THE QUALITY BAROMETER

FOR HIGHER EDUCATION SYSTEM

2015

BUCHAREST, 2015

Editor:

The Romanian Agency for Quality Assurance in Higher Education

Publishing date:

December 2015

The content of this document does not necessarily represent the official views of the European Union or of the Government of Romania

ISBN 978-973-0-20469-8

The Quality Barometer 2015 has been developed within the POSDRU – QUALITAS project and it is printed in Romanian version in 200 copies

The complete or partial reproduction of this document is not allowed without the written permission of ARACIS

The Quality Barometer 2015 is also presented on the website www.aracis.ro, in the section designed for the presentation of project results http://www.aracis.ro/proiecte/qualitas/.

Invest in people!
Project co-financed from the European Social Fund by the
Sectoral Operational Programme Human Resources Development 2007-2013
Priority axis 1 “Education and professional training for supporting the economic growth and development of the knowledge based society”
Primary intervention field 1.2 “Quality in higher education”
Project title “The development and the consolidation of the quality culture at the Romanian Higher Education system – QUALITAS”
POSDRU/155/1.2/S/141894 Agreement

THE QUALITY BAROMETER
FOR HIGHER EDUCATION SYSTEM
2015

Project Manager/ARACIS President:

Iordan PETRESCU

Coordinators of Work Package IV. *System analysis: quality in the Romanian Higher Education*

Emilia GOGU
Romiță IUCU BUMBU

Senior experts:

Constanța MIHĂESCU
Mihai PĂUNESCU

Assistant / ARACIS Expert:

Oana SÂRBU

Experts:

Liviu Stelian BEGU
Lucian CIOLAN
Ciprian FARTUȘNIC
Bogdan FLORIAN
Marian Gabriel HÂNCEAN
Călin Emilian HINȚEA
Georgeta ION
Mihaela MUREȘAN
Ileana Gabriela NICULESCU–ARON
Vergil VOINEAGU

BUCHAREST, 2015

AUTHORS:

PART I, II, III	PART IV	PART V
Emilia Gogu (coordinator)	**Romiță Iucu Bumbu** (coordinator)	**Emilia Gogu** (coordinator)
Liviu Stelian Begu **Ciprian Fartușnic** **Georgeta Ion** **Constanța Mihăescu** **Mihaela Mureșan** **Ileana Gabriela Niculescu-Aron** **Iordan Petrescu** **Oana Sârbu** **Vergil Voineagu**	Lucian Ciolan Florian Bogdan Marian Gabriel Hâncean Călin Emilian Hințea Mihai Păunescu	Iordan Petrescu Oana Sârbu

CONTRIBUTORS:

Radu Mircea Damian
Simona Iftimescu
Elena Marin
Mircea Neagoe
Ancuța Prisacariu
Viorel Proteasa
Vasilica Stan
Ștefan Stanciu
Mihaela Stangu
Marinella Sabina Turdean

CONTENTS:

TABLE OF CONTENTS

ABBREVIATIONS USED AND WEBSITES ACCESSED 8
FOREWORD 10
CONTRIBUTION OF AUTHORS 12
INTRODUCTON 14
1 Structure 14
2 Research method 15
3 Data sources 16
PART ONE. THE EUROPEAN CONTEXT OF HIGHER EDUCATION SYSTEM 17
1.1 International Standard Classification of Education (ISCED) in EU 18
1.2 Comparative study between the education systems of European countries that are part of the EHEA 20
1.2.1 The education system in Belgium 21
1.2.2 The education system in Germany 22
1.2.3 The education system in France 23
1.2.4 The education system in Finland 24
1.2.5 The education system in United Kingdom – England 25
1.3 Participation in tertiary education in the European Union and Romania's position 26
1.4 European 2020 target for tertiary education 33
1.5 The share of tertiary educated labour force in EU countries 38
1.6 International mobility of students 41
PART TWO. ANALYSIS OF ROMANIAN HIGHER EDUCATION SYSTEM IN THE PERIOD 2000-2014 46
2.1 Structural capital of RHES 47
2.1.1 Infrastructure and material resources 47
2.1.2 University offer 49
2.1.3 Financing of higher education 63
2.1.4 Management, internal regulations and procedures 69
2.2 Human capital of RHES 70
2.2.1 Teaching and research stuff 70
2.2.2 The analysis of high school graduates over the period 2004-2015 72
2.2.3 Students – their participation in the educational process 82
2.2.4 Demand of students in HEI in the academic year 2014-2015 87
2.2.5 Graduates – learning outcomes 90
2.2.6 Projection of youth groups – prospective students during 2016-2020 .. 93

2.2.7 Research, development and innovation 99
2.3 Relational capital of RHES 101
2.3.1 Relationship and knowing of students 102
2.3.2 Relationship and knowing of partners in the academic and research environment 104
2.3.3 Relationship and knowing of the socio-economic environment 108

Part III ANALYSIS AND STATISTIC INTEPRETATION ON THE QUALITY OF THE HIGHER EDUCATION SYSTEM 111

3.1 Methodology of research and survey execution 111
3.1.1 Selection criteria of the survey respondents 111
3.1.2 Construction and implementation of questionaires 112
3.2 Quantity and quality related study on students perception 113
3.2.1 Demographics aspects of the responding students 113
3.2.2 Aspects regarding the educational process 115
3.2.3 Abilities and competencies acquired 130
3.2.4 Quality assurance of higher education 137
3.2.5 Quality study concerning students perception – interview presentation 140
3.3 Quantity and quality study on the perception of the teaching staff 147
3.3.1 Demographics aspects of the responding teaching staff 148
3.3.2 General aspects of the educational process 148
3.3.3 Employment of students 158
3.3.4 Finality of education 161
3.3.5 Representations on the higher education system 162
3.3.6 Accreditation and quality assurance 165
3.3.7 Quality study of the teaching staff perception - interviews 172
3.4 Quantity and quality study regarding the perception of employers 182
3.4.1 Socio-economic aspects of the responding employers 183
3.4.2 Criteria used for the selection of future employees 184
3.4.3 Preferences for various types of graduates 190
3.4.4 Investments into the professional training of employers 193
3.4.5 Quality study on the perception of employers regarding the quality of SIS 201
3.5 Comparative analysis of the perception of stakeholders 212
3.6 Conclusions and the SWOT analysis on the SIS quality 215

PART IV. EVOLUTIONS AND TRENDS OF HIGHER EDUCATION FROM THE PERSPECTIVE OF CONSTRUCTION OF EUROPEAN HIGHER EDUCATION AREA (EHEA / SEIS) – CONSEQUENCES IN EDUCATIONAL POLICIES PLAN FOR QUALITY ASSURANCE 231

4.1 Quality assurance – developing dimensions of SEIS / EHEA 231
4.1.1 Bologna Process as promoter of a new European academic and professional identity in EHEA / SEIS 236

4.1.2 Priorities for the future of European higher education in the context EHEA / SEIS – from ... Bucharest to ... Yerevan 241
4.1.3 EHEA and quality challenges: quality as product ... ”brand”, quality as process ”education”, quality as ”cultural institutional state” …”identity”242

4.2 Institutional development of universities of Romania. strategic factors from quality assurance perspective..... 251
4.2.1 Strategic Context 251
4.2.2 Key strategic factors 253

4.3 Empirical analysis of quality assurance processes in Romanian higher education 258
4.3.1 Quality assurance systems 258
4.3.2 From accreditation to internal quality assurance 260
4.3.3 Quality assurance in Romania. Objective data 264
4.3.4 Perceptions on quality assurance in higher education in Romania. Data from online sociological surveys 270

4.4 Higher education and employability. Opinions and perceptions of teaching staff and students. Data from online sociological surveys 283
4.4.1 Skills and competences 283
4.4.2 Perceptions regarding employability 291
4.4.3 Professional development 293
4.4.4 Professional career 303

4.5 Perceptions on policies and quality of Romanian higher education at system level. Descriptive statistics – data from online sociological surveys309
4.5.1 Perceptions of teaching staff 309
4.5.2 Perceptions of students 323

PART FIVE. NHES’ ANALYSIS AND CORRELATION TOOLS.....333

5.1 The elements and the layout of the matrices..... 335

5.2 Types of outcome indicators 339

5.3 The usefulness of matrices..... 340

ANNEXES.....341

BIBLIOGRAPHY

1 ABBREVIATIONS USED AND WEBSITES ACCESSED:

Organisation

Abbreviation	Organisations	website
ACPART	National Agency for Qualifications in Higher Education and Partnership Economic and Social Environment	www.acpart.ro
ANCS	National Authority for Scientific Research	www.research.ro/
ANOSR	National Alliance of Student Organizations in Romania	www.anosr.ro
ANPCDEFP	National Agency for Community Programs in Education and Vocational Training	www.anpcdefp.ro
ARACIS	Romanian Agency for Quality Assurance in Higher Education	www.aracis.ro
BFUG	Bologna Follow-up Group	www.ond.vlaanderen.be/
CEAC	Quality Assurance and Evaluation Commission	http://ceac.wordpress.com/
EQF	European Qualifications Framework	www.upt.ro/calitate
CNATDCU	National Council for Attestation of Academic Titles, Diplomas And Certificates	www.cnatdcu.ro
CNCSIS	National Council for Scientific Research in Higher Education	www.cncsis.ro
CNFIS	National Council Higher Education Funding	www.cnfis.ro
CNR	National Council of Rectors	http://www.cnr-romania.ro/
EHEA	European Higher Education Area	www.ehea.info
ENQA	The European Association for Quality Assurance in Higher Education	www.enqa.eu
EQAR	European Quality Assurance Register	www.eqar.eu
EQF	The European Qualifications Framework	www.ec.europa.eu/
ESU	European Students' Union	www.esib.org
EUA	European University Association / Association of European Institutions of Higher Education	www.eua.be
EURASHE	European Association of Institutions in Higher Education	www.eurashe.eu
EUROSTAT	Statistical Office of the European Communities	http://ec.europa.eu/eurostat
EURYDICE	The Information Network on Education in Europe	www.eurydice.org/
INS	National Institute of Statistics	www.insse.ro/
ISCED	International Standard Classification of Education	www.uis.unesco.org

Abbreviation	Organisations	website
ISCO	International Standard Classification of Occupations	www.mmuncii.ro
MECS	Ministry of Education and Scientific Research	www.edu.ro
UEFISCDI	Executive Unit for Financing Higher Education, Research, Development and Innovation	www.uefiscdi.gov.ro/
UEFISCSU	Executive Unit for Financing Higher Education and University Scientific Research	www.uefiscsu.ro
UNESCO-UIS	United Nations Educational, Scientific and Cultural Organization, Institute for Statistics	www.uis.unesco.org

Other abbreviations used

Abbreviations	Description
CEAC	Commission for Evaluation and Quality Assurance
DAC	Quality Assurance Department
DID/IFR	Department of distance learning and part-time education
DMC	Quality Management Department
ECTS	European Credit Transfer and Accumulation
ECVET	European Credit system for Vocational Education and Training
EEA	European Economic Area
EQF	European Qualifications Framework for lifelong learning
FTS	Full-time Study
PTS	Part-time Study
DL	Distance learning
HEIs	Higher Education Institutions
ISCED	International Standard Classification of Education
IT	Department of Information Technology
LLL	Lifelong learning
MFP	Ministry of Public Finance
RMUR	National Enrolment Registry of the Universities from Romania
SACE	Service Quality Assurance in Education
SEAQ	System Evaluation and Quality Assurance
EHEA	European Higher Education Area
HES	Higher Education System
HESR	The higher education system in Romania
NHES	National Higher Education System
SMP	Student mobility for placements
SMS	Student mobility for studies
INES	National Indicators of Education System
SSE	European Statistical System
STA	Staff mobility – Teaching assignments
STT	Staff mobility – Staff training
UE	European Union

2 FOREWORD

"Good education is itself the source of all that is good in the world"
Immanuel Kant

The Quality Barometer for Higher Education System – 2015 (QBHES – 2015) was conducted within the project *"The development and the consolidation of the quality culture at Romanian Higher Education system – QUALITAS",* financed by the European Social Fund through the Sectoral Operational Programme Human Resources Development 2007 - 2013 Contract HRD/155/L.2/S/141894, SMIS Code: 52882.

The general objective of QUALITAS is to ensure quality in the Romanian higher education system by developing an organizational culture focused on continuous improvement of quality in higher education institutions, training of management skills at institutional and system level – fundamental premises for growth of study programs quality and relevance for labour market integration and knowledge-based society.

In order to achieve the project objectives, there have been planned several activities and sub-activities interleaved and grouped into five work packages (WP):

- WP I. Management and project monitoring activities
- WP II. Quality Assessment and accreditation
- WP III. Development of indicators to assess the quality and compatibility at system level
- WP IV. System analysis: quality in Romanian higher education
- WP V. Internationalization, exchange of best practices, communication in Romanian higher education quality assurance.

Specific / operational objectives of the project:

Objective 1. *Quality assessment of national higher education system* in order to substantiate and validate proposals for adjusting evaluation and quality assurance policies and methodologies.

Objective 2. *Development and implementation of internal quality assurance system* in universities, both at institutional level and at study programs level, by supporting and training the structures involved in the design and development of curricula as well as the internal committees for quality assurance.

Objective 3. *Self-evaluation and periodic external evaluation* of universities and study programs they offer, but also formulation of proposals for adjustments and continuous improvement of methodology and assessment guides.

Objective 4. *Improving university management* and increasing the capacity of higher education institutions to provide relevant qualifications for the labour market and for supporting a knowledge-based economy, by developing

recommendations based on similar national and European experiences and by participation of the target group in training sessions, workshops, conferences etc.

Objective 5. *Continuous development of a relevant basis of relevant indicators for measuring the quality of higher education*, differentiated by type of universities and fields in order to diversify higher education institutions.

Objective 6. *Internationalisation* of quality assurance concerns, exchange of best practices and cooperation with similar agencies from within the European Higher Education Area in order to ensure convergence between national and European relevant policies.

Objective 7. *Providing a framework for communication and cooperation* between relevant organizations in the higher education system in order to increase the capacity of consistent and strategic action at system level.

The Quality Barometer for Higher Education System – 2015 (QBHES-2015) was developed in the work package WP IV, *System analysis: quality in Romanian higher education.*

QBHES-2015 can be considered **a *guide* and *a tool for finding, analysing and correlating*** complex phenomena existing in the Romanian academic environment. The statistical analysis of the most significant indicators provides a clear picture and an overview of the status and dynamics of the Romanian higher education system in the last 15 years. To further highlight the condition of the higher education system, in addition to statistical information obtained, a qualitative and quantitative research, relevant at system level, has also been performed among the three key players: students, teachers and employers (4,000 respondents).

The logical sequence of addressing the Barometer from ***general issues*** (European and national context of Higher Education System – HES) **to particular issues** by identifying information in each Higher education institution (HEI) provides the reader a natural insight of the entire national higher education system.

In this regard, we hope that knowing the complexity and interdependence of the SIS, the management of IIS management will need to ensure better awareness and enhance the quality of education processes.

We consider **The Quality Barometer for Higher Education System – 2015 presents** a clear picture on the condition of the HES and wants to become a ***useful and reference tool*** for MECS, higher education institutions and other institutions/organizations interested in the condition and quality of academia in order to support the development of policies aiming to enhance the quality and to improve the situation of the National System of Higher Education.

QUALITAS Project Manager,
Professor Doctor of Engineering Iordan Petrescu

3 CONTRIBUTION OF AUTHORS

The Quality Barometer for Higher Education System – 2015 (QBHES-2015) benefited from the careful coordination of the *President of ARACIS – Iordan Petrescu*, who contributed significantly to the coagulation of an integrating vision of quality in higher education by translating the results of research conducted by the team of experts involved in the Quality Barometer. His vision on the approach to quality and status quantification of HES led to the development of a new instrument for analysis and correlation of the National Higher Education System.

To developing the structure and the content of **QBHES-2015** contributed a team of experts and researchers with significant experience in analysing the higher education system, such as *Mr Romiţă Iucu Bumbu* (University of Bucharest, Faculty of Psychology and Educational Sciences), *Mrs Emilia Gogu* (ASE[1], Faculty of Cybernetics, Statistics and Informatics, and UCDC[2]) and *Mr Mihai Păunescu* (SNSPA - National University of Political Studies and Public Administration, Faculty of Political Sciences), who ensured the whole coordination process of implementation, documentation, structuring and drafting of this material.

The paper benefited from the valuable contribution of *Mr Romiţă Iucu Bumbu,* renowned specialist in education policies, who provide clarity and depth in identifying trends in higher education in terms of building the European area of higher education. The methodology of observation, processing and statistical analysis of quantitative and qualitative data was coordinated by *Mrs Emilia Gogu*.

A substantial contribution to the data analysis came from the experts in statistics from ASE, Faculty of Cybernetics, Statistics and Informatics, ASE: *Mrs Constanţa Mihăescu, Mrs Ileana Niculescu-Aron, Mr Vergil Voineagu and Mr Liviu Stelian Begu*. By using methods and techniques of statistical and econometric analysis, the statisticians characterized the education phenomena in depth, analysing quantitative and qualitative variables from HES and the interdependencies between them. The paper also benefited from the valuable contribution of *Mrs Mihaela Mureşan*, researcher and professor at UCDC, who stood out for her own modelling and comparative analysis methods applied in social sciences.

The issue of education in the context of institutional development of universities in Romania was presented by experts in science education: *Mrs Georgeta Ion* (Autonomous University of Barcelona) and *Mr Ciprian Fartuşnic* (Institute of Education Sciences).

1. ASE –University of Economic Studies Bucharest
2. UCDC – "DIMITRIE CANTEMIR" Christian University of Bucharest

The completion of Barometer wouldn't have been possible without the contribution and significant support of specialists in sociology, educational science and public policies: *Mr Mihai Păunescu (*SNSPA, Faculty of Political Science), *Marian Gabriel Hâncean*, (SNSPA, Faculty of Political Science), *Lucian Ciolan* (UB, Faculty of Psychology and Educational Sciences), *Bogdan Florian* (SNSPA, Institute of Education Sciences) and *Călin Emilian Hinţea* (Babes-Bolyai University Cluj-Napoca, Faculty of Political, Administrative and Communication Sciences).

The technical and logistical support was provided by *Mrs Oana Sârbu* (ARACIS expert), who also contributed to drafting the material on the analysis of relational context in the academic environment.

The research conducted within QBHES-2015 are also due to the close cooperation with experts from the other four work packages of the project: *Ștefan Stanciu* – *Operations Manager of the project*, *Mircea Neagoe* – Coordinator of WP II, *Vasilica Stan* – Coordinator of WP III, *Radu Damian* – Coordinator of WP V), to whom we are grateful for their support and suggestions.

The authors thank those who, through proposals and suggestions, can help to improve the content and quality of this work.

The authors

0 INTRODUCTON

The Quality Barometer is an emblematic product of the Romanian Agency for Quality Assurance in Higher Education (ARACIS) and an important publication for the Higher Education System (HES) as it combines official statistical data and qualitative information obtained in the process of periodic evaluation with sociological research made by ARACIS in order to present the organization, the condition at a given time, the development and quality of HES in Romania.

The current edition is the fourth[3] Barometer conducted by ARACIS within two projects funded by the Sectoral Operational Programme Human Resources Development 2007 - 2013.

The Quality Barometer for Higher Education System 2015 (QBHES-2015) aims at being a useful and reference tool in the longitudinal empirical analysis of the National Higher Education System, of the quality improvement trend and of the interdependence between the academic environment and labour market needs.

Moreover, QBHES-2015 presents comparable data at national and international levels to internal users involved in defining, implementing and evaluating educational policies in general and of HES in particular.

0.1 Structure

In this current edition, the structure of the Barometer was significantly complemented by the introduction of statistical and contextual indicators based on time series data presenting the developments of the European tertiary education system and the national higher education system over the last decade.
The Barometer provides an overview of the Bologna Process in Romania in general and HES condition in particular. The approach is made from two perspectives. The first refers to the objective and subjective evaluations, which yielded quantitative and qualitative aspects with direct impact on HES. The second refers to strategies and policies in education and research in academia.
Therefore, the first part of the paper is an ***objective dimension*** of the research, made by the presentation of several issues which are relevant for the European and national tertiary education, but also for their developments over the last decade, using statistical indicators of dynamics and status. This first part of the paper also presents the indicators for analysing the structures and organization of HES in EU Member States and includes the main trends in tertiary education in Europe.

3. The Quality Barometer – 2009, 2010 and 2011 editions, were made within the Project "Quality assurance in the Romanian higher education in European context. Development of academic quality management at system and institutional level – ACADEMIS". http://www.aracis.ro/publicatii/publicatii-aracis/

The second part of the paper develops the ***subjective dimension*** of the research, through the qualitative and quantitative analysis of data from a representative survey at national level and from a series of interviews on perceptions of all stakeholders, students, teachers and employers, on policies and quality of Romanian higher education system at system level.
At the same time, the Barometer presents ***the impact of policies*** and national measures on quality assurance over the evolution of educational process, satisfaction of stakeholders (students, teachers, employers), as well as ***the consequences of the internationalization*** of quality assessment of education. We believe that currently *the primary objective of every society is to establish a firm policy to increase significantly, both qualitatively and quantitatively, the education level of the population*.
The Barometer is divided into five thematic parts, as follows:

I. **The European context of higher education system**
II. **Analysis of the Romanian higher education system during 2004-2014**
III. **Statistical analysis and interpretation of perceptions on quality in higher education**
IV. **Developments and trends of higher education from the perspective of building European Higher Education Area (EHEA) – consequences in terms of educational policies for quality assurance**
V. **Analysis and correlation instruments of NHES.**

Each part is provided with a preamble, which presents the relevance of the subject for HES, the objectives pursued and a comprehensive analysis of the topic.

0.2 Research method

A set of research methods was used in QBHES-2015, in order to emphasize the condition and performance of higher education system as objectively as possible. To this end, research methods and statistical interpretation of data were used to reflect in an objective manner the issues relating to **structural capital** (infrastructure, physical resources, educational offer, investments), **human capital** (teaching and research staff, students graduates) and **relational capital** (collaborations and partnerships with higher education institutions, research entities and public or private entities from the socio-economic environment).
Moreover, **quantitative and qualitative research** methods were used, namely the survey and interview methods, in order to identify perception on HES of actors and those who benefit from the results of HES (graduates' skills and knowledge transfer) the socio-economic environment. In this regard, the team of experts drafted and distributed three forms of questionnaires and three interview guides for the students enrolled in undergraduate programs, academics and employers of university graduates.

The representativeness at the level of HEI system and the labour market was ensured by the sample size in the three categories of respondents, respectively: 1533 students, 1454 teachers and 1572 employers, with a probability of guaranteeing results of *P = 95%* and maximum permissible error of *Δw = ± 2.5%.* In parallel, *30 interviews* were conducted.

The analysis and interpretation of interviewees' perceptions on quality in higher education is presented in Part III of the Barometer.

Moreover, in Part IV, ***a sociological investigation with online self-administered questionnaire*** was conducted by involving a judgmental sample of *916 teachers and 896 students*.

Although, the results of the two studies cannot be compared because there are not met the conditions of compatibility data[4], we can consider the results of the online survey as a complement to that achieved by probabilistic polls.

Finally, a comparative study was conducted in order to compare the outcomes provided by the different groups to which interview and survey methods were applied. In this manner, we aimed at measuring the differences between the perceptions of researched actors. The comparative study was extended to assessing the compatibility/differences between subjects' perceptions and the statistical data analysed.

Refining and filtering the outcomes led to the identification of strategic directions, which represent, in fact, the valorisation of the research conducted.

0.3 Data sources

For carrying out QBHES-2015, there were used as official data sources: EUROSTAT, Eurostudent[5], United Nations Statistics Division (UNSTAT), EURYDICE[6] network, NSI, as well as data from interviews and representative surveys[7] at national HES level, conducted during April-July 2015, under QUALITAS project.

The Barometer is also based on official information on legislation, European and national policies and regulations in the field of tertiary education.

4 The fact that different methodologies were used for observation, as statistical survey questionnaire through direct distribution in print and the on-line sociological investigation. Through the online investigation could not observe the structure on the development regions, key areas or by ownership.

5. http://www.eurostudent.eu/ The data provided by Eurostudent come from the dataset of Eurostudent IV, which is discussed in detail in the publication Eurostudent, 2011: Social and Economic Conditions of Student Life in Europe.

6. EURYDICE, the information network on education in Europe, has been since 1980 one of the strategic mechanisms established by the European Commission and EU Member States to intensify cooperation through a better understanding of education systems and policies. EURYDICE network covers the education systems of the Member States of the European Union, the EFTA/EEA states and candidate countries involved in the Lifelong Learning Programme.

7. Sociological research aimed at measuring perceptions on policies and quality of Romanian higher education at system level.

1 PART ONE. THE EUROPEAN CONTEXT OF HIGHER EDUCATION SYSTEM

Currently, the Bologna Process unites 47 countries – all of them being part of the European Cultural Convention and committed to the goals of the European Higher Education Area. An important feature of the Bologna Process is the establishment and involvement of a broad partnership consisting of the European Commission, Council of Europe and UNESCO-CEPES, as well as representatives of higher education institutions, students, staff, employers and quality assurance agencies in the field.

The new central objective of the Bologna Process is to improve The European Higher Education Area (EHEA) based on international cooperation and academic exchange that is attractive to students and teachers in the EU, as well as students and teachers from other parts of world[8].

The Bologna Process core is the awareness that the Europe of Knowledge is indispensable for the development of social and human growth and an essential component of the process of enhancement and enrichment of European citizenship.

The Implementation Report 2012[9], "*The Bologna process has transformed the face of European higher education. Indeed all countries have made significant changes that have enabled the European Higher Education Area to emerge and which have laid the ground for higher education that is serving an increased range of societal demands; higher education structures have been modified, quality assurance systems developed, mechanisms to facilitate mobility established and a range of issues for the social dimension of higher education identified. The 47 countries of the European Higher Education Area (EHEA) should implement policies in very different contexts".*

Moreover, in the Implementation Report 2015, Tibor Navracsics[10] stated that *"...the last three years in the 47 countries, more than 4,000 higher education institutions and numerous stakeholder organizations have continued to adapt their higher education systems, which makes them more compatible, by the modernization of education structures and by* ***strengthening the quality assurance mechanisms****."*

8. Overall, the European Higher Education Area – EHEA:
- *facilitates the mobility of students, graduates and higher education staff;*
- *prepares students for their future careers and for life as active citizens in democratic societies and supports their personal development;*
- *provides broad access to high-quality higher education, based on democratic principles and academic freedom.*

9. European Higher Education Area 2012 – Bologna Process. Implementation Report, p.7 and p. 19..
10. European Commissioner for Education, Culture, Youth and Sport. European Area of Higher Education 2015 – Bologna Process. The Implementation Report, p.3, http://www.ehea.info/

This first chapter of QBHES-2015 provides a general framework for the presentation and understanding of different structures, sizes and conditions of operation of higher education institutions in the EHEA and in this respect, the research team aimed to make comparisons between data and information about Romanian higher education system and other European systems.

In the first part of chapter, higher education institutions are classified in a standardized manner and their diversity is presented at European and national levels. In the second part, based on Eurostat data, a comparative analysis of the school population in EHES on 5 age groups[11] is carried out together with the trends which are recorded in participating in tertiary level education for people aged between 18 and 34 years.

1.1 International Standard Classification of Education (ISCED) in EU

Higher education systems in Europe vary greatly in terms of duration, structure and curriculum content. Consequently, it is difficult for national policy makers to compare their own system of education with other EU member states.

In order to facilitate the comparability of statistics and indicators, in the '70s UNESCO developed the **International Standard Classification of Education** (ISCED), which is a benchmark classification within the International Family of Economic and Social Classifications of the United Nations (UN).

Since the education systems (ES) vary in structure and content from country to country, ISCED facilitates the transformation of national data on education in categories internationally agreed and enables their collection, compilation and presentation in a uniform manner, which makes the comparison between countries possible.

UNESCO Institute for Statistics[12] (UIS), the custodian of ISCED, responsible for development, maintenance, updating and revision, regularly updates this classification to reflect the continuous evolution of education systems in the world. So far, UIS issued ISCED-1997, ISCED 2011 and ISCED-F2013.

International Standard Classification of Education (ISCED-UOE 1997) is an instrument for compiling statistics on education at international level. This classification covers two variables: levels and fields of education with the complementary dimensions of general/vocational/pre-vocational and educational destination/labour market. The version from 1997 identifies **seven levels** of education. The domains detailed by ISCED are intended primarily for higher

11. Age groups: 20-24 years, 25-34 years 15-64 years, 25-64 years and 25 years and older.
12. UNESCO Institute for Statistics (UIS) is the statistical office of UNESCO and United Nations' depository for global statistics in education, science and technology, culture and communication. UIS headquarters is Montreal, Canada - http://www.uis.unesco.org

education, vocational education and training programs and for the corresponding qualifications in the secondary and postsecondary vocational education.

ISCED 2011 classification was adopted by the UNESCO General Conference at its 36th session in November 2011. ISCED 2011 covers formal and non-formal education programs offered at any stage of a person's life. The qualifications that are recognized by the competent national education, regardless of how they are obtained (for example, by the completion of a formal education program or by a non-formal education program or by an informal learning activity), are used to measure the educational attainment.

ISCED 2011 classification consists of parallel coding schemes for educational programs (ISCED-Programmes or ISCED-P) and levels of educational attainment (ISCED-Attainment or ISCED A). Within both schemes nine separate levels are identified. Within each level, complementary dimensions are used to identify further categories and sub-categories, if applicable. Three-digit coding systems are used to encode both educational programmes and educational attainment.[13]

Table I.1. ISCED 2011 coding (the first digit)

Level ISCED	ISCED-Programmes (ISCED-P)	ISCED- level graduate (ISCED-A)	Duration
0	Preschool	Lower primary	2-100 days
1	Primary education	Primary education	4-7 years
2	Secondary education	Secondary education	2 to 5 years
3	High school	High school	2 to 5 years
4	Further education	Further education	6 months to 2 or 3 years
5	University - short cycle	University -short cycle	2 to 3 years
6	Bachelor degree or equivalent[14]	Bachelor's degree or equivalent level	3 to 4 years
7	Master degree or equivalent[15]	Master or equivalent level	1 - 4 years
8	PhD or equivalent level	PhD or equivalent level	minimum 3 years
9	Nec	Nec	

Source: *adapted from* http://www.anc.edu.ro/

13. http://www.anc.edu.ro/uploads/images/Legislatie/ISCED_2011_UNESCO_RO_final.pdf
14. ISCED 6: the duration of the bachelor programme or equivalent programmes usually varies from 3 to 4 years or more when following directly after ISCED level 3 or from 1 to 2 years when following after another ISCED level 6 programme.
15. ISCED 7: the duration of the master's programme or equivalent programmes usually varies from 1 to 4 years when following after ISCED level 6 or from 5 -7 years when following directly after ISCED level 3.

The duration of ISCED 2011 levels of attainment are used as criteria for classifying formal education programs.
ISCED 2011 does not cover programmes of informal, incidental or random learning nor qualifications which are not recognized.

Formal and non-formal education cover a variety of educational programmes that are designed within a national context, such as initial education, regular education, second chance programmes, literacy programs, adult education, continuing education, open and distance education, apprenticeships, technical or vocational education, training or special needs education.

The European Commission drafted a preliminary list of **ISCED 2013** detailed domains indicating the correspondences with the classification of study and training fields from 1999 (study and training fields in 1999, based on ISCED 1997). Subsequently, this list was completed by former Erasmus codes. UNESCO adapted the manual of study and training fields from 1999 to the International Standard Classification of Education: Fields of Study and Training 2013 (ISCED-F 2013) at the end of 2014. If a change in the classification, the search tool will be updated accordingly.

1.2 Comparative study between the education systems of European countries that are part of the EHEA

In this part of the Barometer, we want to present a comparative study between the performant and/or the most popular education systems in Europe such as *Germany, Finland, France, Belgium and United Kingdom –England, highlighting both similarities and the main differences between them*.
The opportunity of this study is to reveal some positive aspects and trends in the EHEA, as the Romanian HES, like the systems in other EU countries, is in continuous change and can thus harness the positive experiences of other UE countries in order to develop and to be more competitive within the EHEA. It is known that the reform of the Finnish education system had international influences. At the same time, the German and Dutch system were landmarks in the polytechnic education reform, the competence-based qualifications are inspired by the UK Qualifications and adult education – are models adapted from the Nordic countries and from OECD.
Similarly, learning from the experience of other states recognized in EHEA and sharing best practices, we can critically examine our own educational system in order to improve the structure and policies of HES.
The structure of the education system in Romania includes: preschool, primary, lower secondary education, compulsory education, *higher secondary education, schools of arts and crafts, apprentice schools, post-secondary and higher education*. (Figure I.1).

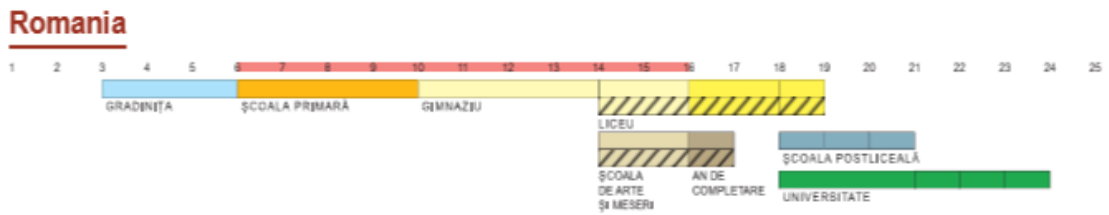


Figure I.1. The structure of education system in Romania
Source: *http://eacea.ec.europa.eu/education/eurydice*[16]

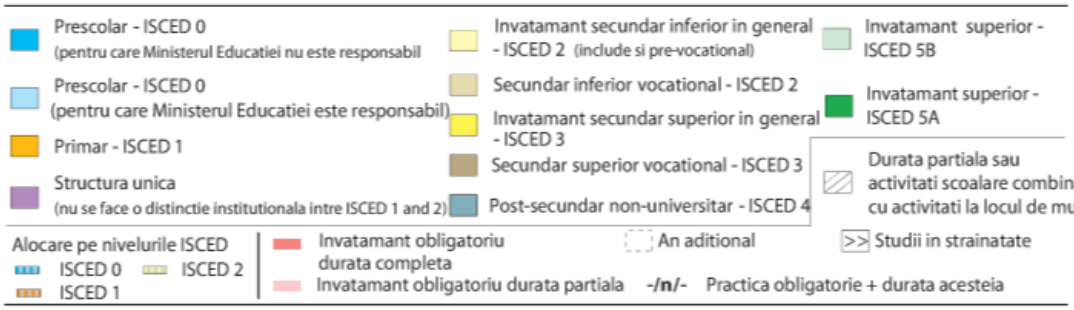


Figure I.2. The significance of Eurydice schematic diagrams (ISCED-UOE, 1997)
Source: *http://eacea.ec.europa.eu/education/eurydice*

Unlike most EU countries, Romanian education system provides very few options/routes for further study of secondary school (ISCED2) or high school (ISCED3) graduates in the sense of access to higher education.

1.2.1 The education system in Belgium

The Bologna Declaration contributed to a radical overhaul of Belgian higher education system. Signed by the European ministers of education in 1999, the declaration sought to harmonize higher education in the European Union. Thus, in Belgium, there is a distinction between Bachelor's degree (general education lasting three years) and master's degree (a specialist course that takes between 1 and 2 years). The results are measured in ECTS credits, with Bachelor degree being evaluated at 180 ECTS credits while a master's degree is assessed between 60 and 120 ECTS. Under this system, an ECTS credit means 24 hours of study.

In Belgium, compulsory education lasts until the age of 18. The education system is divided into four levels: ***nursery***: from 2.5 to 6 years (not compulsory); ***primary education***: from 6 to 12 years (compulsory); ***secondary education*** from 12 to 18 years (mandatory); ***higher education***: over 18 years (not mandatory). There are four different schools networks in Belgium, operating on different principles: community education system, the education system funded by the State; free and subsidized education system and private education: private schools.

16. The structure of education systems in Europe 2009/2010 Eurydice schematic diagrams

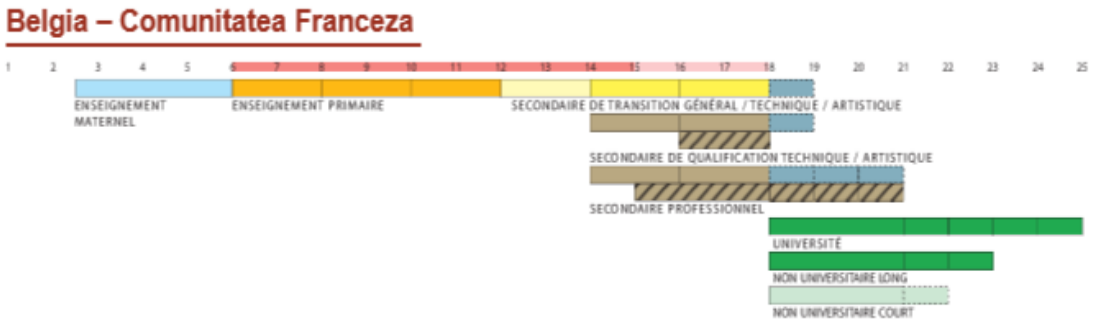


Figure I.3. The structure of education system in Belgium
Source: *http://eacea.ec.europa.eu/education/eurydice*

Higher education is open to young people who completed successfully the cycle of general or technical secondary education. Belgian colleges and universities offer a wide range of options to students.

1.2.2 The education system in Germany

German education system consists of:

General education. From the age of 3 to 6 years, children can attend *Kindergärten* (pre-primary). Compulsory education starts at age of 6 or 7 years old and lasts 9 or 10 years (depending on the State). All children must attend at the beginning the ***Grundschule*** (primary school) for 4 to 6 years. In general, from the age of 6, children of compulsory school go to a local *Grundschule* and then choose separate paths. Parents decide at this time – based on the teacher's advice – the type of school the child should follow: *Hauptschule* (lower secondary school), *Realschule* (intermediate secondary school) or *Gymnasium* (upper secondary school). In some German regions, there are *Gesamtschulen* (comprehensive secondary schools), which combines all three types of schools in one form.

Vocational education. In Germany, only a small share of young people completes their training in school. About three quarters of young people from every elementary school (not including upper schools in *Gymnasien*) are trained in companies. Additionally, the company trainees attend the classes of vocational school. Therefore, it is called a "dual" vocational training.

Higher Education. Once they obtain the *Abitur* or *Fachabitur* (senior secondary certificate of education/specialised upper secondary certificate of education), the graduates can choose from a range of higher education institutions in Germany: *Universität* (university), *Technische Hochschule* (technical university), *Pädagogische Hochschule* (college of education) *Kunsthochchule/ Musikhochschule* (college of art/music college) or *Fachhochschule* (college of applied sciences). The *Fachhoschule* graduates who have completed the study with good grades may enrol in doctorate studies at a university as *Fachhochschulen* doesn't offer the possibility of a doctoral graduation.

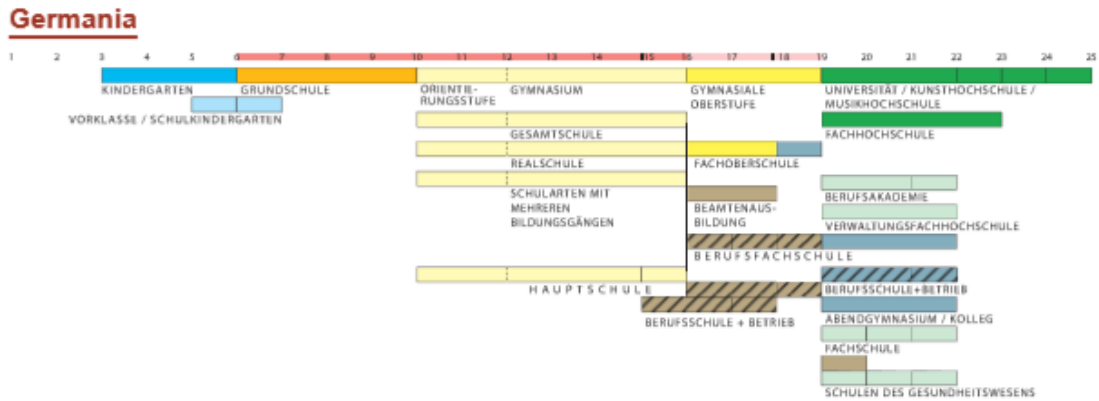


Figure I.4. The structure of education system in Germany
Source: http://eacea.ec.europa.eu/education/eurydice

Additionally, the educational system provides adult education, eLearning and education for people with special needs (disabled persons, foreign students, gifted children or students with special educational needs).

The system is highly decentralized, with numerous differences between the 16 provinces, due to the fact that the federal government in Berlin influences education only in terms of allocation of funds.

1.2.3 The education system in France

The education system in France consists of three stages:

***Primary education* includes two** optional years of kindergarten (*école maternelle*) and five years of primary school.

Secondary education comprises four years of secondary school (*collège*) and three years of high school (*lycée*). Baccalaureate takes place in two stages: first the test of French language at the end of eleventh grade (*première)* and then the other subjects at the end of twelfth grade (*terminale*). French baccalaureate can be professional, general or technical.

Higher education is structured under the Bologna process, and the following degrees are recognized: a) Bachelor (*Licence* and *Licence Professionnelle*) b) Master (*Master recherche* and *Master professionnel*) c) Doctorate.

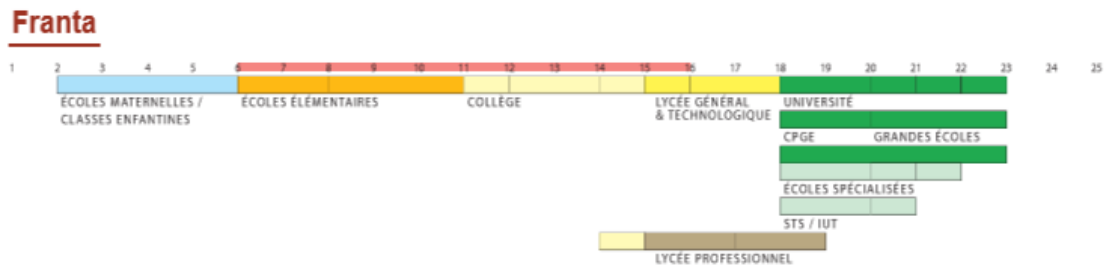


Figure I.5. The structure of education system in France
Source: http://eacea.ec.europa.eu/education/eurydice

The route for the next 2, 5 or 8 years of higher education is determined depending on the baccalaureate type. With a technical or vocational baccalaureate, one can accede to two years of practical studies in various fields related to industry, trade and services. After the two years of study, there is granted a diploma called BTS (*Brevet de Technicien Supérieur*) – higher technician certificate or a university diploma of technology, called DUT (*Diplôme Universitaire de Technologie*). With a general baccalaureate, the student can choose between a university and an Elite school. In some Elite schools – *Grandes Écoles*, which are specific to France, one can enrol only with a baccalaureate degree, but for others it is necessary to enrol in a prep school. This prepares the prospective students to work in a sustained manner for two years. These possibilities are called networks of higher education. Most higher education institutions are theoretical, but at the master level, one can make a choice between Professional Master (*Master Professionnel*) and Master of Research (*Master Recherche*). There are 82 universities in France.

1.2.4 The education system in Finland

School in Finland is not mandatory, only education is mandatory. A student can also study outside school, at home, for example, but the progresses of children who are not in school are regularly checked in the state education system. The number of those studying at home is very small.

Kindergarten is not mandatory but voluntary. Some schools provide a kindergarten preparatory group for children aged six. After nine years of compulsory education, a student can continue to study or chose not to.

Those who decide to continue their studies have two options: ***secondary school*** (which lasts four years maximum – with the possibility of completing in two years – and ends with a national exam based on which admissions in universities are made afterwards) and ***vocational education*** (which lasts two or three years, depending on the study field). The aim of vocational education is to prepare skilled workers in various fields. Vocational education can be also followed by higher education in polytechnics. A very important aspect in the vocational education is the practice made right at the workplace, in the field for which the students prepare themselves.

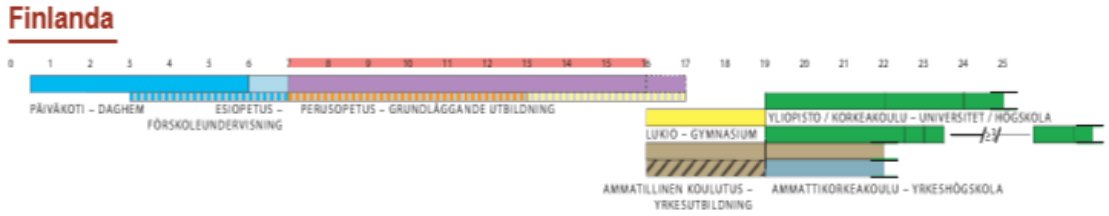


Figure I.6. The structure of education system in Finland
Source: *http://eacea.ec.europa.eu/education/eurydice*

Primary school takes six years, while the secondary takes three. Most schools are administered by local offices and representatives.

The flexible curriculum is set by the Ministry of Education and the Education Committee. Education is compulsory between 7 and 16 years. After secondary school, graduates can be directly employed, or they can attend vocational or high schools. Vocational schools prepare students to practice various trades. Secondary schools are academically oriented and have more stringent admission criteria; they prepare students for the ***Abitur*** exam and for higher education. A vocational school graduation or passing ***Abitur*** qualifies a student for admission to higher education.
After this education stage, either in vocational or in general school, the graduates can apply for admission to a college. The higher education system has two sectors, universities and the polytechnic institutes. The Finnish education system enables Finnish citizens to complete their education or qualifications at any age.
At university level, there are two separate sectors characterized by specific dimensions: the polytechnic Institutes, vocationally oriented, and research-centered universities. Education is free and accommodation is largely covered by government subsidies for students. The country operates 20 universities and 30 polytechnic institutes. Polytechnic institutes provide education in the fields of humanities and education; culture; natural sciences; tourism, catering and domestic services; social services, health and sport; technology, telecommunications and transport; social sciences, business and administration. The 20 Finnish universities provide training in areas such as humanities, technology, natural sciences, art and design, theatre and dance, veterinary medicine etc.

1.2.5 The education system in United Kingdom – England

The education system in England includes:
Foundation stage. The first stage of education is from 3 to 5 years (kindergarten + the year of training before school)
Primary education. The second stage takes between 5 and 11 years. Children start school in the school year during which they reach the age of 5 years (“reception” year).
Primary school comprises three key stages, divided by years as follows:

- ✓ year 1 and year 2 = Key Stage 1: the child will take English and mathematics tests that will allow the teacher to draft a progress report.
- ✓ years 3-6 = Key Stage 2: the child will take national tests at English, mathematics and science.
- ✓ years 7-9 = Key Stage 3: the child will take again national tests at English, mathematics and science.

Secondary education (age 11-17). During the last year, students choose what topics want to study in Key Stage 4 and in the end (years 10 -11), at age 16, they take GCSEs (the results from GCSEs allow the enrollment to A levels). Following the exams, the two years of A levels count for university enrollment. A Level is the

equivalent of Romanian baccalaureate; they are, in most schools, the school-leaving examination of ***Secondary Education***, but not the only exam of this kind (there are also the ***International Baccalaureate*** – IB, which involves a more rigorous academic programme).

Tertiary/higher education (age 18+) comprises: "Undergraduate" studies – bachelor's degree (3 years), "postgraduate" studies–master's degree (1-2years) and PhD (3 years)



Figure I.7. The structure of education system in the United Kingdom
Source: *http://eacea.ec.europa.eu/education/eurydice*

Countries like Germany, France and Belgium are just three of the European countries that developed bridging and recognition programs of prior learning as mechanisms of access to tertiary education.

1.3 Participation in tertiary education in the European Union and Romania's position

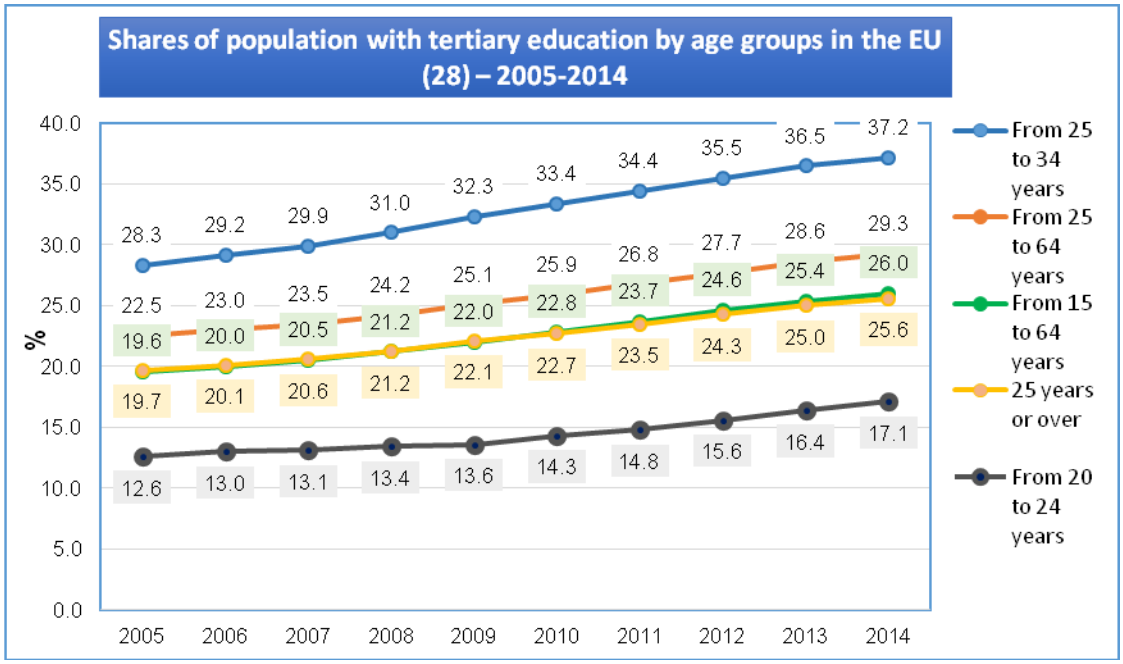
Although the issues of the education system are global, their solutions, as demonstrated by recent development of the EHEA, depend not only on the international community but also on each national system, on each institution whose representatives must take responsibility for ensuring quality education processes which they promote.

In most countries in Northern and Western Europe, access to tertiary education is facilitated through mechanisms provided by the bridging and recognition programs of prior learning. These programs open up new opportunities for those who are unable, for various reasons, to successfully complete a form of upper secondary education, that form which normally offers direct access to higher education. In this context, the model of individual who goes uninterrupted through all levels of education, from nursery to PhD, at established ages, has undergone great changes. The current generation, compared to the previous generation, has different values, priorities and other demographic arrangements, notwithstanding the need for resources, but also personal development.

Leaving school, even if only temporary, and entering the labour market at a young age, under different forms of employment, change patterns of participation in higher education. Young people want, in the same time, to work and have independence/ financial autonomy, but also to have higher education in order to better paid access

jobs/ opportunities. Harmonising these goals is made at the cost of delays or arrangements that increase the age at which they manage to complete a higher education level. In this context, the statistics for the period 2005-2014 confirms an upward trend of the share of population with tertiary education level in the EU, in all age groups (*Figure I.8*).

These factors above mentioned explain the highest levels recorded in the 25-34 age group, also those lower in the 20-24 years group. The other age groups, being wider,



predictably, have intermediate positions[17].

`Figure I.8. Shares of population with tertiary education by age groups in the EU (28) – 2005-2014 %

Source: Representation based on data - *http://appsso.eurostat.ec.europa.eu/* , accessed May 2015

The developments in tertiary education by age groups in Romania are in a similar manner, only to lower levels and in a dynamic of partial recovery of gap observed in 2005.

Thus, the share of people aged 25-34 years with higher education level (ISCED 5-8) in the total population in this group in 2005 was 28.3% in the EU and less than half (13.5%) in Romania. The gap of 14.8% decreased to 11.8% in 2014, but the gap is

17. The age groups 15-64, 25-64 and 25 and over cover large periods of life and as such, the reference population is much wider and the shares of those with higher education in the same age group are smaller.

still very large. The level of this group in Romania (25.4%) in 2014 is similar to the group aged 25 years and over for the same year in the EU.

In Romania, the lowest percentage of population with tertiary education in the total group is still in the age group aged 20-24 years, as in the EU. But in this case, the differences and the recovery time were larger. While in 2005, only 4.5% of Romanian young people aged between 20 and 24 were graduates of a higher education institution, compared to 12.6% in the EU, in 2014 this share almost tripled to 10.9%, but still remains lower than the same group in the EU (17.1%) (*Figure I.9.).*

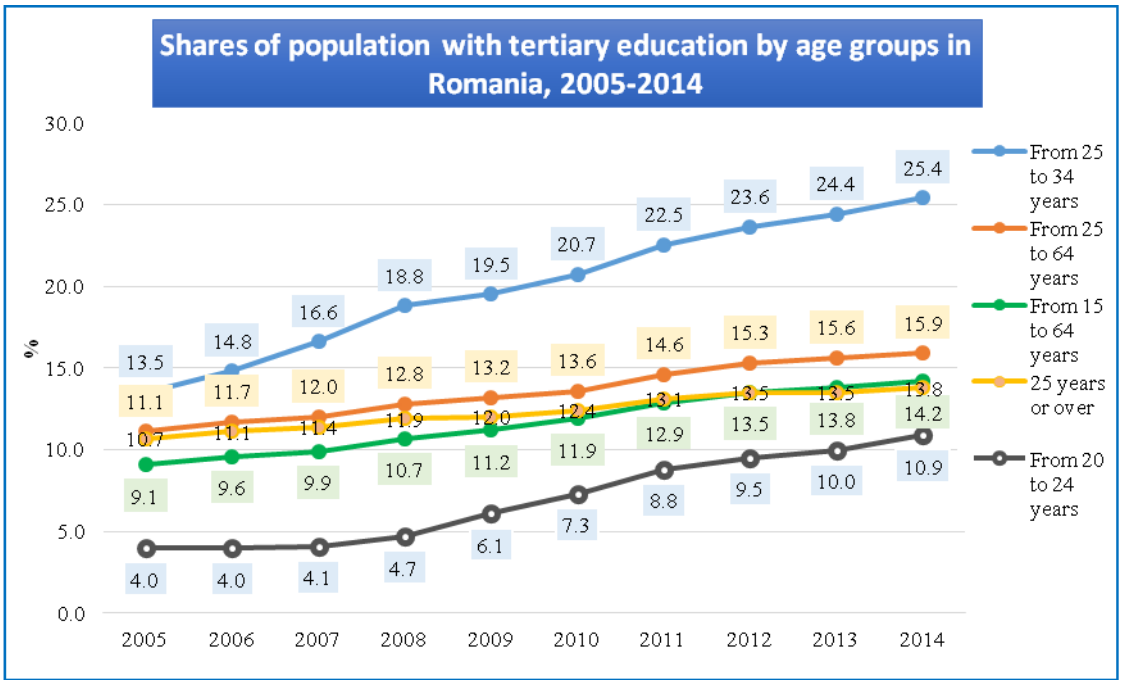


Figure I.9. Shares of population with tertiary education by age groups in Romania, 2005-2014

Source: Representation based on data - http://appsso.eurostat.ec.europa.eu/, accessed May 2015

It is noteworthy that prior to 2005, Romania was among the countries with the lowest rate of secondary studies continued after completing the compulsory education. The situation has improved over time, starting 2009, when 80% of students in the year following completion of compulsory education were continuing their studies. This factor creates a prerequisite for the possibility of access to tertiary education[18].

It should be noted, however, that in order to ensure an increasing trend of population with tertiary education, it is necessary that national education policies should focus not only on attracting people in this stage of education, but also on completion of the cycle by those who enrolled. There are categories of disadvantaged persons on economic criteria (most often) or other criteria, such as race, nationality, religion, rural

*18. Eurydice, Key Data on Education in **Europe 2012**, http://eacea.ec.europa.eu/education/eurydice/documents/key_data_series/134en.pdf, accessed October 2015*

origin or sex. Although for these categories, the possibilities to enrol in tertiary education have increased lately, the difficulties they face cause a higher abandonment rate. In this regard, a worrying conclusion occurs, that 40% of the population faces the risk of poverty and social exclusion and almost 29% is affected by severe material deprivation, according to a recent report of the NGOs Federation for Children (FONPC) and UNICEF Romania[19]. The study shows that more than half of Romanian children are at risk of poverty or social exclusion, the highest in the EU except for Bulgaria. Thus, educational policies must focus on more inclusion and accessibility, on supporting students for successful completion[20].

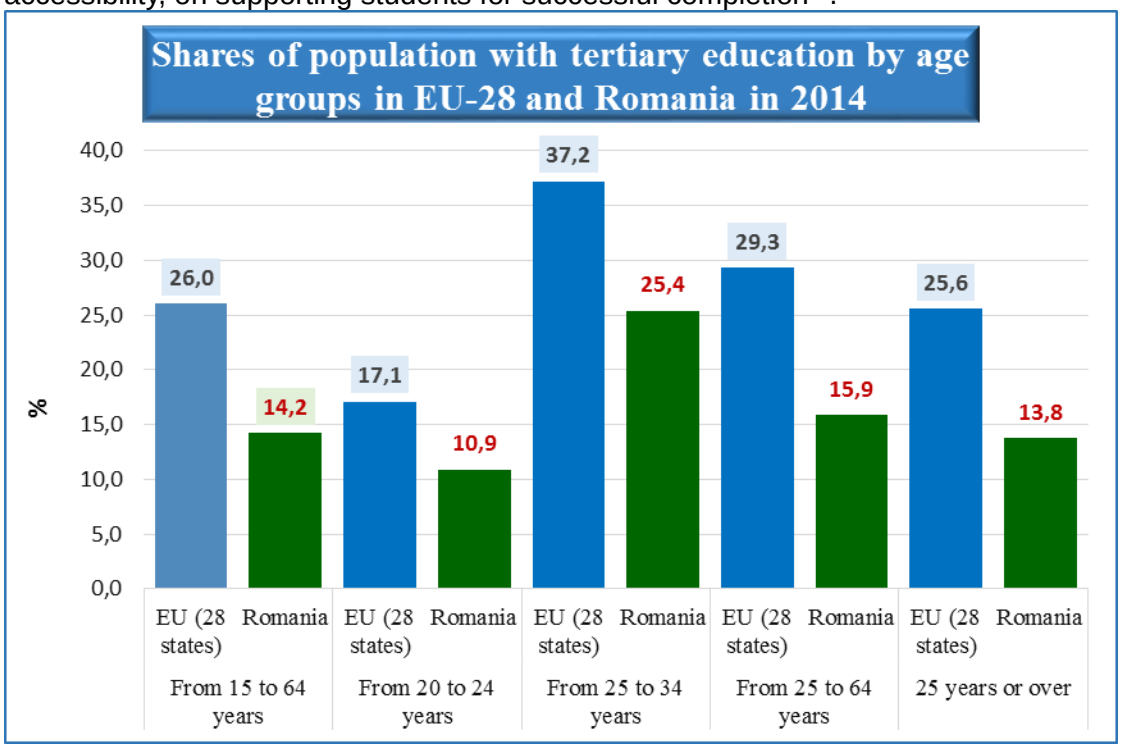


Figure I.10. Shares of population with tertiary education by age groups in EU-28 and Romania in 2014

Source: Representation based on data - *http://appsso.eurostat.ec.europa.eu/*, accessed May 2015

In the broader context of the EU 33[21], the highest percentage of young people 20-24 years with higher education in the total group is registered in Cyprus, France, United Kingdom, Austria, Belgium and Ireland (with levels above 25%), and Romania ranks 12th out of 33, a lot below the European average of 17.1%.

19. http://www.rfi.ro/social-82338-aproape-de-bucuresti-departe-de-civilizatie-drama-unor-copii-și-proiectul-care-le-ar
20. Philip G. Altbach, Liz Reisberg, Laura E. Rumbley, work cited, p. 167.
21. 28 EU member states along with Iceland, Norway, Switzerland, Macedonia and Turkey.

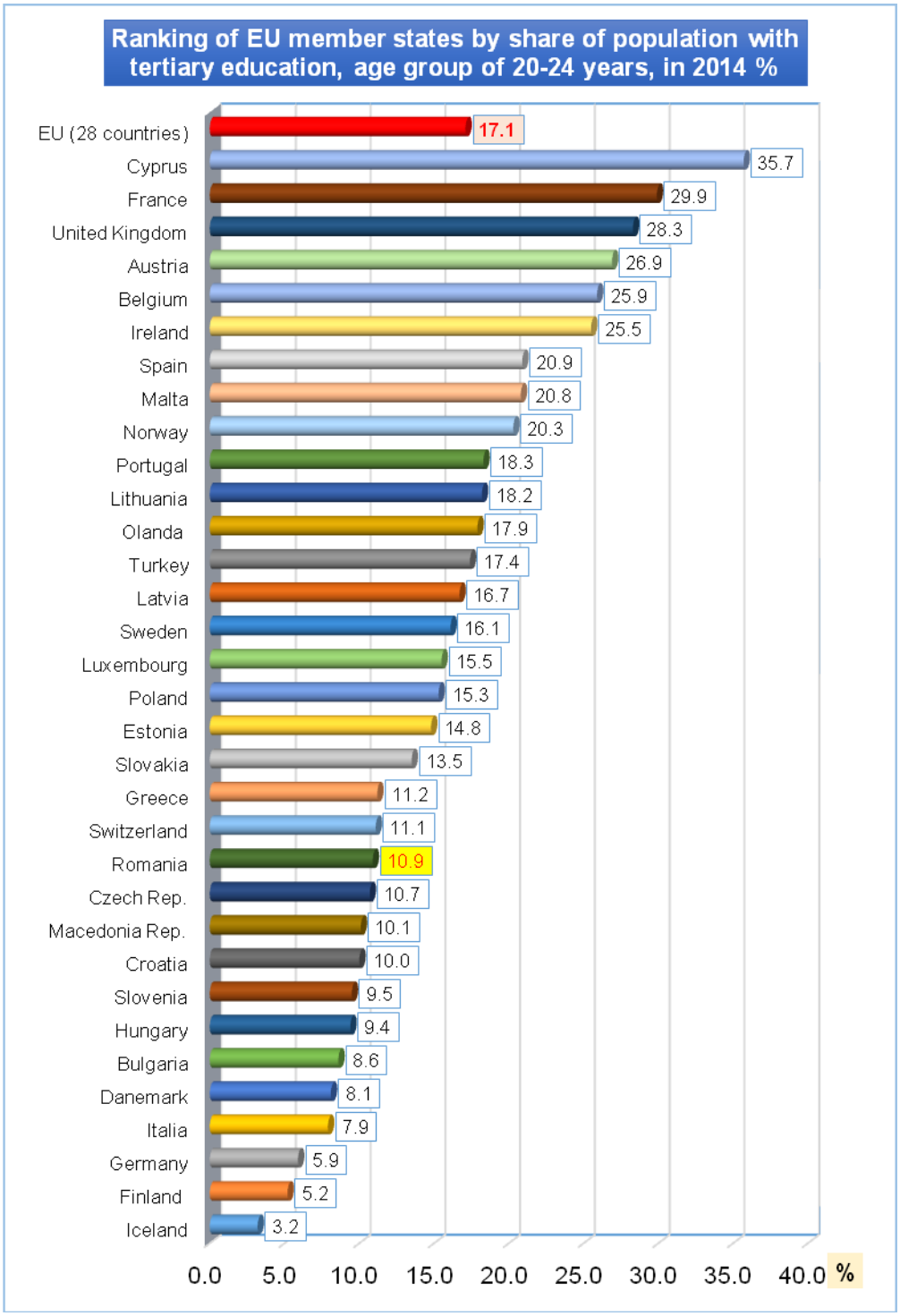


Figure I.11. Ranking of EU member states by share of population with tertiary education, age group of 20-24 years, in 2014

Source: Representation based on data - http://appsso.eurostat.ec.europa.eu/ , accessed May 2015

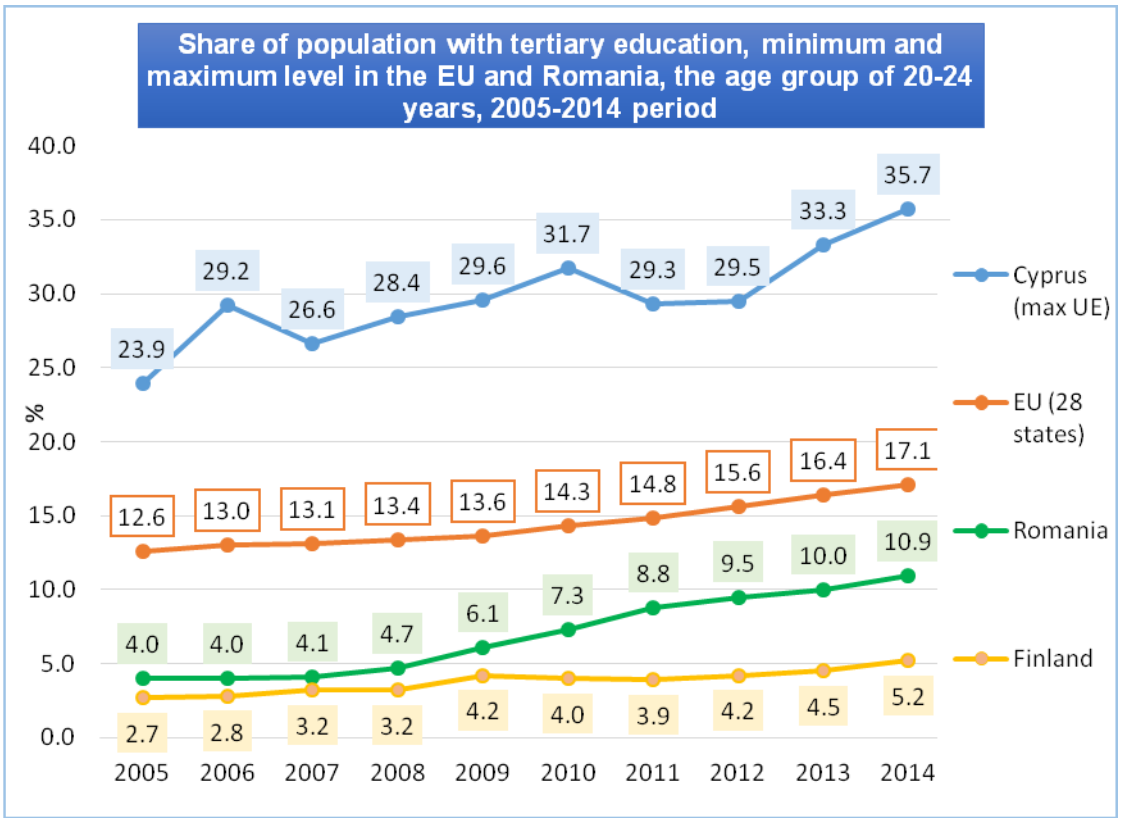


Figure I.12. **Share of population with tertiary education, minimum and maximum level in the EU and Romania, the age group of 20-24 years, 2005-2014 period**

Source: Representation based on data - *http://appsso.eurostat.ec.europa.eu/* , accessed May 2015

The group aged 25-34 years, where the higher education is most likely to be completed, records the highest shares. Leading countries, with more than 50%, are Cyprus, Luxembourg, Lithuania, Ireland and Norway. In this ranking, Romania ranks even lower than the group of 20-24 years, far below the EU 28 average, the last but one, followed only by Italy and Turkey (*Figure I.12*). Obviously, the behaviour of participants in tertiary education system in Romania differs substantially from the trend of most countries in the EU.

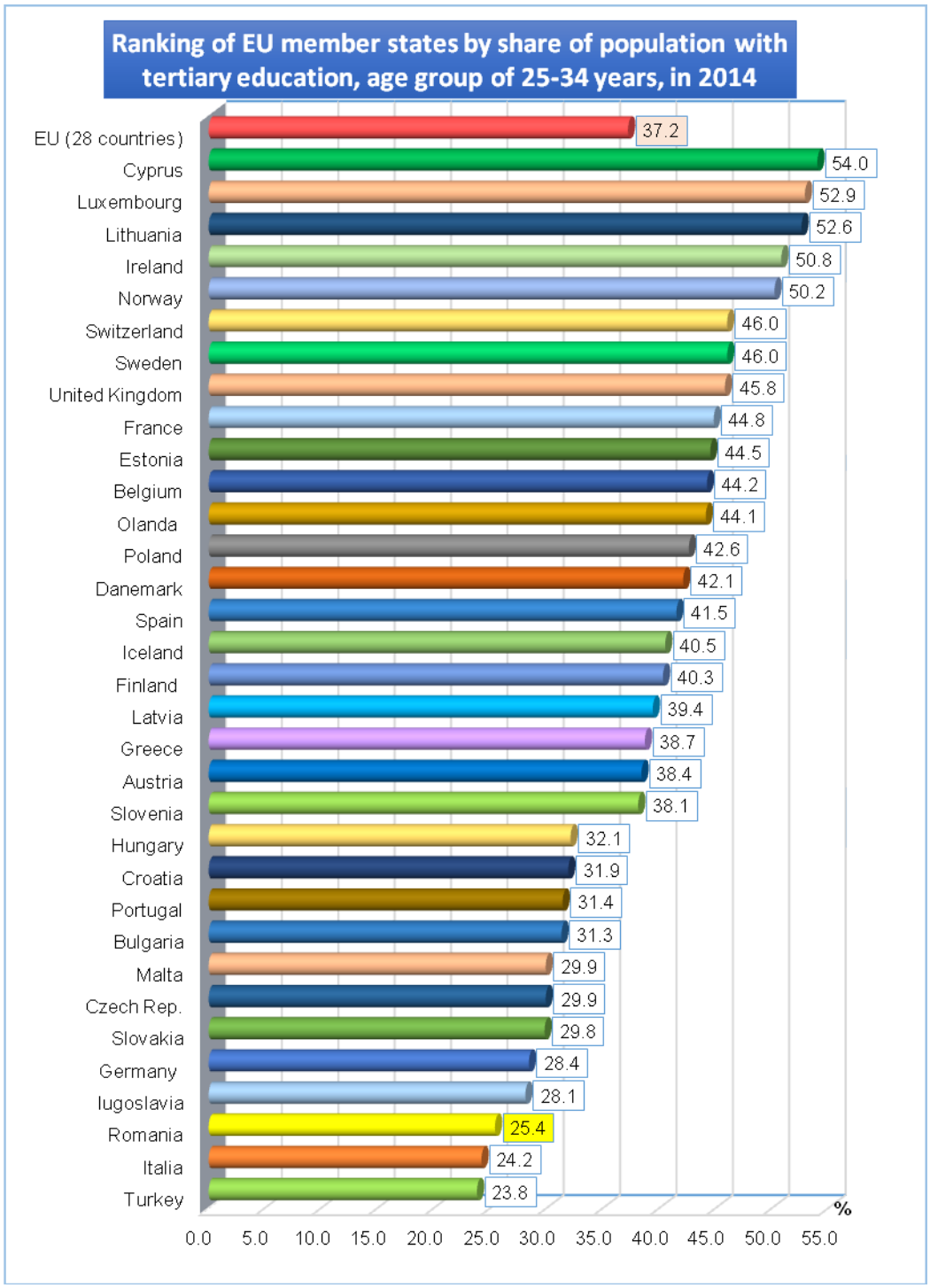


Figure I.13. Ranking of EU member states by share of population with tertiary education, age group of 25-34 years, in 2014

Source: *Representation based on data - http://appsso.eurostat.ec.europa.eu/ , accessed May 2015*

1.4 European 2020 target for tertiary education

According to the EU Strategic Program 2020, the share of population with tertiary education for the age segment of 30-34 years in the European community should achieve 40%.

Between 2005 and 2014, Romania had a steady increase in the share of population with tertiary education in the age group of 30-34 years. Thus, within the reference range, this indicator value increased more than twice, from 11.4% in 2005 to 25% in 2014. In the last two years, Romania surpassed the level of Italy, the country that currently has the low minimum in EU-28.

Education authorities have adopted a cautious position regarding the EU's target population with tertiary education in this age group. Thus, if the EU has set as target for 2020 that 40% of the total population aged 30-34 years have tertiary education, Romania assumed for 2020, by the *National Reform Programme 2011-2013*, a target of 26.7%. Although it is the penultimate value as projective demarche in the EU-28, the target of Romania was justified by the specific of the age group chosen for this indicator (30-34 years) and the benchmark value (*baseline*): in 2010, the EU-28 target was at a distance of 6.2 percentage points (pp) from the real level, while in our case was higher, at 8.4 pp to this level.

As it can be seen in *figure I.14*, the dynamic rhythm of this indicator between 2005 and 2014 is relatively close to that recorded in Europe. Although the difference in this reference period decreased slightly, from 16.2% to 14.1% in the EU, the share of population with tertiary education in this age group remains significantly higher. We can also note that, compared to Lithuania, the country recording the highest value of this indicator in the EU-28, Romania has a gap of over 25 percentage points.

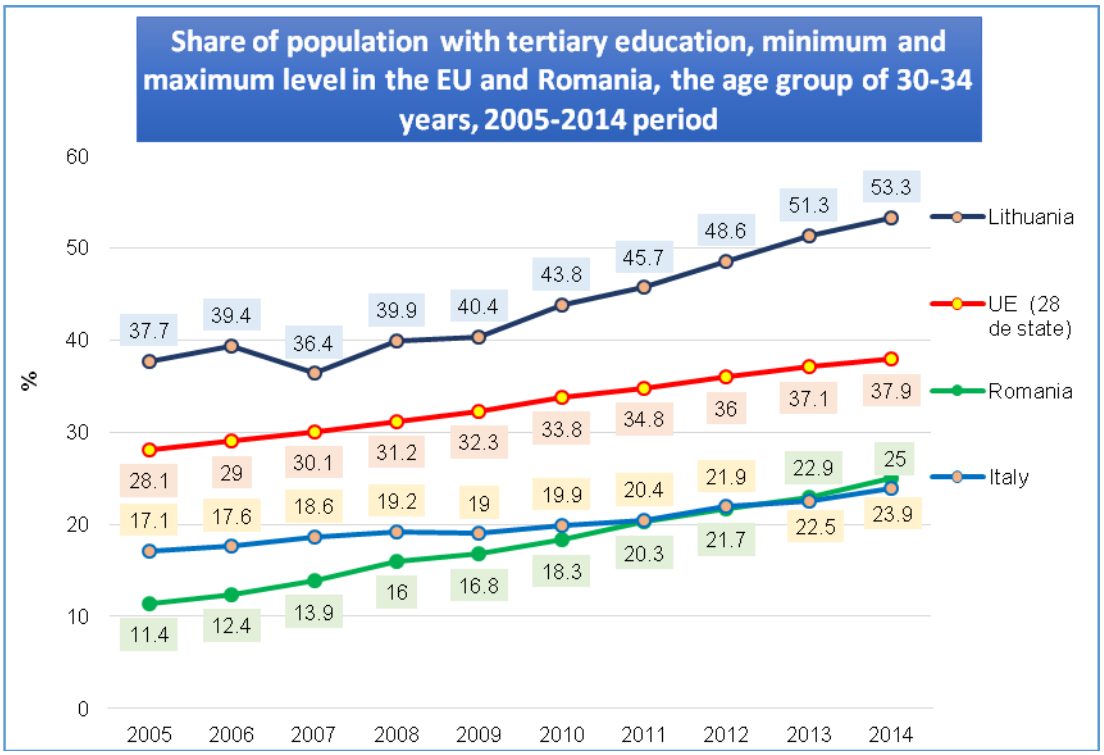


Figure I.14. Share of population with tertiary education, minimum and maximum level in the EU and Romania, the age group of 30-34 years, 2005-2014 period

Source: Representation based on data - http://appsso.eurostat.ec.europa.eu/ , accessed May 2015

Although Romania records this big gap compared to other EU member states, if considered 2014 as a reference, the distance of Romania to the target for 2020 is only 1.7 pp. This value is lower compared to the amplitude recorded by EU-28 average towards the EU target (2.1 pp).

Romania may currently influence this indicator only by attracting non-traditional categories of students/pupils into the tertiary system, those who in the current year (2015) are in the age group of 25-29 years. Even in an optimistic scenario, where the number of students would continue to rise, this trend wouldn't have directly influenced the value of the indicator after 2012, as the most part of new students come from the current class of high school graduates[22].

Figure I.15 shows EU member states ranking based on the share of population with tertiary education, in the age group of 30-34 years, in 2014 and 2020 target.

22. Unfortunately, this scenario was not confirmed. However, the significant decrease in the number of students enrolled in higher education in recent years didn't affect directly the value of this indicator.

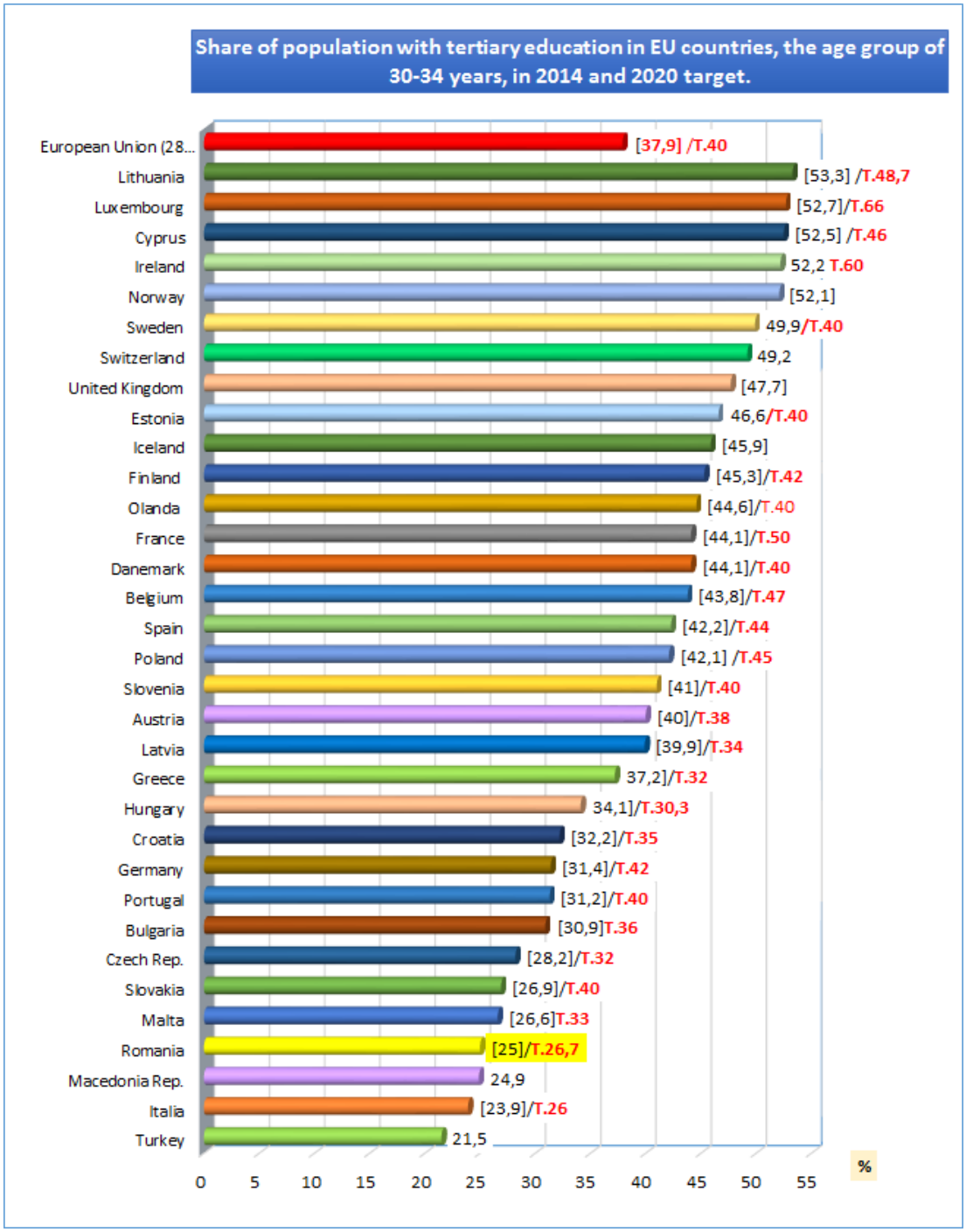


Figure I.15. Share of population with tertiary education in EU countries, the age group of 30-34 years, in 2014 and 2020 target.

Source: Representation based on data - http://appsso.eurostat.ec.europa.eu/ , accessed May 2015

The increase of school population recorded in recent years in post-secondary education, a trend highlighted by the Report on the Pre-University Education in 2014 (MECS), can provide an additional opportunity to improve the value of this indicator, given that the evolution of school population with university education recorded a significant downtrend.

According to EUROSTAT data, in 2014, in the 33 countries shown in Figure I.15, Romania ranks the 30th, above Turkey (21.5%), Italy (23.9%) and Macedonia (24.9%). Our country is surpassed by Malta (26.6%), Slovakia (26.9%) and the Czech Republic (28.2%). The magnitude of the variation between countries in 2014 was 28.8 percentage points, the first being Lithuania, as we have seen, with a share of 53.3%, followed closely by Luxembourg – 52.7% and Cyprus – 52.5%.

Recent data of EUROSTAT (2015)[23] shows that the share of population with tertiary education in the age group of 30-34 years is much lower in a population that has a non-EU nationality (30.2% compared to 38.5% for citizens of EU member states). Without active policies for social inclusion, the evolution of this indicator is likely to be influenced in the longer term, especially by strong migratory phenomena.

In *Annex I.1,* we can see structural changes of the population with tertiary education, in the age group of 30-34 years, in EU countries in the past 10 years and the target for 2020. It is very sad is that Romania, in the analysed period, is still among the last positions in the EU ranking.

Causes. The main challenges in terms of access to tertiary education in Romania are the rates of enrollment in HEI, which are relatively low compared to the EU average, influenced by lower rates of passing the baccalaureate exam in recent years and by the low participation of population in rural area in this level of education. Worryingly for the evolution of this indicator is the fact that in Romania there is a lower participation of non-traditional age groups (25-29 years and 30-34 years) in tertiary education, a situation also pointed out in the Report on the Pre-University Education in 2014 (MECS).
It is obvious that we need a strategic approach to this target group from several perspectives:

- **Educational offer:** diversification of tertiary education and flexibilisation of learning paths;
- **Curriculum:** adaptation of programs/educational offers of universities to the specific needs of the persons in this category and exploitation of non-formal learning and informal learning; new teaching strategies;

23. Eurostat News Release, 145/2015 – August 21, 2015 Migrant integration – education indicators in 2014.

- **Equity:** supporting the access and participation of disadvantaged young people (for example, from rural areas, families socio-economically disadvantaged, disabled persons, Roma minority etc.);
- **Funding:** a funding system that boosts both quality and inclusion.

Although the *Strategic framework for increasing participation, quality and efficiency of tertiary education in Romania 2014-2020* addresses the issue of increasing access and participation in this level of education, the document envisages mainly the traditional categories of students. Although there is a framework methodology on non-university tertiary education and accredited higher education institutions can organize such study programs, the number of students enrolled still remains very low. For non-traditional categories of students, this learning form, which provides level 5 of qualification, may represent an alternative to university and a real incentive for further study. It is important to notice that all countries with high values of this indicator have this form of tertiary education well developed, complementary to university education.

Also, as previously highlighted, the development of post-secondary education may be important to meet the target. Since the post-secondary school attendance is not conditioned by passing the baccalaureate exam, it may be an alternative for students who don't submit or fail the final examination at the end of the twelfth grade. In addition, this form of education traditionally attracts young people over 25 years old who, after some labour market experience, choose to return and attend such a school, which is shorter compared to the university and provides qualifications that are relevant to the labour market.

Education systems with high values of this indicator are those where it can also be seen that they successfully promote different recognition mechanisms of prior learning acquired in non-formal or informal environments. This policy is stimulated even in the Bologna Process (Implementation Report 2012, p. 83)[24]: *"Non-traditional (or alternative) routes for access to higher education are commonly understood as access routes addressing to higher education candidates who don't meet the traditional requirements for admission. This can happen, either because they completed a short vocational route in upper secondary education (i.e. a program that doesn't allow access to higher education) or because they abandoned the initial system of education before completing upper secondary level. In the current political context, promoting the idea that "no talent should be left behind" as well as the topic of non-traditional access routes to higher education has gained more and more ground. The goal aims at extending the admission criteria so that all those who have the ability to continue their studies in a higher education institution to be given the*

24. Report available at http://eacea.ec.europa.eu/education/eurydice/documents/thematic_reports/138RO.pdf (accessed on October 12, 2015).

opportunity to do so, regardless of the results they have achieved in previous educational stages."

This intervention is also supported by the European Council Recommendation of December 2012 which promotes the idea that, by 2018, *Member States should implement recognition systems of non-formal learning and provide the opportunity to obtain qualifications based on these systems.*

Also, the measures meant to encourage the recognition of prior learning and the systems for the equivalence of these learning forms by conversion in transfer credits at university level can positively influence the culture of lifelong learning, another aspect included in the Europe 2020 strategy, where Romania records a modest performance.

Not in the least, further measures of intervention should also consider to support mobility systems for students and teachers, to increase the attractiveness of tertiary education for foreign students, given the small number of study programs organized in a language other than Romanian. These interventions should be targeted at teachers in higher education, both by promoting professional development of staff (for example, in the area of developing new learning strategies for non-traditional students) and management and governance capacity of universities.

1.5 The share of tertiary educated labour force in EU countries

According to statistical data presented by Eurostat, the share of tertiary educated labour force in the EU-33 (28+5 acceding) in the past 10 years (2005-2014) has undergone significant changes in both dynamic and in the hierarchy of the EU-33 (28 + 5 acceding). Thus, in 2005, the EU average for this indicator was 19.6%[25] and the EU average is 26% in 2014.

Considering the developments, but also the positioning at the end of the ranking in EU-33, for the most relevant indicators of the high level preparation of the population, Romania must register great progress in this sense and it must address these gaps. It is no easy task, while the highly skilled workforce migration is a phenomenon and the other countries have also failed to balance their own labour market.

During the economic crisis, Ireland, by dismissing those without tertiary education, surpassed countries like Finland, Belgium, Luxembourg and Norway – countries with significant shares of tertiary educated labour force. In terms of structural change, in only 7 years, in Luxembourg, the share of tertiary educated labour force increased by 15.9 percentage points, followed by Austria with 12.4%. In all states, the structural changes in the last 10 years were positive.

[25] *In 2005- minimum EU - Romania 9,1 % and maximum Finland -28,6%, followed by Denmark 28,5% and Norway 28,4%*

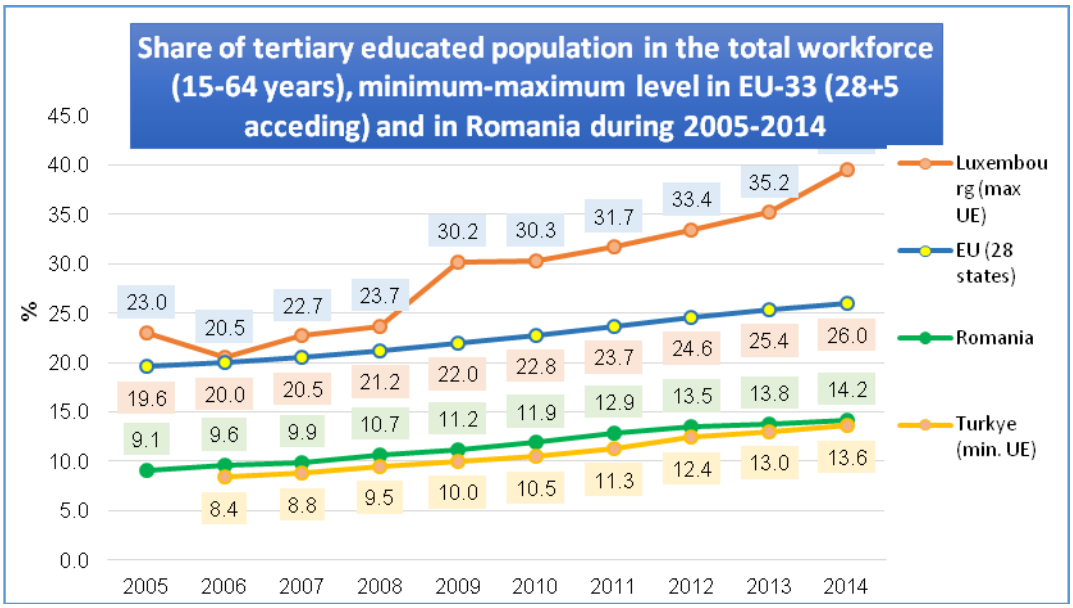


Figure I.16. Share of tertiary educated population in the total workforce (15-64 years), minimum-maximum level in EU-33 (28+5 acceding) and in Romania during 2005-2014
Source: *Representation based on data - http://appsso.eurostat.ec.europa.eu /, accessed May 2015*

Given the encouraging developments, but also the placement at the end of EU-33 ranking for the most relevant indicators regarding the higher education of population, Romania must register much progress in this respect and recover the gaps. A mission that is not easy, given that the emigration of highly skilled labour force is a phenomenon and no other country managed to balance the labour market. Intellectual migration of the population in the countries niche listed above was caused by policies and facilities promoted by economically more developed countries, for example:

- ✓ ***Germany – The Immigration Act 2005 –*** *right and the opportunity to work, employment for foreign students, graduates of technical specialties (recently also medical specialties).*
- ✓ ***United Kingdom – UK Highly Skilled Migrant Programme –*** *on the scoring system – "the exceptional visa" or "foreign graduate scheme"*
- ✓ ***By firm policies to enhance student mobility through Bologna system****.*

Arguably this migration of intellectuals is determined specifically by political, administrative and/or bureaucratic issues.

The extent to which higher education shows its benefits is reflected in the share of population with this level of training in the workforce (15-64 years). On this indicator, Romania ranks second lowest, with only 14.2%, the last in the ranking being Turkey (13.6%). The top five ranked countries, which recorded shares above 35% in 2014, were Luxembourg, the UK, Cyprus, Norway and Ireland.

In Slovenia, Bulgaria, Czech Republic, Latvia, Poland (former socialist countries) the increases corresponding to this indicator may be justified by the development of the tertiary system, namely the increase in the number of education institutions, the schooling and demand. As a result, the number of university graduates in these countries has increased significantly in the last 20 years. *(Figure I.17)*

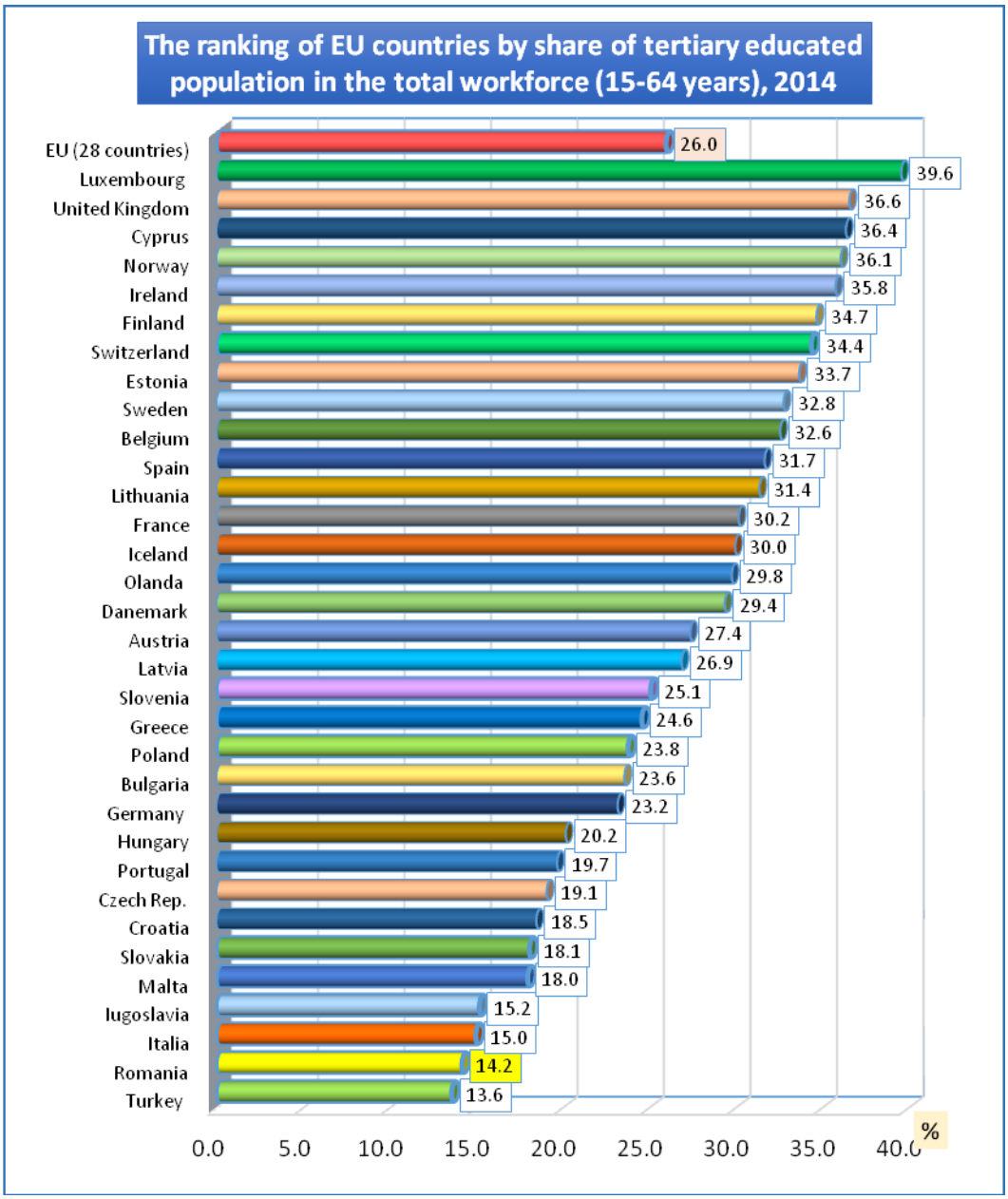


Figure I.17. The ranking of EU countries by share of tertiary educated population in the total workforce (15-64 years), 2014

Source: Representation based on data - http://appsso.eurostat.ec.europa.eu /, accessed May 2015

The importance of tertiary education in relation to labour market is revealed by statistics showing that, in all European countries, tertiary educated people find a first job more quickly than those who are secondary educated. Meanwhile, the 2009 average shows that 86% of tertiary education graduates aged 29 to 35 were employed, compared to 78% of high school graduates and only 60% of those who have completed lower levels of education[26]. Romania is part of these trends[27], even if national surveys[28] show a gap between the number of graduates in certain sectors and labour market requirements. A good anticipation of labour market trends by higher education institutions can make the benefits of tertiary graduates, from this point of view, to be even higher. Clearly, the specialty, specific to tertiary education, can lead to a better sectorial training and is a factor that favours finding a job. Secondary education and high school education prove to be less adapted to the requirements of the labour market.

1.6 International mobility of students

In this era of globalised education, the global academic market becomes undoubtedly more competitive than ever. The international educational race, which deserves to be won, has as a stake the development of intellectual capacity of each state, which must be determined to meet the scientific challenges of the 21st century. This race is long and involves much more actors than politics or economics.

Regardless of geopolitical domination or economic power, each state/country is challenged to participate in the Programme for International Student Assessment (PISA). The top leaders are constantly Finland and South Korea, whose students are always on top.

Countries and states in America, Europe and Asia have developed over time a culture of academic excellence among elite institutions. Recently, countries like Singapore and Saudi Arabia entered this competition, which encourages a culture of academic excellence in their universities by establishing partnerships with elite Western institutions. And the idea of associating a university with a particular location is reconsidered. Renowned universities from Texas A&M to Sorbonne captured world attention in the last decade by creating 160 campuses in Asia and the Middle East. New York University (NYU) initiated liberal arts colleges in Abu Dhabi as part of what NYU President, Jon Sexon, thinks as a "*global university network*." "*One day, as*

26. Liana Badea, work cited p.187-188.
27. Eurydice 2012.
28. UECNCFPA (Romanian The Executive Unit of the National Council of Qualifications and Vocational Training of Adults), 2010, "Recent graduates of higher education and their integration into the labour market" in "The development of an operational system of qualifications in higher education in Romania – DOCIS", docis.acpart.ro/uploads/Fisiere/ 05_rezumat_ studiu_ 18_01_2011.doc, apud. Liana Badea, work cited p. 189.

suggested by the Vice Chancellor of University of Warwick, Nigel Thrift, we could see direct mergers between institutions – and perhaps, ultimately, the academic equivalent of multinational corporations."

Also, an increasing number of Asian countries have made significant progress in developing the university system. Countries like China and South Korea to Saudi Arabia made a priority of creating world-class universities and restoring the lost image of once great institutions. The level of investment in this area is significant: China is spending billions to improve the quality of elite education and research institutions, while the Saudi King Abdullah allocated $10 billion for the new University for Science and Technology that bears his name. In the US, post-secondary education spending represents about 2.9% of GDP, almost double compared to China, European Union and Japan.

International distribution of students in mobility has clearly changed from one state to another, reflecting an increasingly competitive global market of HES. According to the Institute of Statistics and UNESCO, the international mobility of students reflects a growth worldwide. If in 1975, about 800 thousand students studied abroad; in 2000 their number reached 2 million, in 2008 – 3.3 million, and in 2012 reached 4 million students, representing 2% of total number of students globally.

In 2012, the top five destination countries that hosted nearly half of all mobile students were USA (18%), the UK (11%), France (7%), Australia (6%) and Germany (5%).

Table I.2. Top 10 destination and origin countries of mobile students

Rank	Countries of destination	Countries of origin of students in academic mobility programs
1.	United States (18% of total mobile students)	China (694.400 students studying abroad)
2.	United Kingdom (11%)	India (189 500)
3.	France (7%)	Republic of Korea (123.700)
4.	Australia (6%)	Germany (117 600)
5.	Germany (5 %)	Saudi Arabia (62,500)
6.	Russian Federation (4%)	France (62,400)
7.	Japan (4%)	United States (58,100)
8.	Canada (3 %)	Malaysia (55 600)
9.	China (2%)	Vietnam (53 800)
10.	Italy (2%)	Iran (51.600)

Although currently there are far fewer foreign students in the US than a decade ago, the US holds more than 7% of the market for foreign students than the next competitor, UK. Regarding international undergraduate studies, the American universities are a magnet for technical, engineering and informatics education.

In China, for example, institutions such as Tsinghua and Pekin universities in Beijing and Shanghai Jiao Tong University could become globally prominent both through the development and research and absorption of elite students, as well as through the number of students/graduates.

In the long term, the position of countries in the university hierarchy will become increasingly relevant. From the data presented above, the last decade triggered an unprecedented phenomenon of student mobility, which has become a defining feature of global higher education.

The largest host areas in terms of mobile students' number are: North America and Western Europe (57% of mobile students), East Asia and Pacific (20%), Central and Eastern Europe (10%).

In Luxembourg, in 2012, for example, where 42% of the tertiary-age population was enrolled in the HES, about a third of them studied abroad.

There are countries and territories that have more students studying abroad than at home, such as: Andorra, Anguilla, Bermuda, Liechtenstein, Luxembourg, Montserrat, Seychelles, Turks and Caicos Islands.

In the *European Higher Education Area,* in the academic year 2012-2013, approximately 664,000 students studied in another EU country.

For example, every year, France opens its arms to receive about 300,000 foreign students, usually through partnerships between universities or educational exchange programmes.

Table I.3. The share of students (ISCED 5-6) studying in another EU-28 country – as % from the total number of students, between 2000 and 2012

Country / year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
EU (28 countries)	**2,2**	**2,2**	**2,1**	**2,2**	**2,3**	**2,3**	**2,6**	**2,7**	**2,7**	**2,8**	**3,1**	**2,9**	**3,5**
Luxembourg	75	68,6	66,0	66,7	:	:	80,8	:	:	:	:	64,1	72,5
Cyprus	47	44,4	52,2	53,6	54,8	56,5	53,2	56,9	58,4	56,2	54,9	53,8	52,3
Ireland	9,4	8,0	7,4	7,5	8,5	9,3	13,8	14,2	17,7	14,8	12,8	12,6	13,3
Bulgaria	3,2	4,3	6,0	7,4	8,6	8,7	8,9	8,3	7,9	8,0	8,1	6,2	9,0
Romania	1,5	2,0	2,1	2,2	2,4	2,3	2,2	2,2	2,0	2,3	2,9	3,3	5,2
Finland	3,2	3,0	3,0	3,0	2,9	2,7	3,0	2,9	2,7	2,8	2,9	2,6	3,0
Belgium	2,4	2,4	2,4	2,6	2,6	2,6	2,5	2,6	2,9	2,7	2,6	2,6	2,9
France	1,8	1,9	1,9	1,9	2,0	2,1	2,4	2,5	2,3	2,4	2,5	2,3	2,6
UK	0,6	0,6	0,5	0,5	0,6	0,5	0,5	0,6	0,6	0,6	0,7	0,7	0,9

Source: *Eurostat* accessed on June 4, 2015

The influx of students in the EHEA, originating in the European Economic Area (EEA) and the candidate countries in the academic year 2012-2013 was of 728,900 students, of which 65,200 students from the extra EU community.

Table I.4. The influx of students (ISCED 5-6) from the EEA and candidate countries as % of total number of students in the country, between 2000 and 2012

Country / year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
EU (28 countries)	**2,4**	**2,4**	**2,4**	**2,5**	**2,5**	**2,6**	**2,9**	**3,0**	**2,9**	**3,1**	**3,2**	**:**	**3,6**
Luxembourg	25	:	:	:	:	:	38,5	:	:	:	:	43,3	41,9
Cyprus	4,0	3,9	3,9	3,7	3,7	3,9	4,6	5,1	4,4	5,2	5,8	7,7	9,8
Ireland	2,4	2,6	2,4	2,4	2,6	2,3	2,5	3,2	2,6	3,3	5,3	5,0	6,6
Bulgaria	2,3	2,5	2,2	2,5	2,7	2,7	2,8	2,8	2,7	2,7	2,7	2,7	3,0
Romania	1,0	0,7	0,5	0,3	0,3	0,3	0,2	0,2	0,2	0,3	0,4	0,6	0,8
Finland	0,8	0,9	0,9	1,0	1,0	1,0	1,1	1,2	1,2	1,2	1,3	1,3	1,4
Belgium	6,6	6,6	6,8	6,2	7,1	7,5	8,1	8,1	8,4	7,9	7,9	8,0	8,4
France	2,0	2,0	2,0	2,4	2,4	2,2	2,3	2,3	2,1	2,1	2,1	2,2	2,2
UK	5,9	5,7	4,9	4,8	5,1	5,1	7,0	7,8	7,1	7,2	7,5	7,8	8,2

Source: *Eurostat* accessed on June 4, 2015

We must not overlook another factor, namely the attractiveness of higher education quality in some European countries for secondary school graduates from countries with lower quality of tertiary education. Thus, France, Germany and the UK attract the bulk of student mobility[29]. For example, in a statistic made for 2012-2013, Romania was ranked fifth as number of students who chose to follow their doctoral studies in France, representing a rate of 1.6%[30], and forth, with a percentage of 9.72%, as number of students in Italy, a position that actually pursues the migration influx in general[31]. Many students who choose to study in these countries won't return to their home countries, as the higher education obtained enables them to get higher revenues in economically developed countries. Therefore, through the increase of the education quality and the internationalization of education institutions, each State may establish tertiary graduates on their territory. For Romania, the number of people who choose to leave in order to get a university degree abroad is 2.4 times higher than that of people in other countries who chose Romania for tertiary studies[32].

According to sources from NIS, in the academic year 2012-2013, the number of students from other countries enrolled in Romania was 19,295 and the number of graduates was 2,784 foreign students. We consider that these values are too low for HES in Romania.

29. Hans de Wit, Fiona Hunter, Laura Howard, Eva Egron-Polak, Internationalization of Higher Education, Study of the European Parliament, Directorate-General for Internal Policies Policy Department B: Structural and Cohesion Policies, structural administrator, 2015, p. 37, in http://www.europarl.europa.eu/RegData/etudes/STUD/2015/540370/IPOL_STU(2015)540370_EN.pdf, consulted on October 12, 2015.
30. Ibid., p.105.
31. Ibid., p.125.
32. Ibid., p.159.