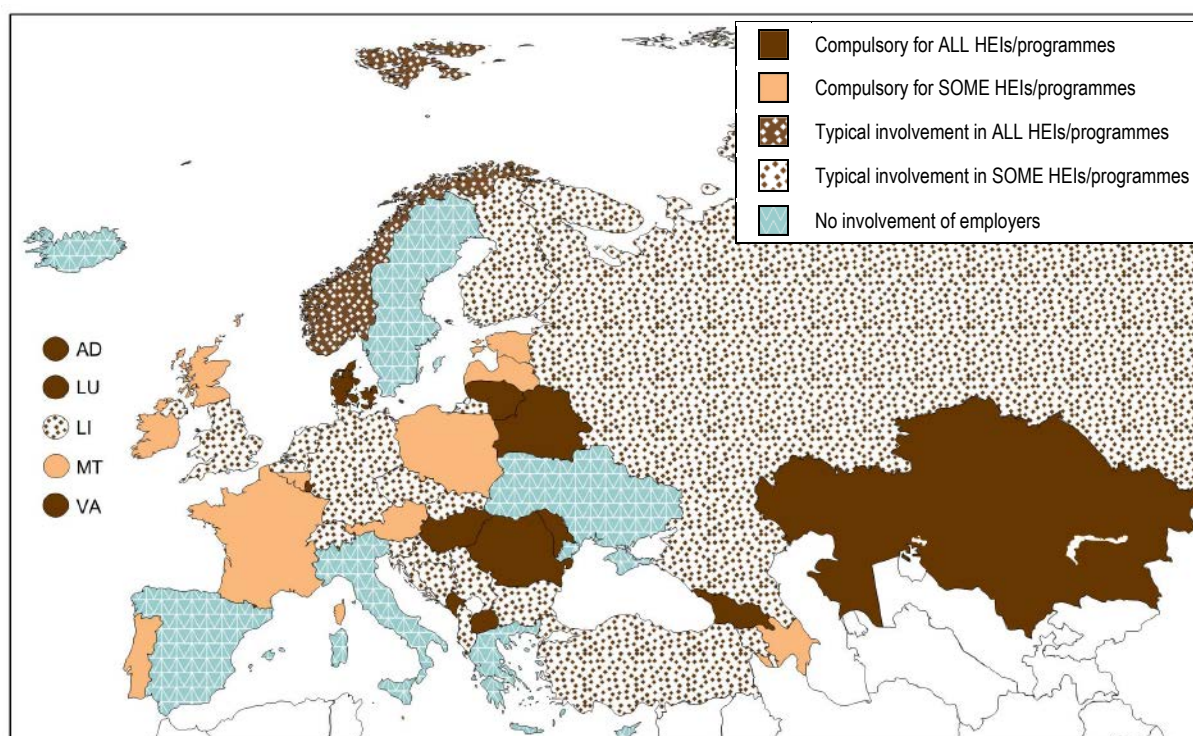
The Yerevan Communiqué regards cooperation between employers and higher education institutions as an important means to enhance the employability of higher education graduates. Indeed, consulting or involving employers, employers' organisations and business representatives in the various steps of developing and evaluating higher education study programmes is a direct and more decentralised mechanism through which labour market information can be included in higher education. Employers and business representatives are aware of the skills graduates need when entering the labour market, and higher education institutions can use this knowledge when designing degree programmes.

Looking at the EHEA, employers are typically involved in curriculum development in at least some higher education institutions/programmes in the majority countries (see Figures 6.16A). Involving employers in curriculum development is compulsory for all institutions in 13 countries. It is more common for employers to be involved in decision-making bodies than in curriculum development. Involvement in decision-making bodies is compulsory in 20 countries for all higher education institutions/programmes, and employers are typically involved in the decision-making bodies of all institutions in an additional 10 countries (see Figure 6.16B). In some countries, employers have to be involved in curriculum development in professional higher education institutions (for example in France, Latvia and Portugal). In Belgium (Flemish Community), Cyprus, Estonia, Germany, and Slovakia, for example, employers are typically involved in curriculum development in such institutions.



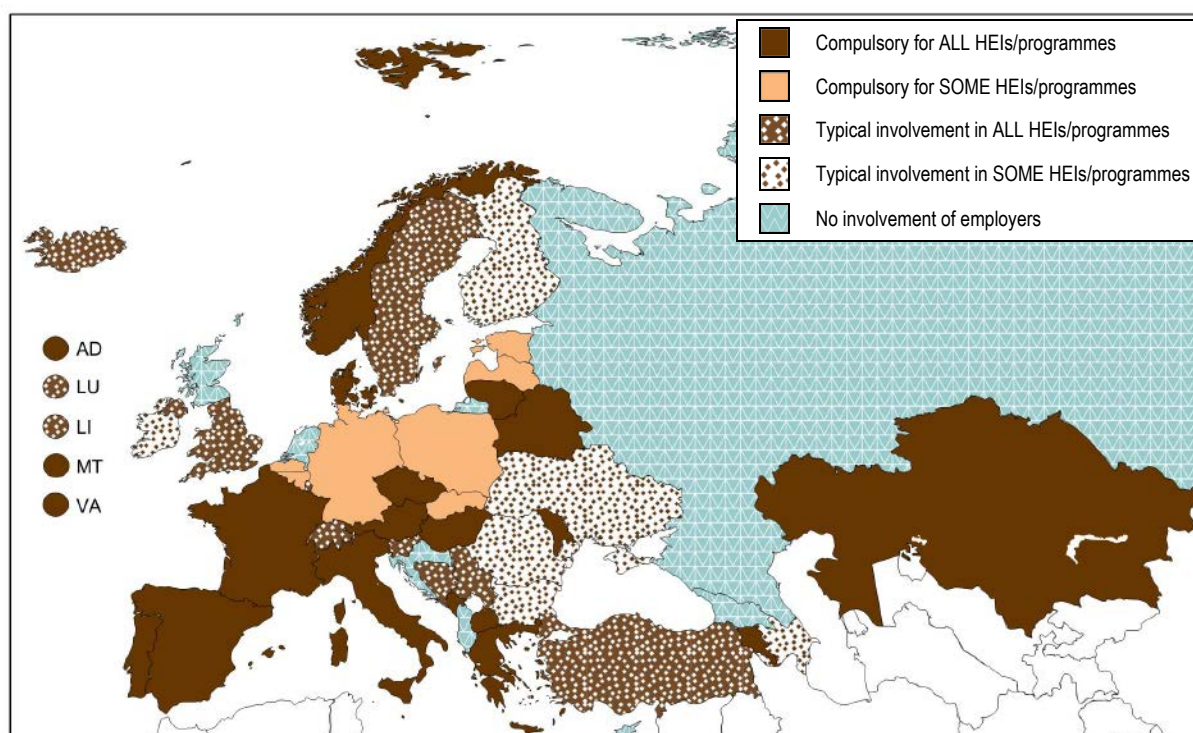
Figure 6.16: Involvement of employers in higher education planning and management

A) Curriculum development, 2016/17



Source: BFUG data collection.

B) Higher education institutions' decision-making bodies, 2016/17



Source: BFUG data collection.

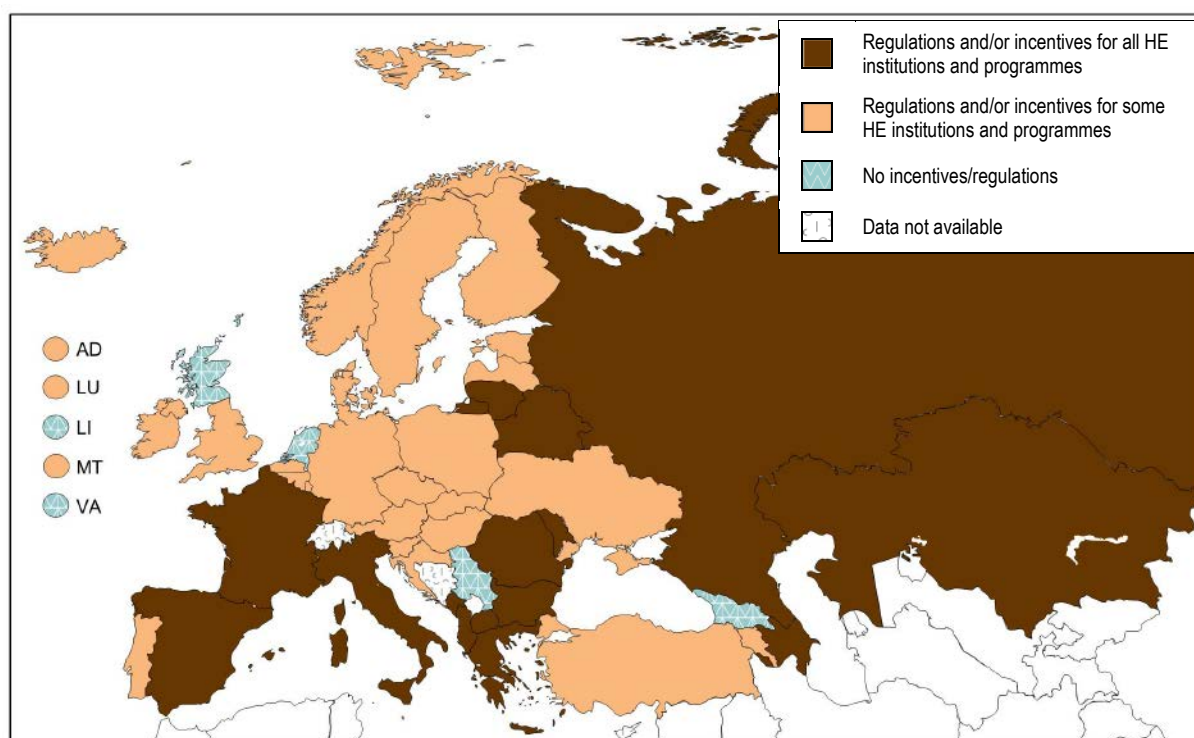
### 6.2.3. Practical training and work placements

Practical training is regarded as a key element in enhancing graduates' employability, especially when it comes to students from under-represented groups. Through such practical training and work placements, students have the possibility of acquiring the skills demanded by employers.

In the European Union (EU), Directive 2005/36/EC on the recognition of professional qualifications <sup>(116)</sup> regulates practical training for certain, professionally oriented study programmes (e.g. for medical or pharmaceutical studies). Many non-EU member countries also apply similar regulations in some, more practice-oriented study fields. However, beyond these regulated professions, higher education institutions are mostly free to decide whether they include such structured work experiences in their study programmes.

Most EHEA countries have regulations or incentives to include practical training and work placements for at least some higher education institutions and/or programmes (see Figure 6.17). However, only 13 education systems reported having such requirements or incentives for all institutions or programmes. Six education systems reported having neither regulations nor incentives to include work placements in higher education programmes. Regulations are much more common than incentives: While three-quarters of education systems reported having regulations for at least some institutions/programmes, less than half of the education systems report incentives at least for some institutions/programmes. Most of the incentives are non-financial, such as promoting work placements through various policy measures. An example of a financial incentive can, however, be found in Slovakia, where additional funding is provided for practical training for some professions, such as students in medicine and teacher training.

Figure 6.17: Regulations and incentives on including work placements in HEIs' programmes, 2016/17

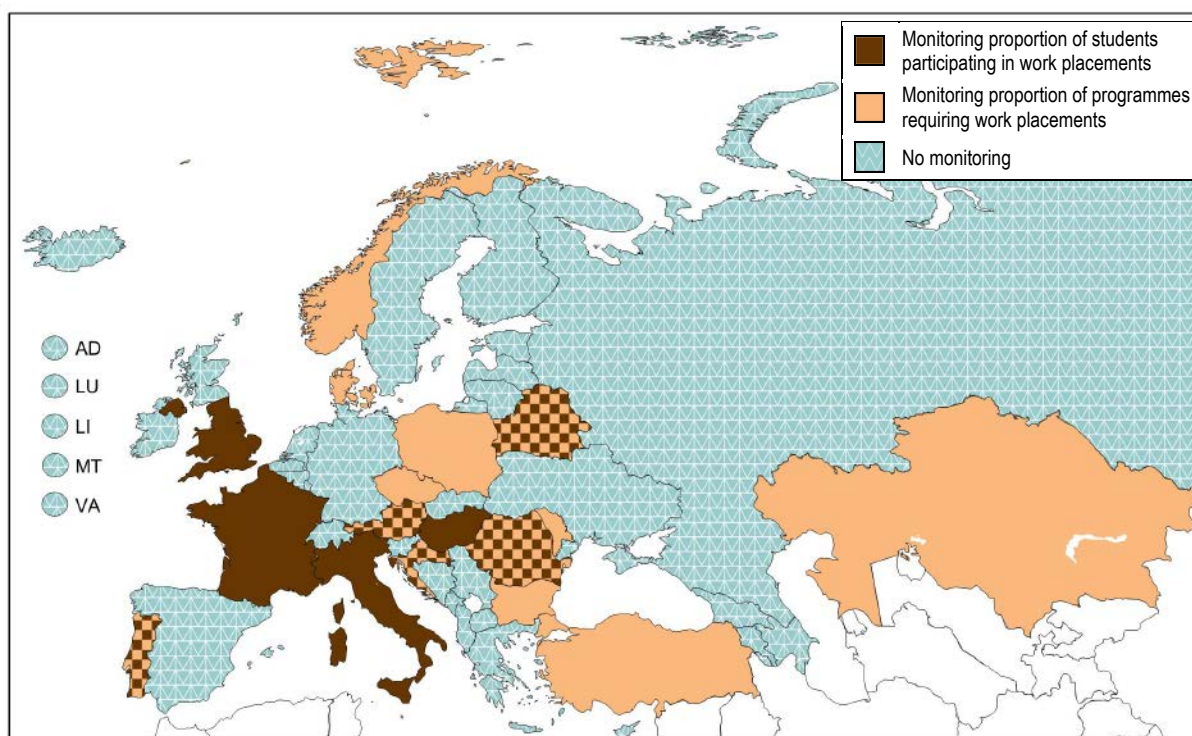


Source: BFUG data collection.

<sup>(116)</sup> Directive 2005/36/EC of the European Parliament and of the Council of 7 September 2005 on the recognition of professional qualifications, OJ L 255, 30.9.2005.

Even though most countries have either regulations or incentives for work placements, a systematic monitoring of the proportion of students participating in programmes with compulsory work placement is not very common (see Figure 6.18). It is done, however, through questionnaires to students (Austria), as part of the graduate tracking system (Italy), within external quality assurance reviews (Romania), or as part of statistical analyses (the United Kingdom – England, Wales and Northern Ireland). Monitoring the proportion of programmes with compulsory work placements is slightly more common, and is undertaken in 13 countries.

**Figure 6.18: Monitoring the proportion of students taking work placements and proportion of programmes with compulsory work placements, 2016/17**



Source: BFUG data collection.

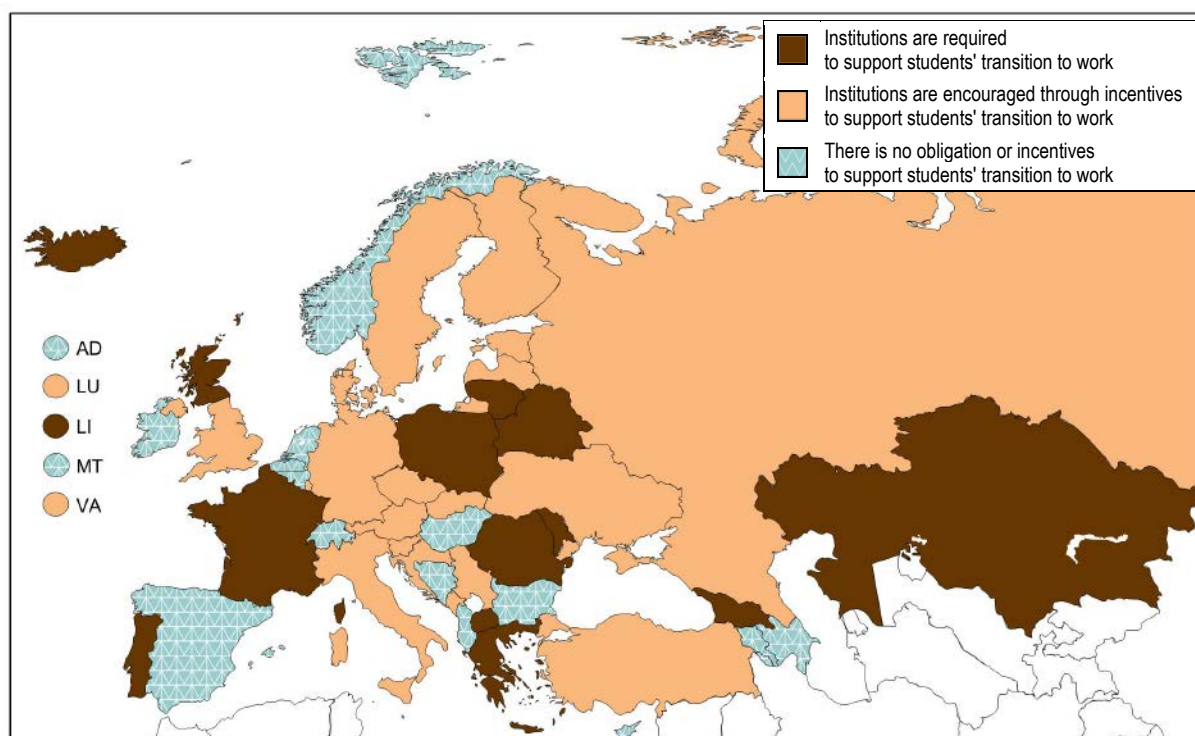


#### 6.2.4. Students' transition to work

Supporting students' transition to work is obligatory only in 14 countries (see Figure 6.19). This can mean, for example, that career guidance services are prescribed in law. In 20 countries, higher education institutions are given incentives through, for example, performance agreements or quality assurance procedures.

When it comes to supporting disadvantaged students' transition to work, the support is most commonly targeted at students with disabilities. However, in some countries there is also specific support for people from minority backgrounds (for example for the Roma minority in Hungary, Moldova and Romania).

**Figure 6.19: Obligation and incentives for higher education institutions to support students' transition to work 2016/17**



Source: BFUG data collection.

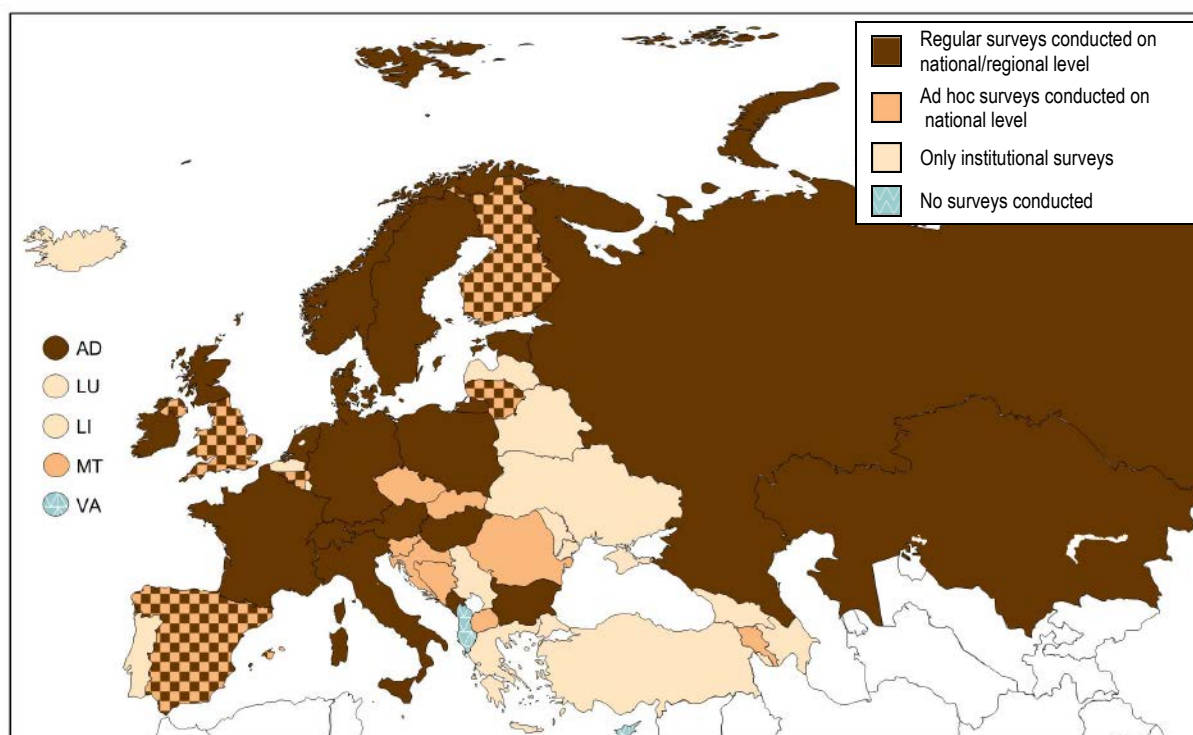
### 6.2.5. Monitoring and evaluation

Measuring employability performance is less straightforward than calculating other performance indicators. Evaluations often rely on student and graduate surveys, where students and/or graduates can evaluate their study programme as well as provide details on their transition to the labour market. Also, administrative data gathered through various databases can be used for monitoring graduates' progress.

Graduate surveys relying on the self-assessment of graduates are valuable tools for evaluating the employability of higher education graduates. Career tracking surveys do not only provide the means to measure the percentage of graduates finding employment after graduation, but they are also able to describe the quality of jobs, the length of the job search period, graduates' job satisfaction, and the match between graduates' skills and job requirements (see Teichler, 2011). Furthermore, based on graduate surveys, it is possible to conduct analyses on the relative impact of graduates' individual characteristics and the higher education programme they attended (Ibid.). This way, such surveys are useful tools for a multi-dimensional evaluation of employability in higher education.

Graduate surveys are organised at least from time to time in the large majority of EHEA countries (see Figure 6.20). At the national and/or regional level, regular surveys are conducted in 24 education systems, while ad hoc surveys take place in 14, sometimes in parallel to the regular one. There are only institutional surveys in 14 EHEA countries. No graduate surveys are conducted in Albania and the Holy See.

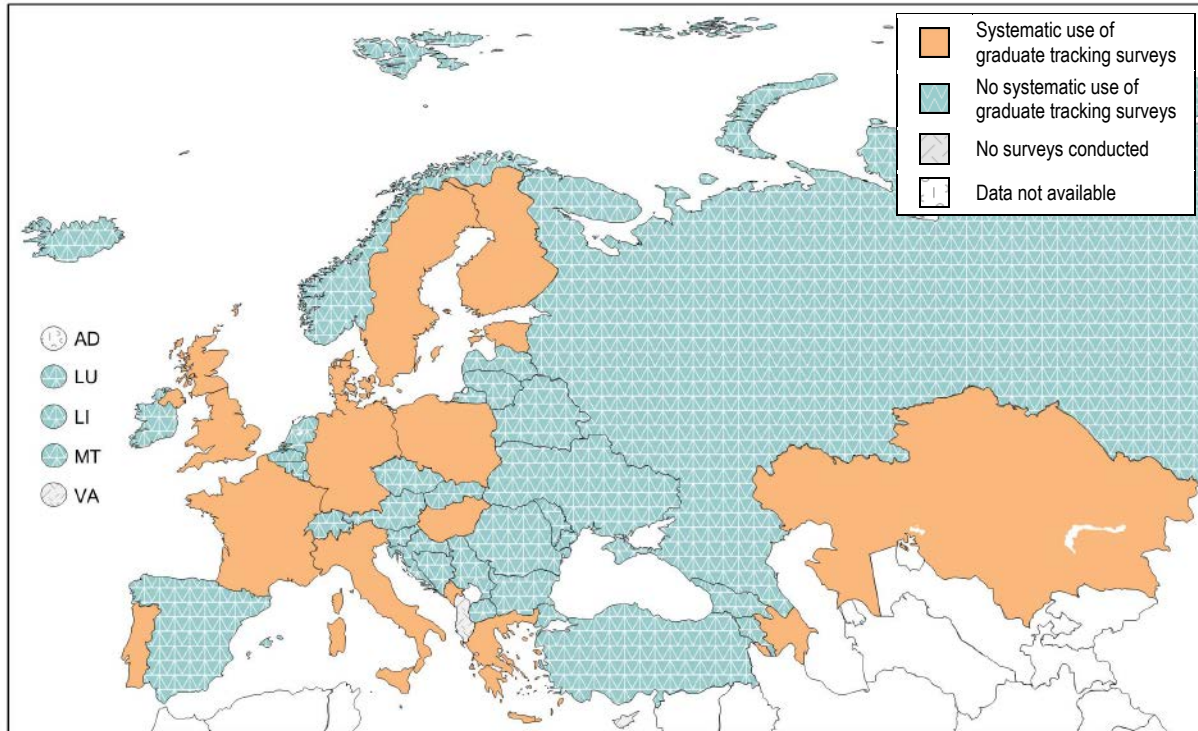
Figure 6.20: Following graduates' career developments – different approaches, 2016/17



Source: BFUG data collection.

While Figure 6.20 shows that graduate tracking surveys are common, they are not always used systematically in policy planning (see Figure 6.21). Only sixteen of the education systems having surveys report using the data systematically. However, as mentioned earlier, using administrative data is one way of following graduates progress in labour market. For example, in the Czech Republic, administrative data about graduate's employability are collected regularly from labour offices and are used for performance-based part of funding of higher education institutions as one of its indicators.

**Figure 6.21: Channelling information on graduates' career developments into education policy planning, 2016/17**



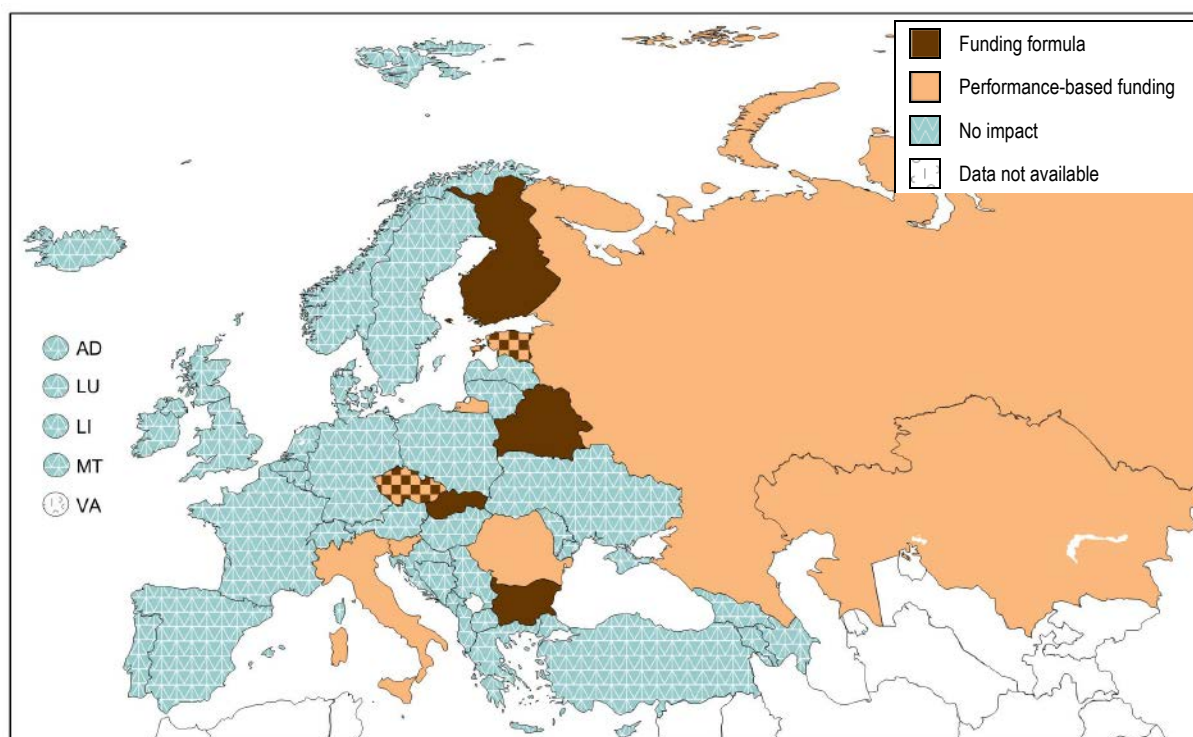
Source: BFUG data collection.

Some countries also use administrative data on graduates' career development. For example, Croatia has conducted a pilot project on matching administrative data of graduates with their outcomes on the labour market. In Ireland, data is published to inform policy-makers, institutions, academics, students, and employment providers. In Finland, the administrative data on graduate's employment is used for various purposes in educational planning and steering of higher education institutions including national foresight planning of education, setting targets for the number of degrees in different fields of study and defining institutional performance agreements.



Figure 6.22 shows whether the employability performance of higher education institutions have an impact on their funding. As can be seen, this is the case only in 11 countries, where there is an impact on the funding formula and/or graduate employability thorough performance-based mechanisms. For example, in the Czech Republic, Estonia and Slovenia, the indicator on employability of students forms a fixed percentage of the performance-based funding allocation. In Romania, monitoring the employability of graduates is a quality indicator to be piloted in 2017, for approving the methodology for the allocation of the budgetary funds for the basic and additional financing of higher education institutions for 2017.

**Figure 6.22: Impact of employability performance on higher education institutions' funding, 2016/17**



Source: BFUG data collection.

## 6.3. Conclusions

The unemployment situation of recent graduates has improved since the last Bologna Process Implementation Report, when the impact of the economic crisis was more clearly visible. The majority of countries experienced a drop in unemployment rates between 2013 and 2016 and in most countries having a higher education degree, especially a second-cycle degree, protected against unemployment compared to those with lower levels of education attainment.

However, the fall in unemployment rates is not a universal trend, and there are a significant number of countries where the graduate unemployment rate has increased significantly. Thus, the improvement of the economic situation in the years after the crisis did not necessarily have a positive impact for higher education graduates. Efforts to improve graduates' employability should therefore continue. This is particularly important as recent graduates are still much more likely to be unemployed than their more experienced counterparts, and in some countries recent female graduates have a markedly high unemployment rate. However, some countries have recovered better than others, and the economic situation generally may limit the impact of what higher education institutions are able to do to promote employability.

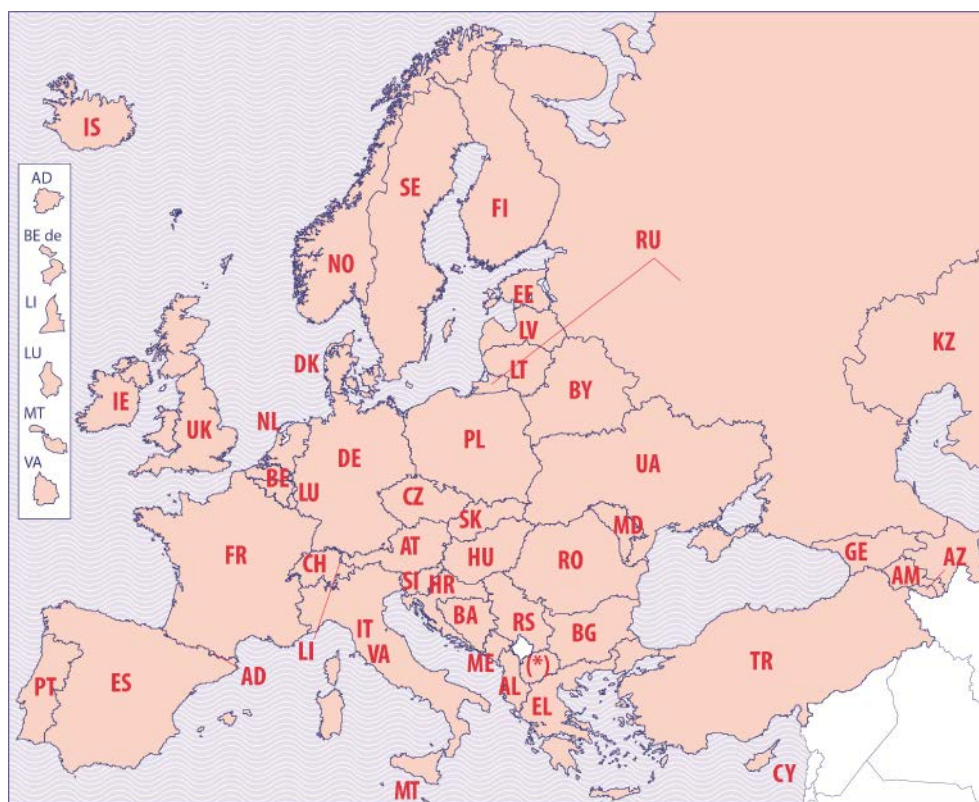
When it comes to income levels, while higher education graduates enjoyed increases across the income percentiles compared to the 2015 edition of the report, people with medium education level – such as an upper secondary school leaving qualification – in fact benefitted the most in all income percentiles. However higher education graduates benefitted almost as much. The lowest percentile of low earners with a low education level lost in annual gross income. Having a higher education degree or a medium education level was therefore similarly beneficial in terms of earnings growth, while low earners with a low education level suffered.

As there are still many problem areas in policies promoting graduate employability, systematic efforts to improve the relationship between higher education and the labour market still need to be better developed and implemented. The elements that are part of coherent policy approaches include the use of labour market forecasts, involving employers in curriculum planning and higher education governance, providing incentives to include work placements in higher education programmes, improving career guidance services, and also encouraging student mobility and the implementation of Bologna tools. There should be more effort to further improve data collection in these areas.

# GLOSSARY AND METHODOLOGICAL NOTES

## I. Codes, abbreviations and acronyms

### I.1. Country Codes



AD	Andorra	EL	Greece	NL	Netherlands
AL	Albania	ES	Spain	NO	Norway
AM	Armenia	FI	Finland	PL	Poland
AT	Austria	FR	France	PT	Portugal
AZ	Azerbaijan	GE	Georgia	RO	Romania
BA	Bosnia and Herzegovina	HR	Croatia	RS	Serbia
BE de	Belgium – German-speaking Community	HU	Hungary	RU	Russia
BE fr	Belgium – French Community	IE	Ireland	SE	Sweden
BE nl	Belgium – Flemish Community	IS	Iceland	SI	Slovenia
BG	Bulgaria	IT	Italy	SK	Slovakia
BY	Belarus	KZ	Kazakhstan	(*)	The former Yugoslav Republic of Macedonia (Provisional code)
CH	Switzerland	LI	Liechtenstein	TR	Turkey
CY	Cyprus	LT	Lithuania	UA	Ukraine
CZ	Czech Republic	LU	Luxembourg	UK-ENG	United Kingdom – England
DE	Germany	LV	Latvia	UK-NIR	United Kingdom – Northern Ireland
DK	Denmark	MD	Moldova	UK-SCT	United Kingdom – Scotland
EE	Estonia	ME	Montenegro	UK-WLS	United Kingdom – Wales
		MT	Malta	VA	Holy See

## I.2. Abbreviations

:	Data not available
BFUG	Bologna Follow-Up Group
CEEPUS	Central European Exchange Program for University Studies
COFOG	Classification of the Functions of Government
EEA	European Economic Area
EHEA	European Higher Education Area
ENIC	European Network of Information Centres
ESG	European Standards and Guidelines for Quality Assurance
EU	European Union
EUA	European University Association
EU-SILC	European Union Statistics on Income and Living conditions
EU-LFS	EU Labour Force Survey
FTE	Full-time equivalent
GDP	Gross Domestic Product
ISCED	International Standard Classification of Education
ISCO	International Standard Classification of Occupations
NARIC	National Academic Recognition Information Centres
OECD	Organisation for Economic Co-operation and Development
PPS	Purchasing Power Standard
R&D	Research and Development
UNESCO-UIS	United Nations Educational, Scientific and Cultural Organization, Institute for Statistics
UOE	UNESCO-UIS/OECD/Eurostat

## II. General terms

### *Access routes to higher education*

Routes to higher education are the different formal access requirements that are defined to be the necessary conditions of higher education access. Questions of selection or acceptance into a programme are not part of the definition.

Standard route: entering higher education with a standard entry qualification. The standard entry qualification is the most widely used diploma or certificate issued by a competent authority attesting the successful completion of an education programme and giving the holder of the qualification the right to be considered for admission to higher education (typically the upper secondary school leaving certificate).

Alternative route: entering higher education without a standard entry qualification, based on requirements other than the standard entry requirements (e.g. based on qualification other than the standard entry qualification or based on the recognition of prior non-formal and informal learning).

### *Admission (to higher education institutions and programmes)*

The act of, or system for, allowing qualified applicants to pursue studies in higher education at a given institution and/or a given programme (see the Lisbon Recognition Convention (<sup>143</sup>)).

### *Completion*

The successful finishing of a study programme (graduation).

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<sup>(143)</sup> Council of Europe Convention on the Recognition of Qualifications concerning Higher Education in the European Region, ETS No.165, [Online] Available at: <http://www.coe.int/en/web/conventions/full-list/-/conventions/treaty/165> [Accessed 22 February 2018].

### ***Credit accumulation/Accumulation of credits***

The process of collecting credits awarded for achieving the learning outcomes of educational components in formal contexts and for other learning activities carried out in informal and non-formal contexts. A student can accumulate credits in order to obtain qualifications, as required by the degree-awarding institution, or to document personal achievements for lifelong learning purposes (European Commission 2015 p. 66).

### ***Credit mobility***

Credit mobility is a short-term form of mobility – usually a maximum of one year – aiming at the acquisition of credits in a foreign institution in the framework of on-going studies at the home institution.

### ***Credit transfer/Transfer of credits***

Is the process of having credits awarded in one context (programme, institution) recognised in another formal context for the purpose of obtaining a qualification. Credits awarded to students in one programme may be transferred from an institution to be accumulated in another programme offered by the same or another institution. Credit transfer is the key to successful study mobility. Institutions, faculties, departments may make agreements which guarantee automatic recognition and transfer of credits (European Commission 2015, p. 68).

### ***Cycle***

One of the objectives in the Bologna Declaration in 1999 was the ‘adoption of a system based on two main cycles, undergraduate and graduate.’ In 2003 doctoral studies were included in the Bologna structure and referred to as the third cycle. The EHEA has thus defined a hierarchy of three Higher Education cycles (first cycle, second cycle and third cycle). All higher education qualifications in the European Higher Education Area are located within these three cycles (European Commission 2015, p. 68).

### ***Degree mobility***

Degree mobility is a long-term form of mobility which aims at the acquisition of a whole degree or certificate in the country of destination.

### ***Digital certificates***

Two types exist: a) Certificates that confirm participation in/ completion of a course, b) Certificates that verify the learner’s identity and confirm attainment of learning outcomes. Digital certificates typically include a URL which leads to the course information and/or the display of certificate information at the website of the course provider to prove the authenticity of the credential (Witthaus, et al., 2016).

### ***Diploma Supplement (DS)***

Is a document accompanying a higher education diploma, providing a standardised description of the nature, level, context, content and status of the studies completed by its holder. It is produced by the higher education institutions according to standards agreed by the European Commission, the Council of Europe and UNESCO. The Diploma Supplement is also part of the Europass framework transparency tools.

It has the following eight sections of information: the holder of the qualification; the qualification; its level and function; the contents and results gained; certification of the supplement; details of the national higher education system concerned (provided by the National Academic Recognition Information Centres (NARICs)); any additional relevant information.

Graduates in all the countries taking part in the Bologna Process have the right to receive the Diploma Supplement automatically, free and in a major European language (European Commission 2015, p. 69).

#### ***Doctoral/Research school***

An organisational structure that includes only doctoral students. It may be organised around a particular discipline, research theme or a cross-disciplinary research area and/or it is focused on creating a research group/network and is project-driven. It may involve one institution or several institutions and organise co-operation among them (EUA 2007, p. 27).

#### ***Credit (ECTS)***

ECTS credits express the volume of learning based on the defined learning outcomes and their associated workload. 60 ECTS credits are allocated to the learning outcomes and associated workload of a full-time academic year or its equivalent, which normally comprises a number of educational components to which credits (on the basis of the learning outcomes and workload) are allocated. ECTS credits are generally expressed in whole numbers (European Commission 2015, p. 68).

#### ***Drop-out***

Refers to students who start but do not continue or finish a study programme.

#### ***European Association for Quality Assurance in Higher Education (ENQA)***

The association of quality assurance agencies in the European Higher Education Area was set up in 2000. It aims to disseminate information, experiences and good practices in the field of quality assurance in higher education. Membership of the association is open to quality assurance agencies in the EHEA member states. Membership of ENQA represents recognition that an agency complies with the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG).

#### ***European Credit Transfer and Accumulation System (ECTS)***

ECTS is a learner-centred system for credit accumulation and transfer, based on the principle of transparency of the learning, teaching and assessment processes. Its objective is to facilitate the planning, delivery and evaluation of study programmes and student mobility by recognising learning achievements and qualifications and periods of learning (European Commission 2015, p. 69).

#### ***European Qualifications Framework for Lifelong Learning (EQF)***

The European Qualifications Framework for lifelong learning is a common European reference framework which aims to increase the transparency, comparability and portability of qualifications systems and all types and levels of qualifications in Europe. The EQF uses eight common European reference levels based on learning outcomes that are defined in terms of knowledge, skills and competences. The EQF is implemented by referencing levels of national qualifications frameworks to the levels of the EQF. The EQF was adopted by the Council of Ministers in the EU in 2008 and revised in 2017.

#### ***European Quality Assurance Register for Higher Education (EQAR)***

The Register aims at increasing transparency of quality assurance in higher education across Europe. It has been founded in 2008 by the European Association for Quality Assurance in Higher Education (ENQA), the European Students' Union (ESU), the European University Association and the European Association of Institutions in Higher Education (EURASHE). EQAR publishes and manages a list of quality assurance agencies that substantially comply with the European Standards and Guidelines for



Quality Assurance (ESG) to provide clear and reliable information on quality assurance agencies operating in Europe (<sup>144</sup>).

### ***External quality assurance***

External quality assurance refers to the process of evaluation or audit of a higher education programme or institution undertaken by a specialised body outside the institution. Typically the body may be a quality assurance or accreditation agency, or an ad hoc panel of experts and peers constituted by the responsible Ministry. The evaluation will involve the collection of data, information and evidence for assessment against agreed standards.

### ***Fee***

Any sum of money paid by students with which they formally and compulsorily contribute to the cost of their higher education. This may include, but is not restricted to e.g. a registration fee, tuition fees, graduation fees, administrative fees, etc. Payments to student unions are not taken into account.

### ***Formal learning***

Formal learning means learning which takes place in an organised and structured environment, specifically dedicated to learning, and typically leads to the award of a qualification, usually in the form of a certificate or a diploma. It includes systems of general education, initial vocational training and higher education (<sup>145</sup>).

### ***Framework for Qualifications of the European Higher Education Area /Qualifications Framework for the European Higher Education Area (QF-EHEA)***

Refers to the overarching framework for qualifications in the EHEA, which comprises three cycles (including, within national contexts, the possibility of intermediate qualifications), generic descriptors for each cycle based on learning outcomes, and credit ranges in the first and second cycles. In order to prove the compatibility of national qualifications frameworks for higher education with the QF EHEA, NQFs need to be self-certified to the QF-EHEA.

### ***Funding formulas***

Funding formulas are formulas that automatically allocate funds to institutions. They may vary on the basis of the factors used in their development. These might include among others inputs, such as students or staff, nominal, real or average costs per student and performance-based criteria (Salmi and Hauptman 2006, p. 10).

### ***Governing bodies***

Refers to structures with responsibility for the strategic orientation and organisation/management of higher education institutions.

### ***Graduate tracking surveys***

A survey of graduates from institutions of higher education (sometimes also called as 'alumni survey' or 'follow-up survey') that usually aims at mapping the labour market situation (professional success, relevance of skills etc.) of graduates. Graduate surveys provide information for evaluating the results of the education and training of a specific institution of higher education (Schomburg 2003, p. 11).

Regular graduate tracking surveys are conducted repeatedly, in regular intervals.

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(<sup>144</sup>) For more details on the European Quality Assurance Register for Higher Education (EQAR), see <http://www.eqar.eu/> [Accessed 8 March 2018].

(<sup>145</sup>) Council Recommendation of 20 December 2012 on the validation of non-formal and informal learning, O.J. 2012/C 398/01.

## **Grant**

Non-repayable public financial support. A need-based grant is awarded on the basis of financial hardship/socio-economic background of students. Universal grants are awarded to (almost) all students. For the purposes of this report, grants can be regarded as universal if they are awarded to at least 50 % of students. A merit-based grant is awarded on the basis of the academic performance of students.

## **Higher education institution**

Any institution providing services in the field of higher and/or tertiary education, as defined by national law.

## **Higher education qualification**

Any degree, diploma or other certificate issued by a competent authority attesting the successful completion of a higher education programme (Lisbon Recognition Convention <sup>(146)</sup>).

## **Incentives**

Apart from regulations, educational authorities can also encourage higher education institutions to follow certain policy lines (e.g. support under-represented groups, enhance completion, include work placements or mobility windows into study programmes, etc.) through incentives. Incentives can be financial, based on funding formulas or performance-based funding, or can include organisational or managerial support.

## **Incoming mobility**

Incoming mobility refers to students that moved (i.e. crossed a national border) to a specified country to study.

## **Informal learning**

Informal learning means learning resulting from daily activities related to work, family or leisure and is not organised or structured in terms of objectives, time or learning support; it may be unintentional from the learner's perspective; examples of learning outcomes acquired through informal learning are skills acquired through life and work experiences, project management skills or ICT skills acquired at work, languages learned and intercultural skills acquired during a stay in another country, ICT skills acquired outside work, skills acquired through volunteering, cultural activities, sports, youth work and through activities at home (e.g. taking care of a child) <sup>(147)</sup>.

## **Integrated/long programmes**

Programmes including both the first and the second cycle and leading to a second-cycle qualification.

## **Internal quality assurance**

Internal quality assurance refers to the processes involved in assuring and/or improving the quality of defined areas of activity within higher education institutions. Typically, it involves the systematic collection and analysis of administrative data, as well as the feedback of students, lecturers, other staff and external stakeholders.

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<sup>(146)</sup> Council of Europe Convention on the Recognition of Qualifications concerning Higher Education in the European Region, ETS No.165, [Online] Available at: <http://www.coe.int/en/web/conventions/full-list/-/conventions/treaty/165> [Accessed 22 February 2018].

<sup>(147)</sup> Council Recommendation of 20 December 2012 on the validation of non-formal and informal learning, O.J. 2012/C 398/01.

### *Joint degree*

A joint degree is a single document officially recognised by the appropriate (national or, if applicable, regional) authorities of at least two countries.

### *Joint programme*

Joint programmes are usually inter-institutional arrangements among higher education institutions leading to a joint degree. Parts of joint programmes undertaken by students at partner institutions are recognised automatically by the other partner institutions. The same is true for joint degrees.

### *Labour market/skills forecasting*

'Forecasting skill needs involves estimating the expected future number of jobs available in an economy [in the medium or long term] and their particular skill or qualification requirements. Skills needs forecasts are complemented by forecasts of the number of people (supply) with particular skills. The comparison of demand and supply can indicate potential imbalances or skill mismatches in future labour markets. Most typically, skills supply and demand is forecasted in order to help different labour market actors – employees, employers, students and parents, social partners, policy makers – to take informed decisions and appropriate action concerning the labour market. Labour market forecasting is usually conducted by occupation and qualification levels (Cedefop, 2012).

### *Learning outcome*

Learning outcomes are statements of what the individual knows, understands and is able to do on completion of a learning process. The achievement of learning outcomes has to be assessed through procedures based on clear and transparent criteria. Learning outcomes are attributed to individual educational components and to programmes at a whole. They are also used in European and national qualifications frameworks to describe the level of the individual qualification (European Commission 2015, p. 72).

### *Lisbon Recognition Convention (LRC)*

The Convention on the Recognition of Qualifications concerning Higher Education in the European Region <sup>(148)</sup> was developed by the Council of Europe and UNESCO and adopted in 1997 in Lisbon. It aims to ensure that holders of a qualification from one European country have that qualification recognised in another.

### *Loan*

Repayable financial aid. Student loan models may differ in many aspects, such as in their repayment plans, the level of subsidy, the expenses covered, eligibility rules, etc. A student loan is subsidised when the government bears a part of the costs. This can take the form of a government guarantee, when student loans are guaranteed or insured by the government against the risk of default and loss (Salmi and Hauptman 2006, p. 43).

### *Massive Open Online Courses (MOOCs)*

Courses which allow open entry, are free, and are delivered online usually with peer or automated support. They often have large enrolment numbers. For the purposes of this data collection, we consider MOOCs as (usually shorter) online courses which do not result in degree qualifications. MOOCs may be provided by higher education institutions as well as other providers.

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<sup>(148)</sup> Council of Europe Convention on the Recognition of Qualifications concerning Higher Education in the European Region, ETS No.165, [Online] Available at: <http://www.coe.int/en/web/conventions/full-list/-/conventions/treaty/165> [Accessed 22 February 2018].

### ***Mobility window***

A period of time reserved for international student mobility that is embedded into the curriculum of a study programme.

### ***Monitoring***

Monitoring is the process of systematic data gathering, analysis and use of information by top-level authorities to inform policy. Systematic monitoring must include mechanisms of cross-institutional data gathering and allow cross-institutional data comparability.

### ***National qualifications frameworks for higher education***

National qualifications frameworks describe qualifications in terms of level, workload, learning outcomes and profile. They relate qualifications and other learning achievements in higher education coherently and are internationally understood.

### ***Non-formal learning***

Non-formal learning means learning which takes place through planned activities (in terms of learning objectives, learning time) where some form of learning support is present (e.g. student-teacher relationships); it may cover programmes to impart work skills, adult literacy and basic education for early school leavers; very common cases of non-formal learning include in-company training, through which companies update and improve the skills of their workers such as ICT skills, structured on-line learning (e.g. by making use of open educational resources), and courses organised by civil society organisations for their members, their target group or the general public <sup>(149)</sup>.

### ***Online programme***

A higher education programme that is provided primarily or entirely through the use of an Internet-connected computer, rather than attending a programme in a traditional higher education institution/campus setting.

### ***Outward mobility***

Outward mobility refers to students that left their country of residence (i.e. crossed a national border) to study elsewhere (in which they are counted as inwardly mobile students).

### ***Performance-based mechanisms***

Performance-based mechanisms are funding mechanisms related to actual or intended results by an institution over a certain period. They may be based on outputs, such as number of graduates, or inputs, such as number of students/staff with certain characteristics. Performance-based mechanisms may take the form of performance contracts, performance set asides and payments for results in research and/or education (Salmi and Hauptman 2006, p. 16).

### ***Portability***

The possibility to take the support available to students in their home country abroad (within EHEA) for credit mobility (credit portability) or degree mobility (degree portability) (European Commission/EACEA/Eurydice 2016b, p. 57).

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<sup>(149)</sup> Council Recommendation of 20 December 2012 on the validation of non-formal and informal learning, O.J. 2012/C 398/01.

### ***Preferential treatment***

The treatment of one individual or group of individuals in a manner that is likely to lead to greater benefits, access, rights, opportunities or status than those of another individual or group of individuals. Regarding admission to higher education, preferential treatment can include, for example, entry quotas, the awarding of extra points in a selection process on the basis of belonging to an under-represented group, etc.

### ***Public higher education institution***

With this term we refer to higher education institutions directly or indirectly administered by a public education authority. Public higher education institutions thus include two categories of institution: 'public institution', i.e. an institution directly managed by a government agency/authority or by a governing body, most of whose members are either appointed by a public authority or elected by public franchise, and: 'government-dependent private higher education institution', i.e. an institution controlled/managed by a non-governmental organisation or where the governing board consists of members not selected by a public agency but receiving 50 percent or more of its core funding from government agencies or whose teaching personnel are paid by a government agency – either directly or through government.

### ***Quality assurance agency***

A body established by public authorities with responsibility for external quality assurance. Agencies are intended to play a strong role in ensuring accountability of higher education institutions and may have specific objectives and developmental roles regarding enhancing quality.

### ***Quantitative objectives***

Quantitative targets defining a goal to be reached (in terms of a concrete percentage) regarding the composition of students in various respects (e.g. regarding the proportion of under-represented groups entering higher education, completing it or participating in mobility programmes).

### ***Recognition of non-formal and informal learning***

Validation and formal recognition of learners' non-formal and informal learning experiences in order to:

- provide higher education access to candidates without an upper secondary school leaving certificate; or
- within a higher education programme, allocate credits towards a qualification and/or provide exemption from some programme requirements.

### ***Retention***

The successful continuation of a study programme.

### ***Self-certification***

A procedure when national authorities, other bodies and stakeholders certify the compatibility of their national qualifications framework for higher education with the overarching Qualifications Framework for the European Higher Education Area. A set of procedures for the transparent self-certification of compatibility by member states was agreed by higher education ministers in the Bologna Process.

### ***Short cycle***

Degree programmes of less than 180 ECTS (or lasting less than 3 years), leading to a qualification that is recognised at a lower level than a qualification at the end of the first cycle. Short-cycle qualifications are recognised in the overarching framework of qualifications for the European Higher Education Area (QF-EHEA).

### ***Socio-economic status***

A combined economic and sociological measure of an individual's or family's economic and social position relative to others, based on income, level of education, and occupation. Definitions of socio-economic status might differ depending on the national context.

### ***Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG)***

European standards and guidelines are an agreed set of standards and guidelines for quality assurance in European higher education. They were developed by the 'E4 Group' (i.e. ENQA, EUA, EURASHE and ESU) and adopted by the ministers in Bergen in 2005. Revision to the ESG was undertaken between the Bucharest and Yerevan Ministerial Conferences, and an updated version of the ESG was adopted at the Yerevan Ministerial Conference in 2015 <sup>(150)</sup>.

### ***Steering documents***

Official documents containing guidelines, obligations and/or recommendations for higher education policy and/or institutions.

### ***Strategy***

An official policy document developed by the central authorities in an effort to achieve an overall goal. A strategy can comprise a vision, identify objectives and goals (qualitative and quantitative), describe processes, authorities and people in charge, identify funding sources, make recommendations, etc.

### ***Student-centred learning***

The European Students' Union (ESU) defines student-centred learning as 'both a mindset and a culture [...] characterised by innovative methods of teaching which aim to promote learning in communication with teachers and other learners and which take students seriously as active participants in their own learning, fostering transferable skills such as problem-solving, critical thinking and reflective thinking' (ESU, 2015, n.p.).

### ***Tax benefits***

Tax relief of any kind, not limited to income tax.

### ***Under-represented groups of students***

Societal groups that may be considered as not being proportionally represented in higher education in different countries. Examples might include people with disabilities, migrants, ethnic groups, lower socio-economic status groups, women/men, etc.

### ***Vertical segregation***

Vertical segregation refers to the phenomenon that while women outnumber men amongst higher education graduates, they are slightly under-represented at doctoral level, and there are even fewer women amongst higher ranking academic staff in universities. Thus, vertical segregation refers to the under-representation of women at higher levels of the professional hierarchy.

### ***Workload***

An estimation of the time learners typically need to complete all learning activities such as lectures, seminars, projects, practical work, work placements, individual study required to achieve the defined learning outcomes in formal learning environments. The correspondence of the fulltime workload of an academic year to 60 credits is often formalised by national legal provisions. In most cases, student

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<sup>(150)</sup> For more details on the European Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG), see <http://www.enqa.eu/index.php/home/esg/> [Accessed 8 March 2018].



workload ranges from 1 500 to 1 800 hours for an academic year, which means that one credit corresponds to 25 to 30 hours of work. It should be recognised that this represents the normal workload and that for individual learners the actual time to achieve the learning outcomes will vary. (European Commission 2015, p. 77)

#### ***Work placement/practical training***

The term 'work placement' refers to experience gained in a working environment as an integrative part of a higher education programme. Most typically, it refers to the placement of students in supervised work settings (e.g. through internships) so they can apply the knowledge and skills learned during their studies. Alternatively, it can also refer to a period of voluntary work (also referred to as 'student-community engagement') that is intended to allow students to become familiar with the working environment in general, whilst also conveying some benefit to the community (Bourner and Millican, 2011).

### **III. Statistical terms**

#### ***Academic staff (Figures 1.6, 1.7 and 1.8)***

This category includes:

- Personnel employed at the tertiary level of education whose primary assignment is instruction or research;
- Personnel who hold an academic rank with such titles as professor, associate professor, assistant professor, instructor, lecturer or the equivalent of any of these academic ranks;
- Personnel with other titles, (e.g. dean, director, associate dean, assistant dean, chair or head of department), if their principal activity is instruction or research.

It excludes student teachers, teachers' aides and paraprofessionals (UNESCO-UIS, OECD and Eurostat 2016, p. 43).

#### ***Access routes to higher education (Figure 5.16)***

Standard route: entering higher education with the standard entry qualification (the upper secondary school leaving certificate) obtained in direct relation to leaving school for the first time (e.g. *Matura*, *Abitur*, *Baccalauréat*), either in the country of survey or abroad.

Delayed route: entering higher education with the standard entry qualification (the upper secondary school leaving certificate) obtained with a delay, e.g. via evening classes or adult learning.

Alternative route: entering higher education without the standard entry qualification.

#### ***At-risk-of-poverty rate (Figure 6.8)***

The at-risk-of-poverty rate is the share of people with an equivalised disposable income (after social transfer) below the at-risk-of-poverty threshold, which is set at 60 % of the national median equivalised disposable income after social transfers (Eurostat, 2018a).

The equivalised disposable income is the total income of a household, after tax and other deductions, that is available for spending or saving, divided by the number of household members converted into equalised adults; household members are equalised or made equivalent by weighting each according to their age, using the so-called modified OECD equivalence scale (Eurostat, 2018b).

### **Completion rate** (Figure 5.28)

Tertiary completion rates show the percentage of students who enter (i.e. entrants) a tertiary programme and ultimately graduate from it. The preferred method used to calculate the completion rate is the true cohort method based on panel data (survey or registers), which follow the individual student from entrance to graduation in the programme. The completion rate gives the proportion of entrants who graduated within the theoretical duration of the programme (N) plus 3 years (N+3), to ensure that only a minority of entrants are still enrolled in the system by that time. Unfortunately, as Figure 5.28 shows, only a limited number of countries apply the true cohort method to calculate completion rates.

### **Delayed transition students** (Figures 5.2 and 5.9)

Delayed transition is a characteristic used for defining a type of student, who entered higher education for the first time more than 24 months after leaving school.

### **Educational attainment** (Figures 5.1, 5.2, 6.1, 6.2, 6.3, 6.6, 6.7 and 6.8)

Educational attainment refers to the highest level of education successfully completed. Indicators using the International Standard Classification of Education (ISCED) often distinguish between low, medium and high educational attainment. These categories are compiled as follows (in EU LFS):

- Low educational attainment corresponds to completed pre-primary, primary and lower secondary education (ISCED levels 0, 1 and 2). For figures in Chapter 6, low educational attainment refers to completed lower secondary education (ISCED 2).
- Medium educational attainment corresponds to upper secondary and post-secondary non-tertiary education (ISCED levels 3 and 4). For figures in Chapter 6, medium educational attainment refers to completed upper secondary education (ISCED 4).
- High educational attainment corresponds to tertiary education (ISCED levels 5 to 8).

When referring to students with or without a higher education background (Figure 5.2), then students with higher education background are those whose parents' highest degree is at ISCED level 5-8; and students without higher education background are those whose parents' highest degree is at ISCED level 0-4.

### **Expenditure on tertiary education** (Figures 1.9, 1.10, 1.12, 1.13, 1.14 and 5.21)

Within the UOE data collection, education expenditure includes the following financial data:

- Goods and Services of educational institutions: All direct public, private and international expenditure whether educational or non-educational (e.g. ancillary services), but with some exceptions; and;
- Goods and Services purchased outside educational institutions: private expenditure on educational goods and services; plus
- Public subsidies to students for student living costs regardless of where or how the student spends these subsidies (UNESCO-UIS, OECD and Eurostat 2016, p. 48).

Public expenditure refers to spending of public authorities. Expenditure on education by other ministries or equivalent institutions, for example Health and Agriculture is included. It includes subsidies provided to households and other private entities (often in the form of financial aid to students) which can be attributable to educational institutions (e.g. fees) or not (e.g. private living costs outside of institutions). Expenditure that is not directly related to education (e.g., culture, sports, youth activities, etc.) is excluded unless provided as ancillary services. (Ibid, p. 56).

Three main types of government expenditure (at central, regional or local levels) on education are distinguished:

- Direct expenditure on educational institutions,
- Intergovernmental transfers for education, and
- Transfers or other payments from governments to households and other private entities.

Public subsidies to households includes:

- Scholarships and other grants (including child allowances contingent to student status, special public subsidies in cash or in kind that are contingent on student status) and
- Student loans (including those not attributable to household payments for educational institutions, such as subsidies for student living costs) (Ibid, p. 58).

On differences between the UOE data collection and data based on COFOG (see Figure 1.11), see Section IV.

#### **Formal student status (Eurostudent) (Figures 2.24 and 2.25)**

In the framework of Eurostudent research, formal status includes student's official registration, which is recognised by the state's order and/or the higher education institutions in the respective country. It contains the categories full-time, part-time, and other. A full-time/part-time student is a student who formally holds the respective status irrespective of the weekly number of hours spent on study-related activities (taught and personal study time) (Hauschildt et al., 2015).

#### **Full-time equivalent student (Figures 1.12, 1.13 and 1.14)**

A full-time equivalent (FTE) is a unit to measure students in a way that makes them comparable although they may study a different number of hours per week. The unit is obtained by comparing a student's average number of hours studied to the average number of hours of a full-time student. A full-time student is therefore counted as one FTE, while a part-time student gets a score in proportion to the hours he or she studies (Eurostat, 2015b).

#### **Gross income (Figures 6.6 and 6.7)**

Gross income is the sum of the variables PY010G 'Employee cash or near cash income' and PY020G 'Non-Cash employee income' derived from the EU-SILC database. Gross means that neither taxes nor social contributions have been deducted at source. Employee income is defined as the total remuneration, in cash or in kind, payable by an employer to an employee in return for work done by the latter during the income reference period.

Gross employee cash or near cash income (PY010G) refers to the monetary component of the compensation of employees in cash payable by an employer to an employee. It includes the value of any social contributions and income taxes payable by an employee or by the employer on behalf of the employee to social insurance schemes or tax authorities. Examples of items included are:

- Wages and salaries paid in cash for time worked or work done in main and any secondary or casual job(s);
- Remuneration for time not worked (e.g. holiday payments);
- Enhanced rates of pay for overtime;
- Supplementary payments (e.g. thirteenth month payment);
- Profit sharing and bonuses paid in cash;
- Allowances for transport to or from work.

Gross non-cash employee income (PY020G) refers to the non-monetary income components which may be provided free or at reduced price to an employee as part of the employment package by an employer (only the value of private use is taken into account). Examples are a company car and associated costs, free or subsidised meals, luncheon vouchers, reimbursement or payment of housing-related expenses.

***Incoming mobility rate (Figures 7.10, 7.11, 7.17, 7.18, 7.19 and 7.20)***

Incoming mobility rate refers to mobile students (enrolments or graduates) from abroad studying in the country of destination as a percentage of the total number of students enrolled/graduating in the country.

***International Standard Classification of Education (ISCED)***

The International Standard Classification of Education (ISCED) has been developed to facilitate comparisons of education statistics and indicators across countries on the basis of uniform and internationally agreed definitions. The coverage of ISCED extends to all organised and sustained learning opportunities for children, young people and adults, including those with special educational needs, irrespective of the institutions or organisations providing them or the form in which they are delivered.

The older ISCED classification – known as ISCED 1997 (UNESCO, 1997b) – referred to seven levels of education:

- ISCED 0: Pre-primary education;
- ISCED 1: Primary education;
- ISCED 2: Lower secondary education;
- ISCED 3: Upper secondary education;
- ISCED 4: Post-secondary non-tertiary education;
- ISCED 5: Tertiary education (first stage);
- ISCED 6: Tertiary education (second stage).

The current classification – ISCED 2011 or 'ISCED' (UNESCO-UIS, 2012) – refers to the following levels of education:

**ISCED 0: Pre-primary education**

Programmes at level 0 (pre-primary), defined as the initial stage of organised instruction, are designed primarily to introduce very young children to a school-type environment, i.e. to provide a bridge between the home and a school-based atmosphere. Upon completion of these programmes, children continue their education at level 1 (primary education).

ISCED level 0 programmes are usually school-based or otherwise institutionalised for a group of children (e.g. centre-based, community-based, home-based).

Early childhood educational development (ISCED level 010) has educational content designed for younger children (in the age range of 0 to 2 years). Pre-primary education (ISCED level 020) is designed for children aged at least 3 years.

**ISCED 1: Primary education**

Primary education provides learning and educational activities typically designed to provide students with fundamental skills in reading, writing and mathematics (i.e. literacy and

numeracy). It establishes a sound foundation for learning, a solid understanding of core areas of knowledge and fosters personal development, thus preparing students for lower secondary education. It provides basic learning with little specialisation, if any.

This level begins between 5 and 7 years of age, is compulsory in all countries and generally lasts from four to six years.

#### ISCED 2: Lower secondary education

Programmes at ISCED level 2, or lower secondary education, typically build upon the fundamental teaching and learning processes which begin at ISCED level 1. Usually, the educational aim is to lay the foundation for lifelong learning and personal development that prepares students for further educational opportunities. Programmes at this level are usually organised around a more subject-oriented curriculum, introducing theoretical concepts across a broad range of subjects.

This level typically begins around the age of 11 or 12 and usually ends at age 15 or 16, often coinciding with the end of compulsory education.

#### ISCED 3: Upper secondary education

Programmes at ISCED level 3, or upper secondary education, are typically designed to complete secondary education in preparation for tertiary or higher education, or to provide skills relevant to employment, or both. Programmes at this level offer students more subject-based, specialist and in-depth programmes than in lower secondary education (ISCED level 2). They are more differentiated, with an increased range of options and streams available.

This level generally begins at the end of compulsory education. The entry age is typically age 15 or 16. Entry qualifications (e.g. completion of compulsory education) or other minimum requirements are usually needed. The duration of ISCED level 3 varies from two to five years.

#### ISCED 4: Post-secondary non-tertiary education

Post-secondary non-tertiary programmes build on secondary education to provide learning and educational activities to prepare students for entry into the labour market and/or tertiary education. It typically targets students who have completed upper secondary (ISCED level 3) but who want to improve their skills and increase the opportunities available to them. Programmes are often not significantly more advanced than those at upper secondary level as they typically serve to broaden rather than deepen knowledge, skills and competencies. They are therefore pitched below the higher level of complexity characteristic of tertiary education.

#### ISCED 5: Short-cycle tertiary education

Programmes at ISCED level 5 are short-cycle tertiary education, and are often designed to provide participants with professional knowledge, skills and competencies. Typically, they are practice-based and occupation-specific, preparing students to enter the labour market. However, these programmes may also provide a pathway to other tertiary education programmes.

Academic tertiary education programmes below the level of a Bachelor's programme or equivalent are also classified as ISCED level 5.

#### ISCED 6: Bachelor's or equivalent level

Programmes at ISCED level 6 are at Bachelor's or equivalent level, which are often designed to provide participants with intermediate academic and/or professional knowledge, skills and

competencies, leading to a first degree or equivalent qualification. Programmes at this level are typically theory-based but may include practical elements; they are informed by state of the art research and/or best professional practice. ISCED 6 programmes are traditionally offered by universities and equivalent tertiary educational institutions.

#### ISCED 7: Master's or equivalent level

Programmes at ISCED level 7 are at Master's or equivalent level, and are often designed to provide participants with advanced academic and/or professional knowledge, skills and competencies, leading to a second degree or equivalent qualification. Programmes at this level may have a substantial research component but do not lead to the award of a doctoral qualification. Typically, programmes at this level are theory-based but may include practical components and are informed by state of the art research and/or best professional practice. They are traditionally offered by universities and other tertiary educational institutions.

#### ISCED 8: Doctoral or equivalent level

Programmes at ISCED level 8 are at doctoral or equivalent level, and are designed primarily to lead to an advanced research qualification. Programmes at this ISCED level are devoted to advanced study and original research and are typically offered only by research-oriented tertiary educational institutions such as universities. Doctoral programmes exist in both academic and professional fields.

The first statistical data collection based on ISCED 2011 took place in 2014.

The ISCED classification also refers to fields of education. This area was revised in 2013 (ISCED-F 2013). The current classification refers to 'broad fields', which are further divided into 'narrow fields' and 'detailed fields' (UNESCO-UIS, 2015). The 'broad fields' are as follows:

- 00 Generic programmes and qualifications;
- 01 Education;
- 02 Arts and humanities;
- 03 Social sciences, journalism and information;
- 04 Business, administration and law;
- 05 Natural sciences, mathematics and statistics;
- 06 Information and Communication Technologies (ICTs);
- 07 Engineering, manufacturing and construction;
- 08 Agriculture, forestry, fisheries and veterinary;
- 09 Health and welfare;
- 10 Services;
- 99 Field unknown.



### ***International Standard Classification of Occupations (ISCO) (Figures 6.9, 6.10, 6.11 and 6.12)***

ISCO is a tool for organizing jobs into a clearly defined set of groups according to the tasks and duties undertaken in the job. The first version of ISCO was adopted in 1957 by the Ninth International Conference of Labour Statisticians (ICLS). The second version, ISCO-68 was adopted in 1966 and the third version, ISCO-88, in 1987. Though ISCO-88 was updated in December 2007 (ISCO-08), this report uses the classification of the ISCO-88 version, which defines the following major groups:

4. Legislators, senior officials and managers
5. Professionals
6. Technicians and associate professionals
7. Clerks
8. Service workers and shop and market sales workers
9. Skilled agricultural and fishery workers
10. Craft and related trades workers
11. Plant and machine operators and assemblers
12. Elementary occupations
13. Armed forces <sup>(151)</sup>

### ***Mature students (Figures 5.8, 5.9 and 5.32)***

For the purposes of this report, mature students are defined as students aged 30 or more years old.

### ***Median***

The median is the middle value in a group of numbers ranked in order of size, thus dividing the group into two halves. In other words, it is the number in a range of scores that falls exactly in the middle so that 50 % of the scores are above and 50 % are below (Eurostat, 2018c). In this report, the EHEA median refers to the median of values among the EHEA countries where data are available.

### ***Migrant status (Figure 5.6)***

In the Eurostudent survey, students are classified according to their own and their parents' places of birth and the location of their latest educational attainment. Students are classified as international students if they possess a foreign higher education entry qualification or have left the school system for the first time abroad (regardless of their and their parents' birthplace). Students with a national higher educational entry qualification, or who have left the regular school system for the first time without a qualification in the country of the survey, are further categorised according to their own and their parents' places of birth. First generation students with national educational background were born abroad, as were at least one of their parents. Second generation students with national educational background have one (mixed) or two (foreign) parents who were not born in the country of the survey. The category "Other" comprises students who were born abroad, but have parents born in the country of survey. Students without migration background and national educational background were born in the country of survey, as were their parents.

Eurostat data (Figure 5.7) only makes a distinction between the foreign-born and the native-born population, without reference to migrant status.

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<sup>(151)</sup> For more details on the ISCO classification, see: <http://www.ilo.org/public/english/bureau/stat/isco/> [Accessed 8 March 2018].

### **New entrants** (Figures 5.1, 5.3 and 5.4)

New entrants to a level of education are students who, during the course of the reference school or academic year, enter for the first time any programme in a given level of education, irrespective of whether the students enter the programme at the beginning or at an advanced stage of the programme (e.g. by virtue of credits gained for relevant work experience or courses taken at another level of education) (UNESCO, OECD and Eurostat 2016, p. 36).

### **Odds ratio** (Figures 5.29 and 5.31)

The odds ratio refers to the ratio of the likelihood that an event may occur in one group in comparison to its likelihood ratio in another group. An odds ratio of 1 indicates that the condition or event under study is equally likely to occur in both groups. An odds ratio greater than 1 indicates that the condition or event is more likely to occur in the first group. And an odds ratio less than 1 indicates that the condition or event is less likely to occur in the first group. An odds ratio is calculated in the following way (probabilities of the event in each of the groups are  $p_1$  (first group) and  $p_2$  (second group)):

$$(p_1/(1-p_1))/(p_2/(1-p_2)).$$

### **Outward mobility rate** (Figures 7.12, 7.13, 7.16, 7.17, 7.18 and 7.21)

Outward mobility rate refers to students (enrolment or graduates) from a country of origin studying abroad (outwardly mobile students) as a percentage of the total number of students with the same country of origin.

### **Percentile**

The percentile  $X$  (with  $X \geq 0$  and  $\leq 100$ ) of a sampled variable is the value of the variable under which are  $X$  per cent of the observations in the sample. For example, a percentile 25 (denoted  $P_{25}$ ) of EUR 1 000 for an income variable means that 25 % of people in that sample earn less than EUR 1 000. Percentile 0 is the minimum, and  $P_{100}$  the maximum. The median is percentile 50 (Eurostat and Eurostudent 2009, p. 129).

### **Purchasing power parity (PPP)**

A currency conversion rate which converts economic indicators expressed in a national currency into an artificial common currency that equalises the purchasing power of different national currencies. In other words, PPP eliminates the differences in price levels between countries in the process of conversion to an artificial common currency, called Purchasing Power Standard (PPS).

### **Purchasing power standard (PPS)** (Figures 1.12, 1.14, 6.6 and 6.7)

The artificial common reference currency unit used in the European Union to express the volume of economic aggregates for the purpose of spatial comparisons in such a way that price level differences between countries are eliminated. Economic volume aggregates in PPS are obtained by dividing their original value in national currency units by the respective PPP (Purchasing power parity). PPS thus buys the same given volume of goods and services in all countries, whereas different amounts of national currency units are needed to buy this same volume of goods and services in individual countries, depending on the price level.

### **Students enrolled as part-timers** (Figures 2.21, 2.22 and 2.23)

Within the UOE data collection, the part-time/full-time classification is regarded as an attribute of student participation rather than as an attribute of the educational programmes or the provision of education in general. A part-time student is one who is enrolled in an education programme whose intended study load is less than 75 % of the normal full-time annual study load (UNESCO-UIS, OECD and Eurostat 2016, p. 27).

### **Tertiary education (as defined within the ISCED classification)**

Tertiary education builds on secondary education, providing learning activities in specialised fields of education. It aims at learning at a high level of complexity and specialisation. Tertiary education includes what is commonly understood as academic education but also includes advanced vocational or professional education. It comprises ISCED levels 5, 6, 7 and 8, which are labelled as short-cycle tertiary education, Bachelor's or equivalent level, Master's or equivalent level, and doctoral or equivalent level, respectively. The content of programmes at the tertiary level is more complex and advanced than in lower ISCED levels.

#### *Unemployment rate and unemployment ratio (Figures 6.1, 6.2, 6.3, 6.4 and 6.5)*

An unemployed person is defined by Eurostat, according to the guidelines of the International Labour Organization, as:

- someone aged 15 to 74 (in Italy, Spain, the United Kingdom, Iceland, Norway: 16 to 74 years);
- without work during the reference week;
- available to start work within the next two weeks (or has already found a job to start within the next three months);
- actively having sought employment at some time during the last four weeks.

The unemployment rate is the number of people unemployed as a percentage of the labour force (Eurostat, 2018d).

The *unemployment ratio* is the number of people unemployed as a percentage of the total population.

#### *Vertical mismatch (Figure 6.12)*

Refers to a situation in which the level of education or skills is less or more than the required level of education or skills (Cedefop 2010, p. 13). Regarding Figure 6.12, vertical mismatch refers to the situation in which people with tertiary qualifications have jobs not requiring this qualification level.

## **IV. Data sources**

### BFUG data collection

This direct data collection based on two questionnaires (an Excel questionnaire and an on-line questionnaire) was aimed at collecting information for the present report. The reference year was the academic year 2016/17. The questionnaires primarily focused on qualitative information, and consisted of several parts covering the following areas:

- contextual data;
- learning and teaching;
- degree structures, qualifications, and Bologna tools;
- quality assurance;
- social dimension policies and measures;
- fees, support and portability;
- employability;
- internationalisation and mobility.

When filling in the questionnaires, the Bologna Follow-Up Group representatives were asked to consult all the relevant actors/stakeholders in their respective systems to ensure the highest degree of accuracy possible.

The information covered by the questionnaires was submitted by all signatory countries.

### Bologna with Student Eyes 2018 (European Students' Union)

*Reference year: 2018*

*Coverage: 38 EHEA countries, 43 National Unions of Students*

#### *Description:*

With different methodological approaches, ESU has been reviewing the implementation of the Bologna Process since 2003 with the Bologna with Student Eyes (BWSE) publication, launched prior to each ministerial conference.

BWSE2018 explores the perception of implementation amongst ESU's members operating in EHEA countries and seeks to bring attention to the students' priorities and recommendations for the future of the Bologna Process.

The 2018 edition of the publication highlights the need for further implementation, the slow development within the field of social dimension and embraces the importance of respect for the fundamental values of the Bologna Process.

### Classification of Functions of Government (COFOG)

The Classification of Functions of Government (COFOG) was developed by the Organization for Economic Cooperation and Development (OECD) and is published by the United Nations Statistical Division (UNSD).

COFOG is regarded as the appropriate basis to examine the structure of government expenditure. It is a 3-level classification with 10 'divisions' at the top level, each of which is broken down to about 6 'groups' at the next level of detail, which in turn are subdivided into 'classes'. Divisions describe the broad objectives of government, while groups and classes both define the means by which these broad objectives are achieved (<sup>152</sup>).

### EQAR/Eurydice survey to BFUG members

This data collection was undertaken through an on-line questionnaire. It aimed at collecting information to be presented in this report and used by EQAR on the legal frameworks allowing higher education institutions to choose a suitable EQAR-registered agency for external quality assurance processes. The reference year was the academic year 2016/17.

Questionnaires responses were submitted by national authorities in all signatory countries with the exception of Cyprus and the Holy See.

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(<sup>152</sup>) For more details on the Classification of Functions of Government (COFOG), see: [http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Classification\\_of\\_the\\_functions\\_of\\_government\\_\(COFOG\)](http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Classification_of_the_functions_of_government_(COFOG)) [Accessed 8 March 2018].

## EU Labour Force Survey (EU-LFS)

The EU-LFS is the largest European household sample survey providing quarterly and annual results on labour participation of people aged 15 and over as well as on persons outside the labour force. It covers residents in private households. The EU-LFS is an important source of information about the situation and trends in the EU labour market.

The EU-LFS currently covers thirty-four countries (participating countries) providing Eurostat with data from national labour force surveys: the 28 Member States of the European Union, three EFTA countries (Iceland, Norway and Switzerland), and three candidate countries, i.e. the former Yugoslav Republic of Macedonia, Montenegro and Turkey. The EU-LFS is conducted by the national statistical institutes in accordance with Council Regulation (EEC) No. 577/98 of 9 March 1998 and the data are centrally processed by Eurostat.

Each quarter around 1.7 million interviews are conducted throughout the participating countries to obtain statistical information for some 100 variables. Due to the diversity of information and the large sample size the EU-LFS is also an important source for other European statistics like Education statistics or Regional statistics.

The main statistical objective of the EU-LFS is to divide the resident population of working age (15 years and above) into three mutually exclusive and exhaustive groups – persons employed, unemployed and economically inactive persons – and to provide descriptive and explanatory data on each of these categories. Respondents are assigned to one of these groups according to international classification on the basis of the information obtained through the survey questionnaire, which principally relates to their actual activity within a particular reference week. The EU-LFS defines the resident population as persons living in private households.

The EU-LFS data collection covers demographic background, labour status, employment characteristics of the main job, hours worked, employment characteristics of the second job, time-related underemployment, search for employment, education and training, previous work experience of persons not in employment, situation one year before the survey, main labour status and income <sup>(153)</sup>.

## Eurostudent VI survey

*Reference year: 2016/17*

*Coverage: 28 EHEA countries*

### *Description:*

EUROSTUDENT couples a central coordination approach with a strong network of national partners in each participant country. The EUROSTUDENT consortium provides national contributors with the EUROSTUDENT core questionnaire, as well as extensive instructions for conducting the field phase at the national level, data cleaning and weighting, calculation of indicators, and data delivery.

The national research teams are chosen and funded by the participating national ministries. The national research teams are responsible for implementing a national student survey, delivering the data to the EUROSTUDENT VI data team in accordance with EUROSTUDENT conventions, and providing national interpretations of the delivered data. The delivered data are checked in a series of

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<sup>(153)</sup> For more details on the EU-LFS, see: [http://ec.europa.eu/eurostat/statistics-explained/index.php/EU\\_labour\\_force\\_survey](http://ec.europa.eu/eurostat/statistics-explained/index.php/EU_labour_force_survey) [Accessed 8 March 2018].

feedback loops for accuracy and comparability and are validated for publication by the national research team.

EUROSTUDENT conventions are the instruments used to ensure the comparability and quality of the data collected. Since the 1st round of EUROSTUDENT, these conventions have been continuously developed further and are the result of productive discussions during several project meetings, intensive seminars, and workshops which were organised by the EUROSTUDENT consortium. They are documented in several handbooks which are provided to all EUROSTUDENT partners as well as the interested public.

The EUROSTUDENT core questionnaire details the items, responses, and instructions to be used in the national surveys. The questionnaire handbook provides in-depth explanations of the purpose of each question and instructions on adapting it, if necessary, to the national context.

The EUROSTUDENT VI questionnaire handbook is available on the EUROSTUDENT website.

The questionnaire handbook also provides guidelines for the preparation and execution of the survey at the national level. It provides information on the EUROSTUDENT standard target group, sampling guidelines, as well as information on the survey organisation and method.

#### **Target group:**

The EUROSTUDENT target group includes all students who are – at the time of observation (usually: semester) – enrolled in any national study programme regarded to be higher education in a country. Usually that corresponds to ISCED levels 5, 6, and 7.

This means all students should be included regardless of:

Nationality – National and foreign students should be included, as long as they are studying for a full degree in the country of observation (and are not only obtaining a limited number of credits, e.g. as an Erasmus student).

Full-time/part-time status – Full-time, part-time, and/or correspondence students should be included as long as the study programmes the students are enrolled in offer a minimum of physical face-to-face interaction in lectures/classes (not only exams).

Character of the higher education institution (HEI) or study programme – General as well as professional orientations of HEIs and study programmes should be included, as long as the programmes and institutions are considered to be higher education in the national context.

Legal character of the HEI – Public and private institutions should be included, as long as private institutions are considered to be a regular part of the higher education system in the national context.

Excluded from the EUROSTUDENT target group are:

Students on (temporary) leave, i.e. students who have officially or non-officially interrupted their studies at the time of observation for whatever reason.

Students on credit mobility, short-term mobile students (e.g. Erasmus students), i.e. students who are currently studying in the country of observation (incoming) or who have currently left the country of observation (outgoing) for a short time period (e.g. one or two semesters) with the purpose of gaining only a relatively small number of credits.

Students in ISCED 8 study programmes (PhD – and doctoral programmes).



Students in distance learning study programmes which do not offer any physical face-to-face lecture period at all, but are solely based on written/online interaction (apart from exams).

Students at very specialised HEIs, e.g. military or police academies, or HEIs directly affiliated with one company. This might also include programmes providing training only for public administration.

Students in programmes classified as ISCED (2011) levels 5 or 6 which are not regarded to be higher education in the national context. This could encompass, for example, further vocational training programmes for Master crafts(wo)men, or upper secondary schools or post-secondary programmes not regarded as higher education.

### EU-Statistics on Income and Living Conditions (EU-SILC)

The EU statistics on income and living conditions, abbreviated as EU-SILC, is the reference source for comparative statistics on income distribution and social inclusion in the European Union (EU). It is used for policy monitoring within the 'Open method of coordination (OMC)'.

EU-SILC was launched in 2003 on the basis of a gentlemen's agreement between Eurostat and six Member States (Austria, Belgium, Denmark, Greece, Ireland and Luxembourg) and Norway. It was formally launched in 2004 in fifteen countries and expanded in 2005 to cover all of the then EU-25 Member States, together with Norway and Iceland. Bulgaria launched EU-SILC in 2006 while Romania, Switzerland and Turkey introduced the survey in 2007. EU-SILC provides two types of annual data:

- cross-sectional data pertaining to a given time or a certain time period with variables on income, poverty, social exclusion and other living conditions;
- longitudinal data pertaining to individual-level changes over time, observed periodically over a four-year period.

EU-SILC is a multi-purpose instrument which focuses mainly on income. Detailed data are collected on income components, mostly on personal income, although a few household income components are included. However, information on social exclusion, housing conditions, labour, education and health information is also obtained.

EU-SILC is based on the idea of a common 'framework' and no longer a common 'survey'. The common framework defines

- the harmonised lists of target primary (annual) and secondary (every four years or less frequently) variables to be transmitted to Eurostat;
- common guidelines and procedures;
- common concepts (household and income) and classifications aimed at maximising comparability of the information produced.

The reference population in EU-SILC includes all private households and their current members residing in the territory of the countries at the time of data collection. Persons living in collective households and in institutions are generally excluded from the target population. Some small parts of the national territory amounting to no more than 2 % of the national population and the national territories may be excluded from EU-SILC. All household members are surveyed, but only those aged 16 and more are interviewed (<sup>154</sup>).

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(<sup>154</sup>) For more details on the EU-SILC, see: [http://ec.europa.eu/eurostat/statistics-explained/index.php/EU\\_statistics\\_on\\_income\\_and\\_living\\_conditions\\_\(EU-SILC\)\\_methodology\\_-](http://ec.europa.eu/eurostat/statistics-explained/index.php/EU_statistics_on_income_and_living_conditions_(EU-SILC)_methodology_-)

## Trends 2018 (European University Association)

*Reference year: 2017*

*Coverage: 303 higher education institutions from 43 higher education systems*

### *Description:*

The Trends series has been published by the European University Association (EUA) and its predecessor organisation since the signing of the Bologna Declaration in 1999, with Trends 2018 presenting the eighth edition.

Trends provide an institutional perspective on higher education policy and institutional developments in Europe. Over the years, the focus of TRENDS has been changing. Whereas previous reports analysed mainly how the Bologna reforms have been implemented at the European universities, Trends 2015 discussed, amongst other themes, also developments in learning and teaching (L&T).

Trends 2018 research continues and further enhances this focus, and explores recent European policy developments and institutional strategies and practice on L&T.

## UOE data collection on education and training systems (UOE)

The UNESCO Institute for Statistics (UIS-UNESCO), the Organisation for Economic Co-operation and Development (OECD) and the Statistical Office of the European Union (Eurostat) jointly provide internationally comparable data on key aspects of education and training systems through the annual UOE data collection.

For tertiary education the collection covers entrants (input), enrolments (stock) and graduates (output). Data on education expenditure and personnel is also provided. The data are broken down by educational level (using the ISCED classification), as well as by sex, age, sector and field of education. Separate tables provide information on mobile and foreign students and graduates by country of origin (as well as by level, sex and field of education).

Within the UOE data collection, Eurostat collects and disseminates data from the EU Member States, candidate countries and EFTA countries. The OECD collects data from other OECD countries (such as Australia, Canada, Japan and the United States), while the UIS-UNESCO collects data from other participating countries. The validated data are used by the three organisations <sup>(155)</sup>.

## V. Notes on figures

### Chapter 1

#### **Figure 1.1: Number of students enrolled in tertiary education by ISCED level, 2014/15**

**Belgium:** Data on 'Independent private institutions' not included, except at ISCED 6 and 7.

**Bosnia and Herzegovina, Bulgaria, Finland Greece, Liechtenstein, Lithuania, Montenegro, Romania and Serbia:** ISCED 5: not applicable.

**Greece:** ISCED levels are estimated.

**Estonia and the former Yugoslav Republic of Macedonia:** ISCED 5: not applicable according to Eurostat database.

Figure 1.2: Change in the total number of students enrolled in tertiary education between 2009/10 and 2011/12 and between 2012/13 and 2014/15

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[introduction#Main\\_characteristics\\_of\\_EU-SILC](#) [Accessed 8 March 2018].

<sup>(155)</sup> For more details on the UOE data collection, see: [http://ec.europa.eu/eurostat/statistics-explained/index.php/UNESCO\\_OECD\\_Eurostat\\_\(UOE\)\\_joint\\_data\\_collection\\_%E2%80%93\\_methodology#Introduction](http://ec.europa.eu/eurostat/statistics-explained/index.php/UNESCO_OECD_Eurostat_(UOE)_joint_data_collection_%E2%80%93_methodology#Introduction) [Accessed 8 March 2018].

**Belgium:** 2013-2015 - Data on 'Independent private institutions' not included, except at ISCED 6 and 7. 2010-2012 - Data exclude the German-speaking Community. Data exclude students in private independent institutions.

**Bosnia and Herzegovina, Bulgaria, Finland, Greece, Liechtenstein, Lithuania, Montenegro, Romania and Serbia:** 2013-2015 ISCED 5: not applicable.

**Cyprus:** 2010-2012 - Due to 2 years compulsory military service for men aged 18-20, some of them are not in education.

**Greece:** 2013-2015 ISCED levels are estimated.

**Liechtenstein and Romania:** 2010-2012 - ISCED 5B: not applicable.

Russia is not included in the analysis. Missing data for Bosnia and Herzegovina and Luxembourg for the 2009-2012 period.

Figure 1.3: Enrolment rates in tertiary education for the 18-34 years old (% of the total population aged 18-34), 2008/09, 2011/12, 2014/15

**Germany:** 2009: exclude ISCED 6.

**Romania:** 2010: Changes in classification at tertiary level.

Missing data for Montenegro (2012) and Albania, Andorra, Bosnia and Herzegovina, Greece, Kazakhstan, Luxembourg and Montenegro (2009).

#### Figure 1.6: Percentage change in the total number of academic staff between 2000 and 2016

Data referring to 2000, 2005 and 2010 covers academic staff at ISCED 1997 levels 5-6. Data referring to 2016 covers academic staff at ISCED 2011 levels 5-8. All data covers all types of higher education institutions (i.e. public, private government dependent and private government independent).

**Belgium, the Czech Republic, Estonia, Germany, Italy, Latvia, the former Yugoslav Republic of Macedonia, Norway, Poland, Slovakia, Slovenia, Spain, Sweden and the United Kingdom** are represented by 2015 data.

#### Figure 1.7: Academic staff by age groups (%), 2015

Data refers to academic staff at ISCED 2011 levels 5-8. It covers all types of higher education institutions (i.e. public, private government dependent and private government independent).

**Greece and Turkey** are represented by 2014 data.

#### Figure 1.8: Female academic staff (%), 2000 and 2016

Data refers to academic staff at ISCED 2011 levels 5-8.

**Belgium, Croatia, Denmark, Estonia, France, Germany, Italy, Latvia, Luxembourg, the former Yugoslav Republic of Macedonia, Norway, Poland, Portugal, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom** are represented by 2015 data. **Greece and Turkey** are represented by 2014 data.

#### Figure 1.9: Annual public expenditure on tertiary education as a % of GDP, total with R&D and total without R&D, 2014

**Belgium:** Expenditure in independent private institutions is not included

Countries not in the analysis: Andorra, Azerbaijan, Belarus, Bosnia and Herzegovina, Croatia, Greece, Liechtenstein, the former Yugoslav Republic of Macedonia and Montenegro.

#### Figure 1.10: Annual public expenditure on tertiary education as a % of total public expenditure, 2008, 2011, 2014

EHEA is the EHEA median. Countries are sorted by the share of annual public expenditure on tertiary education in 2014. Countries not in the analysis: Andorra, Azerbaijan, Belarus, Bosnia and Herzegovina, Croatia, Finland, Greece, Holy See, Kazakhstan, Liechtenstein, the former Yugoslav Republic of Macedonia, Moldova, Montenegro, Russia, Serbia, Turkey, and Ukraine. Missing data for Albania and Luxembourg in 2011 and 2008. The numbers from 2015 report for 2011-2012 do not match the numbers for 2011-2012 in this report.

#### Figure 1.11: Yearly changes in real public expenditure on tertiary education between year 2011 and year 2015 (price index 2010=100)

Countries not in the analysis – Bosnia and Herzegovina, Holy See, Liechtenstein, the former Yugoslav Republic of Macedonia, Moldova, Montenegro, Russia and Turkey. Missing data for Iceland (2011-2013), Albania, Andorra, Armenia, Azerbaijan, Georgia, Kazakhstan, Serbia, Ukraine (2014-2015).

#### Figure 1.12: Annual public and private expenditure on public and private tertiary education institutions, per full-time equivalent student in PPS, 2008, 2011, 2014

**Austria:** 2008: Payments from private entities other than households to public educational institutions are not available.

**Belgium:** Expenditure exclude independent private institutions for all years and the German-speaking Community for years 2008 and 2011. 2014 - Expenditure in independent private institutions is not included

**Croatia:** 2008: Capital expenditure from private educational institutions is not available. 2008: Expenditure for compensation of personnel in private educational institutions is not available. 2008 and 2011: Payments from international agencies and other foreign sources to independent private educational institutions are not available. 2008: Expenditure for independent private

educational institutions is not available.

**Denmark:** Expenditure of post-secondary non-tertiary level of education is partially included in tertiary level of education. R&D expenditure is not available. 2011: Payments from other private entities to educational institutions are not available.

**Poland:** Payments from other private entities to educational institutions are not available. 2008: Payments from international agencies and other foreign sources to educational institutions are not available.

**Portugal:** Expenditure at local level of government is not available. 2008 and 2011: Expenditure of post-secondary non-tertiary level of education is partially included in upper secondary and tertiary level of education. 2008: Imputed retirement expenditure is not available; Payments from international agencies and other foreign sources to educational institutions are not available.

**Slovakia:** Expenditure of ISCED 5B is not included. 2008: Expenditure for independent private educational institutions is not available. Payments from international agencies and other foreign sources to private educational institutions are not available.

**Slovenia:** 2008: Capital expenditure from private educational institutions is not available.

**Spain:** 2008: Expenditure for ancillary services is not available.

**United Kingdom:** 2008-2011: Adjustment of educational expenditure of financial year that is running from 1 April to 31 March, to the calendar year.

Countries not in the analysis – Albania, Andorra, Armenia, Azerbaijan, Bosnia and Herzegovina, Belarus, Georgia, Greece, Kazakhstan, Liechtenstein, the former Yugoslav Republic of Macedonia, Moldova, Montenegro, Russia, Switzerland and Ukraine. Missing data for Denmark (2014), Hungary, Ireland, Luxembourg, Serbia (2011), and Hungary, Ireland, Luxembourg, Turkey, Romania and Serbia (2008).

### Figure 1.13: Annual public expenditure on public and private tertiary education institutions per full-time equivalent student in euro, 2014

Countries not included in the analysis – Albania, Andorra, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Croatia, Russia, Georgia, Greece, Kazakhstan, Liechtenstein, the former Yugoslav Republic of Macedonia, Moldova, Montenegro and Ukraine.

### Figure 1.14: Annual public and private expenditure on public and private education institutions on tertiary education per full-time equivalent student in PPS relative to the GDP per inhabitant in PPS, 2008, 2011 and 2014

**Austria:** 2008: Payments from private entities other than households to public educational institutions are not available.

**Belgium:** Expenditure exclude independent private institutions for all years and the German-speaking Community for years 2008 and 2011.

**Croatia:** 2008: Capital expenditure from private educational institutions is not available. 2008: Expenditure for compensation of personnel in private educational institutions is not available. 2008 and 2011: Payments from international agencies and other foreign sources to independent private educational institutions are not available. 2008: Expenditure for independent private educational institutions is not available.

**Denmark:** Expenditure of post-secondary non-tertiary level of education is partially included in tertiary level of education. R&D expenditure is not available. 2011: Payments from other private entities to educational institutions are not available.

**Iceland:** 2008: Expenditure for ancillary services, payments from other private entities to educational institutions and payments from international agencies and other foreign sources to educational institutions are not available. 2008: Capital expenditure from private educational institutions is not available. 2011: R&D expenditure is not available.

**Norway:** 2008: Payments from other private entities to educational institutions are not available. Payments from international agencies and other foreign sources to educational institutions are not available.

**Poland:** Payments from other private entities to educational institutions are not available. 2008: Payments from international agencies and other foreign sources to educational institutions are not available.

**Portugal:** Expenditure at local level of government is not available. 2008 and 2011: Expenditure of post-secondary non-tertiary level of education is partially included in upper secondary and tertiary level of education. 2008: Imputed retirement expenditure is not available; Payments from international agencies and other foreign sources to educational institutions are not available.

**Slovakia:** Expenditure of ISCED 5B is not included. 2008: Expenditure for independent private educational institutions is not available. Payments from international agencies and other foreign sources to private educational institutions are not available.

**Slovenia:** 2008: Capital expenditure from private educational institutions is not available.

**Spain:** 2008: Expenditure for ancillary services is not available.

**United Kingdom:** 2008-2011: Adjustment of educational expenditure of financial year, that is running from 1st of April to 31 March, to the calendar year.

Countries missing in the analysis: for 2008 – Albania, Andorra, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Georgia, Greece, Hungary, Ireland, Kazakhstan, Liechtenstein, Luxembourg, the former Yugoslav Republic of Macedonia, Moldova, Montenegro, Romania, Russia, Serbia, Switzerland, Turkey and Ukraine; for 2011 – Albania, Andorra, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Georgia, Greece, Hungary, Ireland, Kazakhstan, Liechtenstein, Luxembourg, the former Yugoslav Republic of Macedonia, Moldova, Montenegro, Russia, Serbia, Switzerland, Turkey and Ukraine; for 2014 – Albania, Andorra, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Denmark, Georgia, Greece, Kazakhstan, Liechtenstein, the former Yugoslav Republic of Macedonia, Moldova, Montenegro, Russia, Switzerland, Turkey and Ukraine.

## Chapter 2

### Figure 2.1: Expectations towards higher education institutions specified in national learning and teaching strategies (% of institutions reporting that there is a national strategy in place), 2017

**Data source:** Trends 2018 (European University Association)

**Question:** Q.8.1: What does this national strategy imply? Higher education institutions are expected...

**Coverage:** The question was only answered by those institutions that reported the presence of a national learning and teaching strategy, or a national higher education strategy, which includes learning and teaching among other matters (234 institutions out of 301 institutions that replied to the question).

### Figure 2.2: Elements included in institutional learning and teaching strategies (% of institutions reporting that there is an institutional strategy in place), 2017

**Data source:** Trends 2018 (European University Association)

**Question:** Q.9.1: What elements does your institutional L&T strategy/policy address or include?

**Coverage:** The question was only answered by those institutions that indicated the presence of an institutional strategy on teaching and learning, including respondents referring to strategies at faculty/department level (260 institutions out of 303 institutions that replied to the question).

### Figure 2.8: Impact of the learning outcomes approach in higher education institutions (% of institutions), 2017

**Data source:** Trends 2018 (European University Association)

**Question:** Q.22.1: What effect on the institution has the introduction of learning outcomes had so far?

**Coverage:** The figure was calculated on a basis of replies from 264 higher education institutions. It shows the percentage of institutions that answered 'Yes, this is the case' or 'Yes, to some extent' to specific items in this question. Answers 'No impact' and 'Don't know/No opinion' are not shown in the figure.

### Figure 2.11: Training for higher education teaching staff in developing learning outcomes (% of institutions), 2017

**Data source:** Trends 2018 (European University Association)

**Question:** Q.39: Please indicate how teachers receive training in developing learning outcomes.

**Coverage:** The figure was calculated on a basis of replies from 285 higher education institutions.

### Figure 2.14: Use of ECTS for credit accumulation and transfer by all higher education institutions, first- and second-cycle programmes, students' perspective, 2016/17

**Data source:** ESU data collection (Bologna with Student Eyes 2018 (European Students' Union))

**Question:** 2.2. In first and second cycle programmes, in your country, ECTS is used as a ... 'credit accumulation system within higher education institutions'; 'credit transfer system for student learning outcomes acquired in another institution in the country', 'credit transfer system for periods of study abroad'.

### Figure 2.15: Elements used for the calculation of ECTS points in public higher education institutions, students' perspective, 2016/17

**Data source:** ESU data collection (Bologna with Student Eyes 2018 (European Students' Union))

**Question:** 2.1. Which elements are used in the calculation of ECTS points in your country?

### Figure 2.17: Provision of part-time programmes or other alternative study forms by higher education institutions, 2016/17

**Albania:** According to the new Law on Higher Education (October 2015), higher education institutions can offer only 'full-time' study programmes. However, they can offer 'extended form of study', but only for short-cycle study programmes (post-secondary), Professional Master and Executive Master. According to the higher education law, extended form of study means that the duration of studies does not exceed the double normal time of the respective study programme. At present, Albania is in a transitory phase: higher education institutions are reorganising their study programmes as foreseen in the abovementioned law, while students enrolled before 2015 will finish their studies with the same status they entered in. Thus some phasing out students with part-time status could be found among the majority of full-time students.

### Figure 2.21: Median of country percentages of students enrolled as part-timers in tertiary education, by age, 2014/15

**Data source:** Eurostat, [specific extraction from Eurobase: file 'ENRL3\_AGE&P'] and additional collection for the other EHEA countries.

**Albania, Azerbaijan, Kazakhstan, Moldova and Ukraine:** data are missing for ages 45+.

**Belgium:** Data on 'Independent private institutions' not included, except at ISCED 6 and 7.

**Greece:** ISCED levels are estimated.

**Coverage:** Albania, Andorra, Azerbaijan, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Denmark, Estonia, Finland, Germany, Hungary, Kazakhstan, Iceland, Ireland, Latvia, Liechtenstein, Lithuania, Luxembourg, the former Yugoslav Republic of Macedonia, Malta, Moldova, the Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Ukraine, the United Kingdom.

### Figure 2.22: Students enrolled as part-timers in tertiary education, by country and by age (%), 2014/15

**Data source:** Eurostat, [specific extraction from Eurobase: file 'ENRL3\_AGE&P'] and additional collection for the other EHEA countries.

**Albania:** Missing values for ISCED 5.

**Austria, Greece, Italy, Serbia and Turkey:** Not applicable.

**Belgium:** Data on 'Independent private institutions' not included, except at ISCED 6 and 7.

**Cyprus, Czech Republic and France:** Not available.

**Kazakhstan:** Data cover ISCED level 6.

### Figure 2.23: 25, 50 and 75 percentile of countries according to the percentage of students enrolled as part-timers in tertiary education, by year, 2005-2015

**Data source:** Eurostat, [educ\_enrl1ad] and [educ\_uoe\_enrt01] and additional collection for the other EHEA countries.

**Belgium:** Data on 'Independent private institutions' not included, except at ISCED 6 and 7.

**Coverage:** Albania, Andorra, Armenia, Azerbaijan, Belarus, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Germany, Hungary, Iceland, Ireland, Kazakhstan, Latvia, Liechtenstein, Lithuania, the former Yugoslav Republic of Macedonia, Malta, Moldova, the Netherlands, Norway, Poland, Romania, Russia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Ukraine, the United Kingdom.

### Figure 2.24: Students qualifying themselves as full-timers (%), 2016/17

**Data source:** EUROSTUDENT VI, C.5.

**Countries in which no formal part-time status exists:** Austria, Denmark, France, Georgia, Serbia and Turkey.

**Countries which did not include part-time students in sample:** Albania and Latvia.

**No data:** Italy.

**EUROSTUDENT question(s):** 1.5 What is your current formal status as a student?

**Deviations from EUROSTUDENT conventions:** the Czech Republic, Italy, Romania and Switzerland.

**Deviations from EUROSTUDENT standard target group:** Albania, Germany, Ireland, Italy, Latvia and Serbia.

**Comments from national research teams on EUROSTUDENT data on part-time students:**

**Albania:** According to the new Law on Higher Education (October 2015), higher education institutions can offer only 'full-time' study programmes. However, they can offer 'extended form of study', but only for short-cycle study programmes (post-secondary), Professional Master and Executive Master. According to the higher education law, extended form of study means that the duration of studies does not exceed the double normal time of the respective study programme. At present, Albania is in a transitory phase: higher education institutions are reorganising their study programmes as foreseen in the abovementioned law, while students enrolled before 2015 will finish their studies with the same status they entered in. Thus some phasing out students with part-time status could be found among the majority of full-time students.

**Czech Republic:** We assume part-time students as those who are studying during the weekend etc. Full-time students go to school on daily basis.

**Slovenia:** Part-time students, unlike full-time students in 1st and 2nd cycle studies, have to pay (higher) tuition fees. Regarding the part-time studies, Article 37 of Higher Education Act states, that '...the organisation and schedule of lectures, seminars and practical exercises may be adapted to the possibilities of students (e.g. part-time studies)'. This shall be done in the manner and under the procedure laid down by the statute. Full-time study in Slovenia is study with a full load, i.e. 60 ECTS per year. It can be payable or unpayable. In case of 'part-time stud' the organization and schedule of lectures, seminars and exercises may be adapted to the possibilities of students – however, 'part-time study' still leads to 60 ECTS per year and is payable. Students, irrespective of whether the study is provided full-time or part-time, have the right to health care and other benefits and rights (e.g. food, transport, grants) in accordance with special regulations provided they are not in full-time employment or registered job seekers.

**Sweden:** The students course registrations defines if the student is a full-time student or not. The study pace is stated as a percentage of average credits per week throughout the course period. 1,5 ECTS credits per week = 100 % (and 30 credits per semester). A course comprising of 15 credits over a given term corresponds to a study pace of 50 % on this specific course. If the students are registered to more than one course during the same period, the total course registration credits for the period will define if the student is a full-time student or not. In Sweden distance studies and on-campus studies are also registered in the study administrative system. Of the students that only studied distance courses in the academic year 2015/2016, more than 71 percent studied free-standing courses. For students studying on campus the relationship was the reverse, 76 percent were programme students.

**Turkey:** In Turkey there are 'İkinci Öğretim Programı' in Turkish in higher education ('Evening Education Programme' in English) within the framework of the law 3843. According to this Law, Evening Education is defined as the formal education when the normal formal education (daytime education) has been completed in higher education institutions. There is no difference between Formal Education and Evening Education in terms of period of study, study guidelines for associate's degree and bachelor's degree levels, attendance, number of mid-term examinations, contribution to the success grade, implementation and make-up examination conditions, and other issues regarding education and training [these fall under the category 'other'].



**Figure 2.25: Part-time students according to their study intensity (self-reported) as % of students in different study intensity groups, 2016/17**

**Data source:** EUROSTUDENT VI, C.5.

**Countries in which no formal part-time status exists:** Austria, Denmark, France, Georgia, Serbia and Turkey.

**Countries which did not include part-time students in sample:** Albania and Latvia.

**No data:** Italy.

**EUROSTUDENT question(s):** 1.5 What is your current formal status as a student?

**Deviations from EUROSTUDENT conventions:** the Czech Republic, Italy, Romania and Switzerland.

**Deviations from EUROSTUDENT standard target group:** Albania, Germany, Ireland, Italy, Latvia and Serbia.

**Figure 2.33: Trends in higher education institutions regarding digital learning, last three years (% of institutions), 2017**

**Data source:** Trends 2018 (European University Association)

**Question:** Q.25: What are the main trends at your institution regarding digital learning in the last three years?

**Coverage:** The figure was calculated on a basis of replies from 293 higher education institutions. The figure shows the percentage of institutions that answered 'Yes, this is the case' or 'Yes, to some extent' to specific items in this question. Answers 'No' and 'Information unavailable' are not shown in the figure.

**Figure 2.34: Formal or most common requirements for holding higher education positions with teaching responsibilities (% of institutions), 2017**

**Data source:** Trends 2018 (European University Association)

**Question:** Q.34: In your institution, what formal or most common requirements are needed for holding one of the positions below with teaching responsibilities?

**Coverage:** The figure was calculated on a basis of replies from 303 higher education institutions.

**Figure 2.36: Measures to promote and develop teaching skills of academics (% of institutions), 2017**

**Data source:** Trends 2018 (European University Association)

**Question:** Q.38: Has there been a systematic effort to establish the following at your institution?

**Coverage:** The figure was calculated on a basis of replies from 287 higher education institutions. The figure shows the percentage of institutions that answered 'Yes' to specific items in this question. Answers 'No, but we are planning to do this', 'No' and 'Information unavailable' are not shown in the figure.

**Figure 2.37: Means of assessment/enhancement of teaching in place throughout the institution (% of institutions), 2017**

**Data source:** Trends 2018 (European University Association)

**Question:** Q.36: Which of the following means and criteria are used for the assessment of teaching?

**Coverage:** The figure was calculated on a basis of replies from 289 higher education institutions. The figure shows the percentage of institutions that answered 'Yes, throughout the institution' to specific items in this question. Answers 'Yes, in some parts of the institution', 'No, but we are planning to do it' and 'No, we do not use this' are not shown in the figure.

**Figure 2.38: Students' satisfied with quality of teaching in their current study programme (%), 2016/17**

**Data source:** EUROSTUDENT VI, J.29.

**No data:** Austria, Germany, Italy, Switzerland and Turkey.

**EUROSTUDENT Question(s):** 1.9 How satisfied are you regarding the following aspects of your current (main) study programme?

**Deviations from EUROSTUDENT standard target group:** Albania, Germany, Ireland, Italy, Latvia and Serbia.

**Figure 2.39: Students agreeing with the statement that their teachers inspire them (%), 2016/17**

**Data source:** EUROSTUDENT VI, J.15.

**No data:** Austria, France, Germany, Italy, Switzerland and Turkey.

**EUROSTUDENT Question(s):** 1.13 To what extent do you agree with the following statements? - My teachers inspire me.

**Deviations from EUROSTUDENT standard target group:** Albania, Germany, Ireland, Italy, Latvia and Serbia.

## Chapter 3

### Figure 3.1: Distribution of students enrolled in ISCED 5-8 programmes, 2014/15

**Data source:** Eurostat, [educ\_uoe\_enrt02] and additional collection for the other EHEA countries.

**Belgium:** Data on 'Independent private institutions' not included, except at ISCED 6 and 7.

**Bosnia and Herzegovina, Bulgaria, Finland Greece, Liechtenstein, Lithuania, Montenegro, Romania and Serbia:** ISCED 5: not applicable.

**Estonia and the former Yugoslav Republic of Macedonia:** ISCED 5: not applicable according to Eurostat database.

**Greece:** ISCED levels are estimated.

### Figure 3.2: Share of first cycle-programmes with a workload of 180, 210, 240 or another number of ECTS credits, 2016/17

**Coverage:** No data for the United Kingdom (England, Wales and Northern Ireland).

### Figure 3.3: Share of second-cycle programmes with a workload of 60-75, 90, 120 or another number of ECTS credits, 2016/17

**Coverage:** No data for Greece and the United Kingdom (England, Wales and Northern Ireland).

## Chapter 4

### Figure 4.5: European Student Unions perception of student participation in external quality assurance, 2016/17

**Data source:** ESU data collection (Bologna with Student Eyes 2018 (European Students' Union))

**Questions:** 3.2. Is there a requirement that students are involved in external quality assurance review teams?

### Figure 4.11: Scorecard indicator n°7: Level of openness to cross border quality assurance of EQAR registered agencies, 2016/17

**Data source:** EQAR/Eurydice survey to BFUG members, 2017.

## Chapter 5

### Figure 5.1: Relationship between the educational background of first-cycle new entrants (ISCED 6) and the educational attainment of their parents' cohort (population aged 45-64), 2016/17

**Data source:** Eurostat, EU-LFS (Population by educational attainment level, sex and age: edat\_ifse\_03).

**Luxembourg:** Data not reliable for proportions of the population aged 45-64 with different educational attainment levels.

### Figure 5.2: Percentage of delayed transition students among students with/without higher education background, 2016/17

**Data source:** EUROSTUDENT VI, B.4.

**No data:** Malta.

**EUROSTUDENT Question(s):** 2.3 How long after leaving the #regular school system for the first time did you enter higher education for the first time?

**Deviations from EUROSTUDENT survey conventions:**

Austria: Only national students.

France: Delay calculated using the moment of graduation from high school and the first entering into an higher education institution.

Germany: Delay calculated based on month and year of obtaining #matura or foreign equivalent.

Hungary: Delay calculated using additional questions about the high school type, year of maturation and starting year of higher education studies.

Switzerland: Information from national register of students (Swiss University Information System); duration of transition into higher education is approximated.

**Deviations from EUROSTUDENT standard target group:** Albania, Germany, Ireland, Italy, Latvia and Serbia.

### Figure 5.3: Percentage of women among new entrants in tertiary education in 2004/05 and 2014/15

**Data source:** Eurostat, [educ\_entr2tl] and [educ\_uoe\_ent01] and additional collection for the other EHEA countries.

**Albania and Estonia:** 2015 - ISCED 5 not available

**Belgium, Ireland and Poland:** 2005 - ISCED 6 not included.

**Belgium and Malta:** 2015 - ISCED 8 not available

**Bosnia and Herzegovina, Bulgaria, Finland, Greece, Liechtenstein, Lithuania, Montenegro, Romania and Serbia:** 2015 - ISCED 5: not applicable.

**Croatia:** 2005 – not significant data.

**Finland:** 2005 - ISCED 5B not applicable.

**Finland and the Netherlands:** 2005 ISCED 6 not included.

**France:** 2005 – missing data. 2015 - ISCED 5, 6 and 7 are not available

**Germany:** 2005 ISCED 6 not included.

**Italy:** 2005: ISCED 5B not significant.

**Luxembourg, Latvia and Portugal:** 2005 – missing data.

**The Netherlands:** 2005 - ISCED 5B not applicable.

#### **Figure 5.4: Percentage of women among new entrants in tertiary education by level of education, 2014/15**

**Data source:** Eurostat, [educ\_uae\_ent01] and additional collection for the other EHEA countries.

**Albania and Estonia:** ISCED 5 not available

**Belgium and Malta:** ISCED 8 not available

**Bosnia and Herzegovina, Bulgaria, Finland, Greece, Liechtenstein, Lithuania, Montenegro, Romania and Serbia:** ISCED 5: not applicable.

**France:** ISCED 5, 6 and 7 are not available

#### **Figure 5.5: Median percentage of women among enrolled students in Bologna structures by field of education and level of Bologna structure (first and second cycle, ISCED 6 and 7), 2014/15**

**Data source:** Eurostat, [educ\_uae\_ent03] and additional collection for the other EHEA countries.

Country coverage ISCED 6:

**Education:** Albania, Austria, Azerbaijan, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Hungary, Iceland, Italy, Kazakhstan, Latvia, Lithuania, Luxembourg, the former Yugoslav Republic of Macedonia, Malta, Moldova, the Netherlands, Norway, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Sweden, Turkey, the United Kingdom, Spain, Switzerland, Ukraine.

**Arts and humanities:** Albania, Austria, Azerbaijan, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Hungary, Iceland, Italy, Kazakhstan, Latvia, Lithuania, Luxembourg, the former Yugoslav Republic of Macedonia, Malta, Moldova, Georgia, the Netherlands, Norway, Poland, Portugal, Romania, Russia, Serbia, Slovenia, Slovakia, Spain, Sweden, Switzerland, Turkey, Ukraine, the United Kingdom.

**Social sciences, journalism and information:** Albania, Austria, Azerbaijan, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Hungary, Iceland, Italy, Latvia, Lithuania, Luxembourg, the former Yugoslav Republic of Macedonia, Malta, Moldova, the Netherlands, Norway, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Sweden, Spain, Switzerland, Turkey, Ukraine, the United Kingdom.

**Business, administration and law:** Albania, Austria, Azerbaijan, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Spain, Finland, France, Georgia, Germany, Hungary, Iceland, Italy, Kazakhstan, Latvia, Lithuania, Luxembourg, the former Yugoslav Republic of Macedonia, Malta, Moldova, the Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovakia, Slovenia, Serbia, Sweden, Switzerland, Turkey, the United Kingdom, Ukraine.

**Natural sciences, mathematics and statistics:** Albania, Austria, Azerbaijan, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Hungary, Iceland, Italy, Kazakhstan, Latvia, Lithuania, Luxembourg, the former Yugoslav Republic of Macedonia, Malta, Moldova, the Netherlands, Norway, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, the United Kingdom.

**Information and communication technologies:** Albania, Austria, Azerbaijan, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Hungary, Iceland, Italy, Latvia, Lithuania, Luxembourg, the former Yugoslav Republic of Macedonia, Malta, Moldova, the Netherlands, Norway, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, the United Kingdom.

**Engineering, manufacturing and construction:** Albania, Austria, Azerbaijan, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Hungary, Iceland, Italy, Kazakhstan, Latvia, Lithuania, Luxembourg, the former Yugoslav Republic of Macedonia, Malta, Moldova, the Netherlands, Norway, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, the United Kingdom.

**Agriculture, forestry, fisheries and veterinary:** Albania, Austria, Azerbaijan, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, the Czech Republic, Georgia, Germany, Denmark, Estonia, Finland, France, Hungary, Kazakhstan, Iceland, Italy, Latvia, Lithuania, the former Yugoslav Republic of Macedonia, Malta, Moldova, the Netherlands, Norway, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, the United Kingdom.

**Health and welfare:** Albania, Austria, Azerbaijan, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Georgia, Hungary, Iceland, Italy, Kazakhstan, Latvia, Lithuania, Luxembourg, the former Yugoslav Republic of Macedonia, Malta, Moldova, the Netherlands, Norway, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, the United Kingdom.

**Services:** Albania, Austria, Azerbaijan, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Hungary, Iceland, Kazakhstan, Latvia, Lithuania, the former Yugoslav Republic of Macedonia, Malta, Moldova, the Netherlands, Norway, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom.

Country coverage ISCED 7:

**Education:** Albania, Austria, Azerbaijan, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Hungary, Iceland, Italy, Kazakhstan, Latvia, Lithuania, Luxembourg, the former Yugoslav Republic of Macedonia, Malta, Moldova the Netherlands, Norway, Poland, Portugal, Romania, Russia, Serbia,

Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, the United Kingdom.

**Arts and humanities:** Albania, Austria, Azerbaijan, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Georgia, Hungary, Iceland, Italy, Kazakhstan, Lithuania, Luxembourg, Latvia, the former Yugoslav Republic of Macedonia, Malta, Moldova, the Netherlands, Norway, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, the United Kingdom.

**Social sciences, journalism and information:** Austria, Albania, Azerbaijan, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Hungary, Iceland, Italy, Latvia, Lithuania, Luxembourg, the former Yugoslav Republic of Macedonia, Malta, Moldova, the Netherlands, Norway, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, the United Kingdom.

**Business, administration and law:** Albania, Austria, Azerbaijan, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Hungary, Iceland, Italy, Kazakhstan, Latvia, Lithuania, Luxembourg, the former Yugoslav Republic of Macedonia, Malta, Moldova, the Netherlands, Norway, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, the United Kingdom.

**Natural sciences, mathematics and statistics:** Albania, Austria, Azerbaijan, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Hungary, Iceland, Italy, Kazakhstan, Latvia, Lithuania, Luxembourg, the former Yugoslav Republic of Macedonia, Malta, Moldova, the Netherlands, Norway, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, the United Kingdom.

**Information and communication technologies:** Albania, Austria, Azerbaijan, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Hungary, Iceland, Italy, Latvia, Lithuania, Luxembourg, the former Yugoslav Republic of Macedonia, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, the United Kingdom.

**Engineering, manufacturing and construction:** Albania, Austria, Azerbaijan, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Hungary, Iceland, Italy, Kazakhstan, Latvia, Lithuania, Luxembourg, the former Yugoslav Republic of Macedonia, Malta, Moldova, the Netherlands, Norway, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom, Ukraine.

**Agriculture, forestry, fisheries and veterinary:** Albania, Austria, Azerbaijan, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Hungary, Iceland, Italy, Kazakhstan, Latvia, Lithuania, Luxembourg, the former Yugoslav Republic of Macedonia, Moldova, the Netherlands, Norway, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, the United Kingdom.

**Health and welfare:** Albania, Austria, Azerbaijan, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Hungary, Iceland, Italy, Latvia, Lithuania, Luxembourg, Kazakhstan, the former Yugoslav Republic of Macedonia, Malta, Moldova, the Netherlands, Norway, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Sweden, Spain, Switzerland, Turkey, Ukraine, the United Kingdom.

**Services:** Austria, Albania, Azerbaijan, Belgium, Bulgaria, Bosnia and Herzegovina, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Hungary, Iceland, Kazakhstan, Latvia, Lithuania, the former Yugoslav Republic of Macedonia, Malta, Moldova, the Netherlands, Norway, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Ukraine, the United Kingdom.

#### Figure 5.6: Composition of students by migration background (%), 2016/17

**Data source:** EUROSTUDENT VI, A.4.

**No data:** Italy and Romania. International students: Germany.

**EUROSTUDENT Question(s):** 5.3 In which country were you and your parents (or those who raised you) born? 2.0 Do you have a standard entrance qualification or foreign equivalent? 2.2 [only students without Matura] Where did you last attend the regular school system

**Notes:** Sum of categories may deviate from 100 due to rounding.

**Deviations from EUROSTUDENT survey conventions:** Germany: no international students included in sample.

**Deviations from EUROSTUDENT standard target group:** Albania, Germany, Ireland, Italy, Latvia and Serbia.

#### Figure 5.7: Participation rates in tertiary education among persons aged 18-29, foreign-born, native-born and total population (%), 2016

**Data source:** Eurostat, EU-LFS.

Bulgaria, Estonia, Lithuania, Malta, Romania and Slovakia: Not reliable and not publishable for foreign born.

Croatia, Latvia, the former Yugoslav Republic of Macedonia, Poland and Slovenia: Not reliable for foreign born.

#### Figure 5.8: Percentage of students enrolled in tertiary education, 30 or more years old, in 2011/12 and 2014/15

**Data source:** Eurostat, [educ\_enr11t] and [educ\_uae\_enr02] and additional collection for the other EHEA countries.

**Belgium:** 2013-2015 - Data on 'Independent private institutions' not included, except at ISCED 6 and 7. 2010-2012 - Data exclude the German-speaking Community. Data exclude students in private independent institutions.

**Bosnia and Herzegovina, Bulgaria, Finland, Greece, Liechtenstein, Lithuania, Montenegro, Romania and Serbia:** 2013-2015 ISCED 5: not applicable.

**Cyprus:** 2010-2012 - Due to 2 years compulsory military service for men aged 18-20, some of them are not in education.

**Greece:** 2013-2015 ISCED levels are estimated.

**Liechtenstein and Romania:** 2010-2012 - ISCED 5B: not applicable.

### Figure 5.9: Percentage of delayed transition students among respondents 30 or more years old, 2016/17 and 2013/14

**Data source:** EUROSTUDENT VI, B.4.

**No data:** Malta. Too few cases: Albania.

**EUROSTUDENT Question(s):** 2.3 How long after leaving the #regular school system for the first time did you enter higher education for the first time?

**Deviations from EUROSTUDENT survey conventions:**

Austria: Only national students.

France: Delay calculated using the moment of graduation from high school and the first entering into an higher education institution.

Germany: Delay calculated based on month and year of obtaining #matura or foreign equivalent.

Hungary: Delay calculated using additional questions about the high school type, year of maturation and starting year of higher education studies.

Switzerland: Information from national register of students (Swiss University Information System); duration of transition into higher education is approximated.

**Deviations from EUROSTUDENT standard target group:** Albania, Germany, Ireland, Italy, Latvia and Serbia.

### Figure 5.16: Percentage of students entering higher education through standard and alternative routes, 2016/17

**Data source:** EUROSTUDENT VI, B.5 & B.9.

**No data:** Finland, Italy and Turkey. Too few cases: Slovakia (for delayed and alternative access routes).

**EUROSTUDENT Question(s):** 2.0 Do you have a #general precondition for HE access [named country-specific] or foreign equivalent? 2.1. [only students with country specific standard qualification] Did you obtain your #general precondition or foreign equivalent in direct relations (within 6 months) of leaving the #regular school [adapted nationally] system for the first time? 2.2 [only students without #general precondition for HE access] Where did you last attend the regular school system?

**Deviations from EUROSTUDENT conventions:**

Austria: All international students coded to have standard entry qualification, as the information was not asked.

Estonia: Entry into higher education without #Matura not possible in Estonia, so response option 'no, I do not have a #Matura' was not offered.

Hungary: Question 2.0 was asked in the English questionnaire only used by international students and not in the Hungarian version because regulations in Hungary only allow to apply for higher education studies for those having a matura. Questions 2.1 (Did you obtain your #Matura or foreign equivalent in direct relation (within 6 month) of leaving #regular school system for the first time?) & 2.2 (Where did you last attend the #regular school system?) were slightly altered in the Hungarian version as in most cases, finishing the high school in Hungary concurs with obtaining a matura. However, this combination of altered questions is unreliable when identifying students with a delayed transition or alternative access route. Thus, additional questions from the Hungarian questionnaire about the high school type, year of maturation and starting year of higher education studies were also employed during data cleaning process for calculating EUROSTUDENT-compatible indicators.

Switzerland: Information from national register of students (Swiss University Information System).

**Deviations from EUROSTUDENT standard target group:** Albania, Germany, Ireland, Italy, Latvia and Serbia.

### Figure 5.18: Percentage of first-cycle students who pay fees, 2016/17

**Data source:** EUROSTUDENT VI, F.171.

**No data:** Italy.

**EUROSTUDENT Question:** What are your average expenses for the following items during the current lecture period?

**Notes:** Fees include tuition fees, registration fees, examination fees, and administrative fees. Social welfare contributions to HEIs/student associations, learning materials, field trips should be excluded, but may have influenced students' perception.

**Deviations from EUROSTUDENT standard target group:** Albania, Germany, Ireland, Italy, Latvia and Serbia.

### Figure 5.20: Most common amount of yearly fees for full-time home students as a percentage of GDP per capita, 2016/17

**Data source:** Authors' calculation based on Student Fee and Support Systems in Europe 2016/17 (European Commission/ EACEA/Eurydice, 2016a), the BFUG questionnaire and World Bank. NY.GDP.PCAP.CN, Data from database: World Development Indicators, Last Updated: 09/18/2017

**No data:** Andorra, Bulgaria, Croatia, Cyprus (second cycle), Estonia, France, Germany, Greece (second cycle), Holy See, Latvia, Liechtenstein, Lithuania, the former Yugoslav Republic of Macedonia, Moldova, Poland, Russia, Slovakia, Slovenia and Turkey

**Notes:** Fees are understood as all fees charged – whether for tuition, enrolment, certification or other administrative costs, except contributions to student organisations. There are no fees: in the first cycle - Cyprus, Greece, Malta and the United Kingdom – Scotland; in the first and second cycles: Denmark, Finland, Norway and Sweden

### Figure 5.21: Support to students enrolled at tertiary education level as a percentage of public expenditure on tertiary education, 2008, 2011, 2014

**Data source:** Eurostat, [educ\_fiaid] and [educ\_uoe\_fina01].

**Belgium:** 2011: Expenditure exclude independent private institutions and the German-speaking Community. 2014 - Expenditure in independent private institutions is not included.

**Bulgaria, Czech Republic and Estonia:** 2008: Student loans from public sources are not applicable.

**Croatia:** 2008: Public transfers to private entities other than households are not available. 2011: Public transfers to private



entities at local level of government are not available.

**Cyprus:** 2008 - 2011: Including financial aid to students studying abroad.

**Denmark:** Expenditure of post-secondary non-tertiary level of education is partially included in tertiary level of education.

**Hungary:** 2008 - Student loans from public sources are not available.

**Iceland:** Expenditure for ancillary services is not available.

**Ireland:** Expenditure for ancillary services is not available.

**Portugal:** 2008 - Expenditure at local level of government is not available. Imputed retirement expenditure is not available. Expenditure of post-secondary non-tertiary level of education is partially included in tertiary level of education. 2008 – 2011 – Student loans from public sources are not available. 2011 - Expenditure at local level of government is not available, except for tertiary institutions.

**Romania:** 2008: data not available. The data published in the 2015 Bologna Implementation Report has been removed from the Eurostat database.

**Slovakia:** 2008-2011 - Expenditure at ISC 5B is included under upper secondary level of education.

**Spain:** 2008: Expenditure for ancillary services is not available.

**United Kingdom:** 2011: data is different from the data in the 2015 Bologna Implementation Report due to the revision of the UK data for the reference year 2011.

### Figure 5.25: Percentage of fee-payers among recipients and non-recipients of public support, 2016/17

**Data source:** EUROSTUDENT VI, G.44.

**No data:** Finland.

**EUROSTUDENT Questions:** 3.3 What is the average monthly amount at your disposal from the following sources during the current lecture period? 3.4 What are your average expenses for the following items during the current lecture period?

**Notes:** Public support includes grants, loans, and scholarships from national public sources. Fees include tuition fees, registration fees, examination fees, and administrative fees. Social welfare contributions to HEIs/student associations, learning materials, field trips should be excluded, but may have influenced students' perception.

**Deviations from EUROSTUDENT standard target group:** Albania, Germany, Ireland, Italy, Latvia and Serbia.

### Figure 5.27: Percentage of persons with tertiary education, by age group, 2013 and 2016

**Data source:** Eurostat, [edat\_ifs\_9903] and additional collection for the other EHEA countries.

### Figure 5.28: Completion rates in ISCED 6 (first-cycle) programmes (%), 2014

**Data source:** OECD, Education at a Glance 2016, Table A9.2: Distribution of full-time students who entered a given educational level, by theoretical duration (N) and theoretical duration plus three years (N+3) (2014).

**Belgium (Flemish Community):** Data for 'Had not graduated and were not in education' refer to students who were not enrolled in either bachelor's or master's degrees or equivalent programmes. They could still be enrolled at other levels or in adult education.

**Czech Republic:** N+3 corresponds to N+2.

**France:** Data provided using a longitudinal survey and excludes international students.

**Netherlands:** In the Netherlands, a few students enter bachelor's or equivalent programmes and graduate from a long first degree within the theoretical duration of the original bachelor's or equivalent programme. They represent less than 0.001% of total new entrants and are included with 'Graduated from a long first degree' by N+3.

### Figure 5.29: Attainment by gender: odds ratios of men over women to attain higher education, 2006-2016

**Data source:** Eurostat, [edat\_ifs\_9903] and additional collection for the other EHEA countries.

**Country coverage:** Austria, Azerbaijan, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, the former Yugoslav Republic of Macedonia, Malta, Moldova, Montenegro, the Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovenia, Slovakia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

### Figure 5.30: Percentage of female graduates in tertiary education programmes by level of education, 2014/15

**Data source:** Calculated based on Eurostat, [educ\_uae\_grad03].

### Figure 5.31: Tertiary education attainment of 25 to 34-year-olds by country of birth: odds ratio of native-born over foreign-born population to complete tertiary education, 2013 and 2016

**Data source:** Eurostat, EU-LFS and additional collection for the other EHEA countries.

**Bulgaria, Romania and Slovakia:** Not reliable and not publishable.

**Georgia:** Reference year is 2014 instead of 2016.

**Lithuania and Poland:** Not reliable.

### Figure 5.32: Adults (30-64) who attained their tertiary education degree during adulthood (aged 30-64) as a percentage of all adults (30-64), 2013 and 2016

**Data source:** Eurostat, EU-LFS and additional collection for the other EHEA countries.

**Georgia:** Reference year is 2014 instead of 2016.



## Chapter 6

### Figure 6.1.A: Unemployment rate and unemployment ratio of people aged 20-34 by educational attainment level (%), 2016

**Data source:** Eurostat, EU-LFS and additional collection for the other EHEA countries.

**Croatia and Lithuania:** Not reliable for the category 'low educational attainment'.

**Malta:** Not reliable for the category 'high educational attainment'.

### Figure 6.1.B: Unemployment rate of people aged 20-34 by educational attainment level (%), 2016

**Data source:** Eurostat, EU-LFS and additional collection for the other EHEA countries.

**Bulgaria, Lithuania, Luxembourg, Malta, Norway and Slovenia:** Not reliable for Bachelor's level.

**Bulgaria, Latvia, Luxembourg, Norway and Romania:** Not reliable for the Masters level.

### Figure 6.2: Compound annual growth rate of unemployment by educational attainment (%), 2013-2016

**Data source:** Eurostat, EU-LFS and additional collection for the other EHEA countries.

**Croatia and Lithuania:** Not reliable for the category 'low educational attainment'.

**Malta:** Not reliable for the category 'high educational attainment'.

### Figure 6.3: Unemployment rate of people aged 20-34 by educational attainment level and by sex (%), 2016

**Data source:** Eurostat, EU-LFS and additional collection for the other EHEA countries.

**Bulgaria, Croatia (male), Czech Republic (male), Estonia, Hungary (male), Latvia (male) and Luxembourg:** Not reliable for the category 'high educational attainment'.

**Malta (male):** Not reliable for the category 'medium educational attainment'.

**Island, Lithuania and Malta:** Not reliable and not publishable for the category 'high educational attainment'.

**Island and Malta (female):** Not reliable and not publishable for the category 'medium educational attainment'.

**Island and Lithuania:** Not reliable and not publishable for the category 'low educational attainment'.

### Figure 6.4: Unemployment rate of tertiary education graduates aged 20-34, by the number of years since graduation (%), 2016

**Data source:** Eurostat, EU-LFS and additional collection for the other EHEA countries.

**Bulgaria, Croatia, Czech Republic, Estonia, Hungary and Luxembourg:** Not reliable for the category 'more than 3 years'.

**Bulgaria, Estonia, Luxembourg and Malta:** Not reliable for the category '3 years or less'.

**Island (more than 3 years), Lithuania and Malta (more than 3 years):** Not reliable and not publishable.

### Figure 6.5: Unemployment rate of tertiary education graduates aged 20-34, by the number of years since graduation and by sex (%), 2016

**Data source:** Eurostat, EU-LFS and additional collection for the other EHEA countries.

**Austria, Croatia, Czech Republic, Denmark (male), Finland (male), Latvia (female), the Netherlands, Norway, Poland (male), Romania, Slovenia and Switzerland (male):** Not reliable for the category 'more than 3 years'.

**Bulgaria, Estonia, Hungary (male), Iceland, Latvia (male), Lithuania, Luxembourg (male) and Malta:** Not reliable and not publishable for the category '3 years or less'.

**Bulgaria, Estonia, Hungary, Iceland, Latvia (male), Lithuania, Luxembourg and Malta:** Not reliable and not publishable for the category 'more than 3 years'.

**Croatia, Czech Republic (male), Hungary (female), Luxembourg (female), Norway (female), Romania and Slovenia (male):** Not reliable for the category '3 years or less'.

### Figure 6.7: Ratio of median annual gross income of employees with tertiary education to the median annual gross income of employees with lower levels of education, 2013 and 2015

**Data source:** Eurostat, EU-SILC (Statistics on Income and Living conditions).

**Moldova:** Reference year is 2016 instead of 2015.

### Figure 6.8: At-risk-of-poverty rate by educational attainment for people aged 25-34 by education level, 2015

**Data source:** Eurostat, EU-SILC (Statistics on Income and Living conditions), specific extraction.

**Moldova:** Reference year is 2016 instead of 2015.

**Figure 6.11: Distribution of people with tertiary education (ISCED 5-6) aged 25-34 and employed in ISCO 1 or 2 (legislators, senior officials, managers and professionals), in ISCO 3 (technicians and associate professionals) and in ISCO 4-9, by sex (%)**

**Data source:** Eurostat, EU-LFS and additional collection for the other EHEA countries.

**Croatia (female):** Not reliable for the category 'ISCO 3'.

**Luxembourg (female):** Not reliable for the category 'ISCO 4-9'.

**Figure 6.12: Percentage of people aged 25-34 with tertiary education (ISCED 5-6) who are vertically mismatched (in ISCO 4-9) by field of study, 2016**

**Data source:** Eurostat, EU-LFS and additional collection for the other EHEA countries.

Country coverage:

**Education:** Austria, Belgium, Croatia, Cyprus, the Czech Republic, Denmark, Germany, Greece, Hungary, Italy, the former Yugoslav Republic of Macedonia, the Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Sweden, Spain, Switzerland, Turkey, the United Kingdom.

**Arts and humanities:** Austria, Belgium, Croatia, Cyprus, the Czech Republic, Germany, Denmark, Finland, France, Greece, Hungary, Iceland, Ireland, Italy, the former Yugoslav Republic of Macedonia, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom.

**Social sciences, journalism and information:** Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Italy, Latvia, Lithuania, the former Yugoslav Republic of Macedonia, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom.

**Business, administration and law:** Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Germany, Finland, France, Greece, Hungary, Ireland, Iceland, Italy, Latvia, Lithuania, Luxembourg, the former Yugoslav Republic of Macedonia, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom.

**Natural sciences, mathematics and statistics:** Belgium, Cyprus, Czech Republic, Germany, Greece, Italy, the former Yugoslav Republic of Macedonia, the Netherlands, Norway, Poland, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom.

**Information and Communication Technologies:** Belgium, Cyprus, Germany, France, Greece, Hungary, Ireland, Italy, the former Yugoslav Republic of Macedonia, Poland, Spain, Sweden, Switzerland, Turkey, the United Kingdom.

**Engineering, manufacturing and construction:** Austria, Belgium, Bulgaria, Switzerland, Cyprus, Czech Republic, Germany, Denmark, Estonia, Spain, Finland, France, Greece, Croatia, Hungary, Ireland, Italy, Lithuania, Latvia, the former Yugoslav Republic of Macedonia, the Netherlands, Norway, Poland, Portugal, Romania, Sweden, Slovenia, Slovakia, Turkey, the United Kingdom.

**Agriculture, forestry, fisheries and veterinary:** Austria, Belgium, Czech Republic, France, Germany, Greece, Hungary, Italy, the former Yugoslav Republic of Macedonia, the Netherlands, Poland, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom.

**Health and welfare:** Belgium, Cyprus, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, the former Yugoslav Republic of Macedonia, the Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom.

**Services:** Austria, Belgium, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, the former Yugoslav Republic of Macedonia, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom.

**Figure 6.13: Students' self-assessment of their chances on the national and international labour market based on the competences gained during studies (for all students and/or different focus groups), 2017**

**Data source:** EUROSTUDENT VI, J.3

**No data:** Germany, Italy, Switzerland, Turkey

**EUROSTUDENT Question(s):** 1.12 Regarding the competences gained during your current study programme: How well do you think you are prepared for the labour market after graduating?

**Notes:** Students responded on a five-point scale ranging from 'very well' to 'very poorly'. Values shown are aggregated across categories 1 + 2 (very) well

## Chapter 7

EHEA countries use multiple definitions to identify and report mobile students. Before 2013 the UOE data collection defined mobile students as foreign students (non-citizens of the country in which they study) who have crossed a national border and moved to another country to study. Starting from 2013 reference year the UOE definition is based on the country of origin understood as the country where the upper secondary diploma was awarded (or the best national estimate) and not the country of citizenship. Twenty countries in the EHEA still use the foreign citizenship/nationality as criteria to define mobile students.

For the inward mobility to the EHEA from countries outside the EHEA information from all declaring countries in the world was considered. For the outward mobility from the EHEA towards countries outside the EHEA only the questionnaires from Australia, Canada, the United States, Japan and New Zealand were considered due to issues with data availability and quality.

**Figure 7.10: Incoming degree mobility rate – tertiary education mobile students from the EHEA and from outside the EHEA studying in the country as a percentage of the total number of students enrolled, by country of destination, 2014/15**

Albania, Andorra, Armenia, Azerbaijan, Bosnia and Herzegovina, Bulgaria, the Czech Republic, Greece, France, Hungary, Italy, Kazakhstan, Luxembourg, Malta, Moldova, Montenegro, Russia, Serbia, Slovakia, Turkey and Ukraine: The criteria used to define mobile students is the citizenship.

Germany and Spain: ISCED 8 is not included in the tertiary mobile students.

Greece, Liechtenstein, Montenegro and Turkey: Missing data.

Norway: Change in the definition of mobile student since UOE 2014 (2012/13).

**Figure 7.11: Number of incoming degree tertiary education mobile students from inside and outside the EHEA, by country of destination, 2014/15**

Albania, Andorra, Armenia, Azerbaijan, Bulgaria, Bosnia and Herzegovina, the Czech Republic, France, Greece, Hungary, Italy, Kazakhstan, Luxembourg, Malta, Moldova, Montenegro, Russia, Serbia, Slovakia, Turkey and Ukraine: The criteria used to define mobile students is the citizenship.

Germany and Spain: ISCED 8 is not included in the tertiary mobile students.

Greece, Liechtenstein, Montenegro and Turkey: Missing data.

Norway: Change in the definition of mobile student since UOE 2014 (2012/13).

**Figure 7.12: Number of outward degree tertiary education students inside and outside the EHEA by country of origin, 2014/15**

Albania, Andorra, Armenia, Azerbaijan, Bosnia and Herzegovina, Bulgaria, the Czech Republic, France, Greece, Hungary, Italy, Kazakhstan, Luxembourg, Malta, Moldova, Montenegro, Russia, Serbia, Slovakia, Turkey and Ukraine: The criteria used to define mobile students is the citizenship.

Germany and Spain: ISCED 8 is not included in the tertiary mobile students.

Greece, Liechtenstein, Montenegro and Turkey: Missing data.

**Figure 7.13: Outward degree mobility rate – mobile tertiary education graduates within the EHEA as a percentage of all graduates of the same country of origin, by country of origin, 2014/15**

Albania, Andorra, Armenia, Azerbaijan, Bosnia and Herzegovina, Bulgaria, the Czech Republic, France, Greece, Hungary, Italy, Kazakhstan, Luxembourg, Malta, Moldova, Montenegro, Russia, Serbia, Slovakia, Turkey and Ukraine: The criteria used to define mobile graduated students is the citizenship.

Andorra, France, Greece, Iceland, Slovakia and Georgia: Missing data.

Poland: ISCED 8 is not included in the graduated students.

Spain: Only including value from ISCED 6 and 7.

**Figure 7.14: Share of degree mobile graduates from abroad by education level, sex and country of origin, 2014/15**

Albania, Andorra, Armenia, Azerbaijan, Bosnia and Herzegovina, Bulgaria, the Czech Republic, France, Greece, Hungary, Italy, Kazakhstan, Luxembourg, Malta, Moldova, Montenegro, Russia, Serbia, Slovakia, Turkey and Ukraine: The criteria used to define mobile graduated students is the citizenship.

Albania, Andorra, Armenia, Azerbaijan, Bosnia and Herzegovina, Belarus, France, Georgia, Greece, Iceland and Kazakhstan, Liechtenstein, Moldova, Montenegro, Russia and Ukraine: Missing data.

Poland: ISCED 8 is not included in the graduated students.

Spain: Only including value from ISCED 6 and 7.

**Figure 7.15: Share of tertiary students enrolled abroad (degree mobility), by country of origin, 2014/15**

Albania, Andorra, Armenia, Azerbaijan, Bosnia and Herzegovina, Bulgaria, the Czech Republic, France, Greece, Hungary, Italy, Kazakhstan, Luxembourg, Malta, Moldova, Montenegro, Russia, Serbia, Slovakia, Turkey and Ukraine: The criteria used to define mobile students is the citizenship.

Germany and Spain: ISCED 8 is not included in the tertiary mobile students.

Greece, Liechtenstein, Montenegro and Turkey: Missing data.

**Figure 7.16: Outward degree mobility rate – tertiary education students studying abroad outside the EHEA as a percentage of the total number of students of the same country of origin, 2014/15**

Albania, Andorra, Armenia, Azerbaijan, Bosnia and Herzegovina, Bulgaria, the Czech Republic, France, Greece, Hungary, Italy, Kazakhstan, Luxembourg, Malta, Moldova, Montenegro, Russia, Serbia, Slovakia, Turkey and Ukraine: The criteria used to define mobile students is the citizenship.

Germany and Spain: ISCED 8 is not included in the tertiary mobile students.

Greece, Liechtenstein, Montenegro and Turkey: Missing data.

#### Figure 7.17: Mobility balance: Incoming/outgoing tertiary students ratio within the EHEA, 2014/15

**Albania, Andorra, Armenia, Azerbaijan, Bosnia and Herzegovina, Bulgaria, the Czech Republic, France, Greece, Italy, Kazakhstan, Luxembourg, Hungary, Malta, Moldova, Montenegro, Russia, Serbia, Slovakia, Turkey and Ukraine:** The criteria used to define mobile students is the citizenship.

**Germany and Spain:** ISCED 8 is not included in the tertiary mobile students.

**Greece, Liechtenstein, Montenegro and Turkey:** Missing data.

**Norway:** Change in the definition of mobile student since UOE 2014 (2012/13).

#### Figure 7.18: Mobility balance: Incoming/outgoing tertiary students ratio within and outside the EHEA, 2014/15

**Albania, Andorra, Armenia, Azerbaijan, Bosnia and Herzegovina, Bulgaria, the Czech Republic, France, Greece, Hungary, Italy, Kazakhstan, Luxembourg, Malta, Moldova, Montenegro, Russia, Serbia, Slovakia, Turkey and Ukraine:** The criteria used to define mobile students is the citizenship.

**Germany and Spain:** ISCED 8 is not included in the tertiary mobile students.

**Greece, Liechtenstein, Montenegro and Turkey:** Missing data.

#### Figure 7.19: Balance as a measure of the attractiveness of the education system of the country at tertiary education level (mobility flows within and outside EHEA), 2014/15

**Albania, Andorra, Armenia, Azerbaijan, Bosnia and Herzegovina, Bulgaria, the Czech Republic, France, Greece, Hungary, Italy, Kazakhstan, Luxembourg, Malta, Moldova, Montenegro, Russia, Serbia, Slovakia, Turkey and Ukraine:** The criteria used to define mobile students is the citizenship.

**Germany and Spain:** ISCED 8 is not included in the tertiary mobile students.

**Greece, Liechtenstein, Montenegro and Turkey:** Missing data.

#### Figure 7.20: Student mobility flows: Top three countries of origin (inward) in %, 2014/15

**Albania, Andorra, Armenia, Azerbaijan, Bosnia and Herzegovina, Bulgaria, the Czech Republic, France, Greece, Hungary, Kazakhstan, Italy, Luxembourg, Malta, Serbia, Slovakia, Turkey, Moldova, Montenegro, Russia and Ukraine:** The criteria used to define mobile students is the citizenship.

**Germany and Spain:** ISCED 8 is not included in the tertiary mobile students.

#### Figure 7.21: Student mobility flows: Top three countries of destination (outward) in %, 2014/15

**Albania, Andorra, Armenia, Azerbaijan, Bosnia and Herzegovina, Bulgaria, the Czech Republic, France, Greece, Hungary, Italy, Kazakhstan, Luxembourg, Malta, Moldova, Montenegro, Russia, Serbia, Slovakia, Turkey and Ukraine:** The criteria used to define mobile students is the citizenship.

**Germany and Spain:** ISCED 8 is not included in the tertiary mobile students.

#### Figure 7.22: Outward mobility versus diversity of destination countries (mobility flows within and outside EHEA) 2014/15,

**Albania, Andorra, Armenia, Azerbaijan, Bosnia and Herzegovina, Bulgaria, the Czech Republic, France, Greece, Hungary, Italy, Kazakhstan, Luxembourg, Malta, Moldova, Montenegro, Russia, Serbia, Slovakia, Turkey and Ukraine:** The criteria used to define mobile students is the citizenship.

**Germany and Spain:** ISCED 8 is not included in the tertiary mobile students.

#### Figure 7.23: Recognition of credits gained during (most recent) enrolment abroad – Share of students who have been enrolled abroad (in %), 2016/17

**Data source:** EUROSTUDENT VI, 1.7.

**No data:** **Germany:** Partial recognition/no credits gained/no plans for recognition, **Switzerland:** no plans for recognition.

**EUROSTUDENT Question:** 4.4. *[only students who have been enrolled abroad]* Were the credits (ECTS, certificates) you gained for your enrolment abroad recognised by your home institution?

**Deviations from EUROSTUDENT survey conventions:**

Austria, France, Germany, Ireland and Switzerland: Response option 'did not plan to get credits recognised' not offered.

Germany: Fewer response options offered

**Deviations from EUROSTUDENT standard target group:** Albania, Germany, Ireland, Italy, Latvia and Serbia.

**Germany:** fewer response options: no distinction between 'full' and 'partial' recognition possible.

## REFERENCES

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ACA (Academic Cooperation Association), 2013. *Mapping “mobility windows” in European higher education. Examples from selected countries –MOWIN.* [pdf] Available at: [http://eacea.ec.europa.eu/LLp/project\\_reports/documents/erasmus/ESMO/eras\\_esmo\\_517968\\_fr.pdf](http://eacea.ec.europa.eu/LLp/project_reports/documents/erasmus/ESMO/eras_esmo_517968_fr.pdf) [Accessed 14 March 2018].

Andersson, R. and Olsson, A-K., 1999. *Fields of Education and Training. Manual.* Luxembourg: Eurostat.

BMWF (Bundesministerium für Wissenschaft, Forschung und Wirtschaft) [Austrian Federal Ministry for Science, Research and Economy], 2017. *Nationale Strategie zur sozialen Dimension in der Hochschulbildung* [National Strategies in the Social Dimension of Higher Education]. [pdf] Available at: [http://www.sozialerhebung.at/sozdim/strategiepapier/Strategie\\_2017.pdf](http://www.sozialerhebung.at/sozdim/strategiepapier/Strategie_2017.pdf) [Accessed 13 November 2017].

Bourner, T. and Millican, J., 2011. Student-community engagement and graduate employability. *Widening Participation and Lifelong Learning*, 13(2), pp. 68-85.

Cedefop, 2010. *The skill matching challenge. Analysing skill mismatch and policy implications.* Luxembourg: Publications Office of the European Union.

Cedefop. 2016. *Briefing Note. Qualifications Frameworks in Europe.* [pdf] Available at <http://www.cedefop.europa.eu/en/publications-and-resources/publications/9117> [Accessed 22 November 2017].

Council of the Magna Charta Observatory. 25 July 2016. *Statement concerning universities in Turkey.* [Online] Available at <http://www.magna-charta.org/publications-and-documents/observatory-publications/statement-concerning-universities-in-turkey> [Accessed 20 February 2018].

DZHW (German Centre for Higher Education Research and Science Studies) ed., 2018. *Social and Economic Conditions of Student Life in Europe. EUROSTUDENT VI 2016-2018 Synopsis of Indicators.* [pdf] [https://khrono.no/files/2018/03/06/EUROSTUDENT\\_VI\\_Synopsis\\_of\\_Indicators%20\(2\).pdf](https://khrono.no/files/2018/03/06/EUROSTUDENT_VI_Synopsis_of_Indicators%20(2).pdf) [Accessed 22 February 2018].

EHEA Pathfinder Group on Automatic Recognition, 2014. *Report by the EHEA Pathfinder Group on Automatic Recognition. To present to Ministers of the European Area of Higher Education for the Bologna Ministerial Conference, 14-15 May 2015, Yerevan, Armenia.* [pdf] Available at: [http://media.ehea.info/file/2015\\_Yerevan/72/3/EHEA\\_Pathfinder\\_Group\\_on\\_Automatic\\_Recognition\\_January\\_2015\\_613723.pdf](http://media.ehea.info/file/2015_Yerevan/72/3/EHEA_Pathfinder_Group_on_Automatic_Recognition_January_2015_613723.pdf) [Accessed 9 July 2016].

ESU (European Students' Union), 2015. *Overview on Student-Centred Learning in Higher Education in Europe. Research Study.* [pdf] Available at: <https://www.esu-online.org/wp-content/uploads/2016/07/Overview-on-Student-Centred-Learning-in-Higher-Education-in-Europe.pdf> [Accessed 29 November 2017].

EUA (European University Association), 2007. *Trends V: Universities shaping the European Higher Education Area.* [pdf] Available at [http://www.eua.be/Libraries/publications-homepage-list/eua\\_trends\\_v\\_for\\_web1b9364ca84b96a879ce5ff00009465c7.pdf?sfvrsn=0](http://www.eua.be/Libraries/publications-homepage-list/eua_trends_v_for_web1b9364ca84b96a879ce5ff00009465c7.pdf?sfvrsn=0) [Accessed 28 February 2018].



EUA, 2010. *Salzburg II Recommendations. European universities' achievements since 2005 in implementing the Salzburg Principles*. [pdf] Available at: [http://www.eua.be/Libraries/publications-homepage-list/Salzburg\\_II\\_Recommendations](http://www.eua.be/Libraries/publications-homepage-list/Salzburg_II_Recommendations) [Accessed 26 March 2018].

European Commission, 2011. *Towards a European Framework for research Careers*. [pdf] Available at: [https://era.gv.at/object/document/1509/attach/Towards\\_a\\_European\\_Framework\\_for\\_Research\\_Careers\\_final.pdf](https://era.gv.at/object/document/1509/attach/Towards_a_European_Framework_for_Research_Careers_final.pdf) [Accessed 11 July 2016].

European Commission, 2012. *Europeans and their Languages. Special Eurobarometer 386*. Report. [pdf] Available at: [http://ec.europa.eu/commfrontoffice/publicopinion/archives/ebs/ebs\\_386\\_en.pdf](http://ec.europa.eu/commfrontoffice/publicopinion/archives/ebs/ebs_386_en.pdf) [Accessed 11 October 2017].

European Commission, 2013. *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. European higher education in the world*. COM(2013) 499 final.

European Commission. 2014. *Report to the European Commission on new modes of learning and teaching in higher education*. Luxembourg: Publications Office of the European Union.

European Commission, 2015. *ECTS Users' Guide*. Luxembourg: Publications Office of the European Union. Luxembourg: Publications Office of the European Union.

European Commission, 2017a. *Study to support the revision of the diploma supplement and analyse the feasibility of its digitalisation at European level*. Luxembourg: Publications Office of the European Union.

European Commission, 2017b. *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Strengthening. European Identity through Education and Culture*. COM(2017) 673 final.

European Commission, 2017c. *Erasmus + Annual report 2016. Enriching lives, opening minds*. Luxembourg: Publications Office of the European Union.

European Commission, 2017d. *Progress report on a Learning Mobility Benchmark*. COM (2017)148 final.

European Commission/EACEA/Eurydice, 2011. *Modernisation of Higher Education in Europe: Funding and Social Dimension*. Eurydice Report. Luxembourg: Publications Office of the European Union.

European Commission/EACEA/Eurydice, 2014. *Modernisation of Higher Education in Europe: Access, Retention and Employability*. Eurydice Report. Luxembourg: Publications Office of the European Union.

European Commission/EACEA/Eurydice/Cedefop, 2014. *Tackling Early Leaving from Education and Training in Europe: Strategies, Policies and Measures*. Eurydice and Cedefop Report. Luxembourg: Publications Office of the European Union.

European Commission/EACEA/Eurydice, 2015. *The European Higher Education Area in 2015: Bologna Process Implementation Report*. Luxembourg: Publications Office of the European Union.

European Commission/EACEA/Eurydice, 2016a. *National Student Fee and Support Systems in European Higher Education 2015/16*. Eurydice - Fact and Figures. Luxembourg: Publications Office of the European Union.



European Commission/EACEA/Eurydice, 2016b. *Mobility Scoreboard: Higher Education Background Report*. Eurydice Report. Luxembourg: Publications Office of the European Union.

European Commission/EACEA/Eurydice, 2017a. *Modernisation of Higher Education in Europe: Academic Staff – 2017*. Eurydice Report. Luxembourg: Publications Office of the European Union.

European Commission/EACEA/Eurydice, 2017b. *National Student Fee and Support Systems in European Higher Education 2016/17*. Eurydice - Fact and Figures. Luxembourg: Publications Office of the European Union.

European Commission/EACEA/Eurydice, Eurostat and Eurostudent, 2012. *The European Higher Education Area in 2012: Bologna Process Implementation Report*. Luxembourg: Publications Office of the European Union.

Eurostat, 2018a. *Glossary: At-risk-of-poverty rate*. [Online] Available at: [http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:At-risk-of-poverty\\_threshold](http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:At-risk-of-poverty_threshold) [Accessed 15 January 2018].

Eurostat, 2018b. *Glossary: Equivalised disposable income*. [Online] Available at: [http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Equivalised\\_disposable\\_income](http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Equivalised_disposable_income) [Accessed 15 January 2018].

Eurostat, 2018c. *Glossary: Median*. [Online] Available at: <http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Median> [Accessed 15 January 2018].

Eurostat, 2018d. *Glossary: Unemployment* [Online] Available at: [http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Unemployment\\_rate](http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Unemployment_rate) [Accessed 20 March 2018].

Eurostat and Eurostudent, 2009. *The Bologna Process in Higher Education in Europe. Key indicators on the social dimension and mobility*. Luxembourg: Office for Official Publications of the European Communities.

Government of Flanders/Department of Education and Training, 2013. *Brains on the Move! Action plan for mobility 2013* [pdf] Available at: [http://www.ond.vlaanderen.be/hogeronderwijs/beleid/ActieplanMobiliteit/actieplan2013\\_english.pdf](http://www.ond.vlaanderen.be/hogeronderwijs/beleid/ActieplanMobiliteit/actieplan2013_english.pdf) [Accessed 18 January 2016].

Griga, D. and Hadjar, A., 2014. Migrant Background and Higher Education Participation in Europe: The Effect of the Educational Systems. In: *European Sociological Review* 30(3), pp. 275-286.

Hauschildt, K. et al., 2015. *Social and Economic Conditions of Student Life in Europe. Synopsis of Indicators, EUROSTUDENT V 2012-2015*. Bielefeld: W. Bertelsmann Verlag.

HEFCE (Higher Education Funding Council for England), 2016. *National collaborative outreach programme: Invitation to submit proposals for funding*. [pdf] Available at: <http://www.hefce.ac.uk/pubs/year/2016/201606/> [Accessed 13 November 2017].

Higgins, S., Xiao Z., Katsipatakis M., 2012. *The Impact of Digital Technology on Learning*. A Summary for the Education Endowment Foundation. Full Report. Durham University. [pdf] Available at: [https://educationendowmentfoundation.org.uk/public/files/Publications/The\\_Impact\\_of\\_Digital\\_Technologies\\_on\\_Learning\\_\(2012\).pdf](https://educationendowmentfoundation.org.uk/public/files/Publications/The_Impact_of_Digital_Technologies_on_Learning_(2012).pdf) [Accessed 20 February 2018].

King, R., Findlay, A. and Ahrens, J., 2010. *International student mobility literature review*. Report to HEFCE, and co-funded by the British Council, UK National Agency for Erasmus. [pdf] Available at: <https://www.ucl.ac.uk/basc/documents/hefce-report> [Accessed 15 February 2016].

Ministère de l'Enseignement supérieur, de la Recherche et de l'Innovation [French Ministry of Higher Education, Research and Innovation], 2015. *Pour une société apprenante - propositions pour une stratégie nationale de l'enseignement supérieur* [For a learning society – proposals for a national higher education strategy]. [pdf] Available at: [http://cache.media.enseignementsup-recherche.gouv.fr/file/STRANES/12/2/STRANES\\_entier\\_bd\\_461122.pdf](http://cache.media.enseignementsup-recherche.gouv.fr/file/STRANES/12/2/STRANES_entier_bd_461122.pdf) [Accessed 18 January 2018].

MSMT (Ministerstva školství, mládeže a tělovýchovy) [Czech Ministry of Education, Youth and Sports], 2015. *Strategic Plan for Higher Education Institutions 2016-2020*. [Online] Available at: <http://www.msmt.cz/areas-of-work/tertiary-education/strategic-plan-for-higher-education-institutions-2016-2020?lang=2> [Accessed 18 January 2018].

OECD (Organisation for Economic Co-operation and Development), 2012. *Equity and Quality in Education: Supporting Disadvantaged Students and Schools*. Paris: OECD Publishing. [Online] Available at: <http://dx.doi.org/10.1787/9789264130852-en> [Accessed 13 November 2017].

OECD, 2017. *Table D6.1: Use of limits on number of students entering fields of study and institutions within countries with open and selective systems* [Online] Available at: <http://dx.doi.org/10.1787/eag-2017-34-en> [Accessed 13 November 2017].

Orr, D. et al., 2017. *Study on the impact of admission systems on higher education outcomes. Volume I: Comparative report*. Luxembourg: Publications Office of the European Union.

Quinn, J., 2013. *Drop-out and Completion in Higher Education in Europe among students from under-represented groups*. NESET report. [pdf] Available at: <http://nesetweb.eu/wp-content/uploads/2015/09/2013-Drop-out-and-Completion-in-Higher-Education-in-Europe-among-students-from-under-represented-groups.pdf> [Accessed 3 October 2017].

Report by the Bologna Working Party on Qualifications Frameworks submitted to the conference of Ministers of Education of the Bologna Process, London, May 2007. [pdf] Available at: [http://media.ehea.info/file/WG\\_Qualifications\\_frameworks/40/0/QualificationsFrameworks\\_report2007\\_581400.pdf](http://media.ehea.info/file/WG_Qualifications_frameworks/40/0/QualificationsFrameworks_report2007_581400.pdf) [Accessed 13 February 2018].

Salmi, J. and Hauptman, A.M., 2006. *Innovations in Tertiary Education Financing: A Comparative Evaluation of Allocation Mechanisms*. Education Working Paper Series, Number 4. Washington: Human Development Network, Education Sector World Bank Group. [pdf] Available at: [http://siteresources.worldbank.org/EDUCATION/Resources/278200-1099079877269/547664-1099079956815/Innovations\\_TertiaryEd\\_Financing.pdf](http://siteresources.worldbank.org/EDUCATION/Resources/278200-1099079877269/547664-1099079956815/Innovations_TertiaryEd_Financing.pdf) [Accessed 13 November 2017].

Scholars at Risk. 26 July 2016. *15 Universities Shut Down in Connection with State of Emergency*. [Online] Available at <https://www.scholarsatrisk.org/2016/07/15-universities-shut-connection-state-emergency/> [Accessed 20 February 2018].

Scholars at Risk Network. 20 March 2017. *Academic Freedom Monitor*. [Online] Available at <http://monitoring.academicfreedom.info/reports/2017-03-20-european-university-st-petersburg> [Accessed 20 February 2018].

Scholars at Risk Network. 10 April 2017. *Academic Freedom Monitor*. [Online] Available at <http://monitoring.academicfreedom.info/reports/2017-04-10-central-european-university> [Accessed 20 February 2018].

Scottish Funding Council, 2016. *Guidance for the development of University Outcome Agreements: 2017-18 to 2019-20*. [pdf] Available at:

[http://www.sfc.ac.uk/web/FILES/GUI\\_SFCGD222016\\_UniversityOAGuidance1718/SFC\\_GD\\_22\\_2016\\_University\\_OA\\_guidance\\_2017-18.pdf](http://www.sfc.ac.uk/web/FILES/GUI_SFCGD222016_UniversityOAGuidance1718/SFC_GD_22_2016_University_OA_guidance_2017-18.pdf) [Accessed 13 November 2017].

Souto Otero, M., 2008. The socio-economic background of Erasmus students: a trend towards wider inclusion? *International Review of Education*, 54(2), pp. 135-154.

Swedish Council for Higher Education, 2016. *Can excellence be achieved in homogeneous student groups?* [pdf] Available at: <https://www.uhr.se/globalassets/uhr.se/publikationer/2016/uhr-can-excellence-be-achieved-in-homogeneous-student-groups.pdf> [Accessed 13 November 2017].

Teichler, U., 2011. Bologna – Motor or Stumbling Block for the Mobility and Employability of Graduates? In: H. Schomburg and U. Teichler, eds. *Employability and Mobility of Bachelor Graduates in Europe. Key Results of the Bologna Process*. Rotterdam: Sense Publishers, pp. 3-41.

Turkish Council of Ministers, 2016. *Decree with Force of Law: Decree on Measures to be Taken Under State of Emergency KHK/667*. [Online] Available at:

<http://www.resmigazete.gov.tr/eskiler/2016/07/20160723-8.htm> [Accessed 20 February 2018].

UNESCO (United Nations Educational, Scientific and Cultural Organization), 1997a. *Recommendation concerning the Status of Higher-Education Teaching Personnel*. 11 November 1997. [pdf] Available at <http://unesdoc.unesco.org/images/0011/001132/113234mb.pdf> [Accessed 5 February 2018].

UNESCO, 1997b. *International Standard Classification of Education ISCED 1997*. November 1997. [pdf] Available at: <http://unesdoc.unesco.org/images/0011/001113/111387eo.pdf> [Accessed 5 February 2018].

UNESCO and Council of Europe, 2016. *Monitoring the Implementation of the Lisbon Recognition Convention*. [pdf] Available at:

[http://www.enicnarc.net/fileusers/Monitoring\\_the\\_Implementation\\_of\\_the\\_Lisbon\\_Recognition\\_Convention\\_2016.pdf](http://www.enicnarc.net/fileusers/Monitoring_the_Implementation_of_the_Lisbon_Recognition_Convention_2016.pdf) [Accessed 28 March 2018].

UNESCO-UIS (UNESCO Institute for Statistics), 2012. *International Standard Classification of Education ISCED 2011*. [pdf] Available at:

<http://uis.unesco.org/sites/default/files/documents/international-standard-classification-of-education-isced-2011-en.pdf> [Accessed 5 February 2018].

UNESCO-UIS, 2015. *International Standard Classification of Education. Fields of education and training 2013 (ISCED-F 2013) – Detailed field descriptions*. [pdf] Available at:

<http://unesdoc.unesco.org/images/0023/002350/235049e.pdf> [Accessed 5 February 2018].

UNESCO-UIS, OECD and Eurostat, 2015. *ISCED 2011 Operational Manual. Guidelines for Classifying National Education Programmes and Related Qualifications*. [pdf] Available at:

<http://unesdoc.unesco.org/images/0023/002323/232343e.pdf> [Accessed 6 October 2017].

UNESCO-UIS, OECD and Eurostat, 2016. *UOE data collection on formal education. Manual on concepts, definitions and classifications. Version of 11<sup>th</sup> of July 2016*. [pdf] Available at:

[http://uis.unesco.org/sites/default/files/documents/uoe2016manual\\_11072016\\_0.pdf](http://uis.unesco.org/sites/default/files/documents/uoe2016manual_11072016_0.pdf)

[Accessed 27 March 2018].

Vincent-Lancrin, S., 2008. What is the Impact of Demography on Higher Education Systems? A Forward-looking Approach for OECD Countries. In: *Higher Education to 2030 – Volume 1: Demography*. Paris: OECD, pp. 41-103.

Witthaus, G. et al., 2017. *Validation of Non-formal MOOC-based Learning: An Analysis of Assessment and Recognition Practices in Europe (OpenCred)*. JRC Science for Policy Report. [pdf] Available at: <http://bookshop.europa.eu/en/validation-of-non-formal-mooc-based-learning-pbLFNA27660/?CatalogCategoryID=QN4KABste0YAAAEjFZEY4e5L> [Accessed 28 February 2018].

World Bank, 2016. *World Development Indicators database*. [Online] Available at: <https://data.worldbank.org/indicator/NY.GDP.PCAP.PP.CD> [Accessed 13 November 2017].

# ACKNOWLEDGEMENTS

---

## **BFUG Reporting Working Group Co-Chairs**

Tone Flood Strøm  
Andrejs Rauhvargers

David Crosier

## **Authors**

David Crosier, Ralitsa Donkova,  
Anna Horvath, Daniela Kocanova, Anita Kremo, Teodora Parveva,  
Jari Riiheläinen,  
*with the contribution of*  
Benedikte Custers and Cornelia Racké

## **Layout and graphics**

Patrice Brel

## **Editing**

Gisèle De Lel

---

## BFUG CONTACTS

---

### Albania

Linda Pustina

### Andorra

Mar Martínez

### Armenia

Gayane Harutyunyan

### Austria

Gottfried Bacher  
Stephan Dulmovits

### Azerbaijan

Shahin Bayramov

### Belarus

Igor Titovich

### Belgium/Flemish Community

Magalie Soenen  
Noel Vercruysse

### Belgium/French Community

Caroline Hollela

### Bosnia and Herzegovina

Aida Duric

Petar Marić

### Bulgaria

Ivana Radonova

### Business Europe

Irene Seling

### Croatia

Ana Tecilazić Goršić

### Cyprus

Andreas Papoulas

### Czech Republic

Zuzana Poláková

### Denmark

Jonas Husum Johannesen

### Estonia

Janne Pukk

### Education International

Andreas Keller

### European Commission

Klara Engels-Perenyi

### European Association for Quality Assurance in Higher Education (ENQA)

Maria Kelo

### European Quality Assurance Register (EQAR)

Colin Tück

### European Students Union (ESU)

Caroline Sundberg

### European University Association (EUA)

Michael Gaebel  
Henriette Stoebe

### European Association of Institutions in Higher Education (EURASHE)

Michal Karpisek

### Sogeti

Florian Pallaro

### EUROSTUDENT

Kristina Hauschildt

### Finland

Maija Innola

### The former Yugoslav Republic of Macedonia

Borcho Aleksov

### France

Hélène Lagier

### Georgia

Tamar Sanikidze  
Maia Margvelashvili

### Germany

Peter Greisler

### Greece

Panagiota Dionysopoulou

### Holy See

Friedrich Bechina

### Hungary

János Görföl  
Ernö Keszei

### Iceland

Una Vidarsdottir

### Ireland

Joseph Gleeson

### Italy

Paola Castellucci

### Kazakhstan

Yekaterina Boiko

### Latvia

Daiga Ivsina  
Andrejs Rauhvargers

### Liechtenstein

Daniel Miescher

### Lithuania

Eglė Remešienė  
Laura Stračinskienė

### Luxembourg

Corinne Kox

### Malta

Tanya Sammut-Bonnici

### Moldova

Nadejda Velisco

### Montenegro

Mubera Kurpejović

Biljana Mišović

### The Netherlands

Tessa Bijvank

### Norway

Tone Flood Strøm

### Poland

Bartłomiej Banaszak

### Portugal

Ana Mateus

### Romania

Cezar Haj  
Antonela Toma  
Cristina Ghițulică

### Russian Federation

Nadezda Kamynina

### Serbia

Katarina Jocić

### Slovak Republic

Jozef Jurkovič

### Slovenia

Erika Rustja



**Spain**

Margarita de Lezcano-Mújica

**Sweden**

Martin Persson

**Switzerland**

Silvia Studinger  
Muriel Meister-Gampert

**Turkey**

Hasan Mandal

**Ukraine**

Oleh Sharov  
Anna Novosad  
Serhiy Shkabko

**United Kingdom –  
England, Wales and  
Northern Ireland**

Ann Miller  
Pamela Wilkinson

**United Kingdom –  
Scotland**

Ed Thomson

---

**MEMBERS OF BFUG  
WORKING GROUP 1**

---

**Albania**

Linda Pustina

**Armenia**

Lusine Fljyan

**Austria**

Helga Posset

**Cyprus**

Andreas Orphanides

**Czech Republic**

Tomas.Fliegl

**France**

Hélène Lagier

**Germany**

Barbara Lüddecke  
Frank Petrikowski

**Latvia**

Andrejs Rauhvargers

**Lithuania**

Laura Strcinskiene

**Luxembourg**

Elisa Mazzucato

**Italy**

Paola Castellucci

**Norway**

Tone Flood Strøm  
(Co Chair)

**Education International**

Rob Copeland

**European Association for  
Quality Assurance in Higher  
Education (ENQA)**

Maria Kelo

**European Quality Assurance  
Register (EQAR)**

Melinda Szabo

**European Students Union (ESU)**

Adam Gajek

**European University  
Association (EUA)**

Michael Gaebel

**European Association of  
Institutions in Higher Education  
(EURASHE)**

Michal Karpisek

**Sogeti**

Dominic Orr  
Florian Pallaro

**EUROSTUDENT**

Kristina Hauschild

**EACEA/Eurydice**

David Crosier (Co Chair)

---

**BOLOGNA SECRETARIAT**

---

Gayane Harutyunyan





