



Study on the impact of admission systems on higher education outcomes

*Volume I:
Comparative report*

EUROPEAN COMMISSION

Directorate-General for Education and Culture
Directorate B — Youth, Education and Erasmus+
Unit B.1 — Higher Education

E-mail: EAC-UNITE-B1@ec.europa.eu

*European Commission
B-1049 Brussels*

Study on the impact of admission systems on higher education outcomes

Volume I: Comparative report

written by
Dominic Orr
Alex Usher
Cezar Haj
Graeme Atherton
Irina Geanta

Disclaimer

This document has been prepared for the European Commission; however, it reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

***Europe Direct is a service to help you find answers
to your questions about the European Union.***

**Freephone number (*):
00 800 6 7 8 9 10 11**

(*) The information given is free, as are most calls (though some operators, phone boxes or hotels may charge you).

More information on the European Union is available on the Internet (<http://europa.eu>).

Luxembourg: Publications Office of the European Union, 2017

ISBN 978-92-79-71859-5
doi: 10.2766/943076

© European Union, 2017
Reproduction is authorised provided the source is acknowledged.

Image via Alexas_Fotos, Pixabay

Table of Contents

Table of Contents	5
List of figures	7
List of tables	7
Acknowledgements	9
Executive Summary	10
1.1 Admission to higher education as a complex process	10
1.2 Study approach.....	11
1.3 Four types of admission systems and their performance.....	11
1.4 Recommendations based on in-depth analyses.....	13
2 Introduction	17
2.1 Current trends	17
2.2 Approach of the study.....	20
3 A Holistic View of Admissions.....	22
3.1 Admission systems have multiple goals.....	22
3.2 Admission involves multiple stakeholders	23
3.3 Admission takes place over time	25
4 Typology of Admission Systems	28
4.1 Four types of admission system	28
5 Performance differences between types	30
5.1 Entry rates are higher where HEIs have increased autonomy	30
5.2 Social inclusion higher for graduates in least selective systems	34
5.3 Participation of mature students is higher for more selective systems	36
5.4 Participation of female students	38
5.5 Completion rates are linked to selectivity	41
5.6 More flexible enrolment, but higher unemployment rates for least selective systems.....	45
5.7 Overall summary on performance of admission types.....	52
6 Findings on Schools.....	54
Finding 1: Streaming tends to reinforce social inequality.....	54
Finding 2: Merit is often defined in a one-dimensional way.....	56
Finding 3: Matriculation examinations may not be 'fit for purpose' for higher education entry.....	57
Finding 4: The quality of information, advice and guidance is a concern.....	59
Finding 5: Second-chance routes are peripheral.....	63
7 Findings on Higher Education Institutions.....	66
Finding 6: Social inclusion is rarely a central goal for higher education institutions .66	
Finding 7: Higher education institutions can manage student pathways pre- and post-entry.....	69
Finding 8: The link between distribution of study places and labour market demand is weak.....	71
Finding 9: HEIs want more admissions autonomy, but are wary of challenges	74
8 Findings on Students	77
Finding 10: Young people are making decisions under great pressure.....	77
Finding 11: Increased choice should not mean increased complexity	79
9 Conclusions and Recommendations	82
9.1 Balancing policy principles across the admission system.....	82
9.1.1 Balancing equity and efficiency	82
9.1.2 Balancing objectivity and fairness.....	82
9.1.3 Balancing completing secondary education and making future choices ..83	
9.2 Recommendations	83

Recommendation 1 – Improve the architecture of choices provided to students ..	83
Recommendation 2 – Improve the information, advice and guidance available on higher education	84
Recommendation 3 – Link admission policy to student and labour market demand	85
Recommendation 4 – Incentivise Higher Education Institutions to be more inclusive	86
Recommendation 5 – Use Bologna tools to ease transition through higher education	86
Recommendation 6 – Restructure selection processes during secondary education level	87
Recommendation 7 – Introduce pilot projects to reduce pressure during the final year of secondary school.....	87
Recommendation 8 – Permit HEIs to experiment with different methods of identifying student potential	87
Recommendation 9 – Prioritise joint working across schooling and higher education	88
Annex – Methodological notes	89
References.....	93

List of figures

Figure 1.1: Admission to higher education as interplay between three key questions	10
Figure 1.2: Admission systems across Europe by type	11
Figure 2.1: Share of tertiary education attainment in the age group 30-34 years, 2000 - 2016.....	17
Figure 2.2: Number of upper-secondary graduates, 2008 – 2015 (Index 100 = 2008)	18
Figure 2.3: Share of upper-secondary graduates qualifying for entry to higher education, 2008 – 2015	18
Figure 2.4: Number of tertiary education entrants, 2008 – 2015 (Index 100 = 2008)	19
Figure 2.5: SASH study's methodological approach	20
Figure 3.1: Admission to higher education as interplay between three key questions	24
Figure 3.2: Overview of the pipeline to higher education in eight countries	26
Figure 4.1: Map of Europe: the four types	28
Figure 5.1: Entry rates by admission type, 2015.....	31
Figure 5.2: Transition from upper-secondary level to higher education by admission type, 2015.....	32
Figure 5.3: Entry rates by size of the private higher education system, 2015	33
Figure 5.4: Attainment by educational parental background, 2011	35
Figure 5.5: Mature students (30 years or older) as percentage of student population at Bachelor level by admission type, 2014	37
Figure 5.6: Increase in the female share of student enrolments between upper-secondary level and higher education by admission type, 2014	39
Figure 5.7: Increase in the female share of student enrolments between upper-secondary level and higher education by streaming type, 2014	40
Figure 5.8: Completion rates by type of admission system, 2011*	42
Figure 5.9: Completion rates by level of HEI autonomy, 2011*	43
Figure 5.10: Completion rates by streaming system, 2011*	44
Figure 5.11: Overall index of volatility for enrolments by field (excluding health and welfare & services) by admission type, 2003-2012	48
Figure 5.12: Change in the proportion of skills mismatch in tertiary education graduates aged 25-34 by admission type, 2010-2013	49
Figure 5.13: Change in the proportion of skills mismatch of graduates aged 25-34 by level of HEI autonomy, 2010-2013	50
Figure 5.14: Unemployment ratios of young tertiary education graduates (20-34 years) after more than 3 years by admission type, 2013	51
Figure 6.1: Equity of access by the existence of career guidance services targeting under-represented groups, 2011	62
Figure 10.1: Map of Europe: Do streams lead to higher education?	90
Figure 10.2: Map of Europe: autonomy of HEIs in selections	91

List of tables

Table 1.1: A typology of admission systems.....	12
Table 4.1: A matrix for describing admission systems	29
Table 5.1: Summary of results by admission type.....	52

Acknowledgements

The study was commissioned by the European Commission and carried out over 18 months (January 2016 – June 2017) by an international research team. In various ways, numerous researchers from around the globe have provided input to this project, which the authors gratefully acknowledge. The authors would like to thank in particular our international advisors Patrick Clancy, Ligia Deca and Jussi Kivistö for providing their expertise at various stages of the project; it was invaluable for shaping this final report into its current form. Furthermore, the authors would like to acknowledge the support in conducting the interviews and focus groups, as well as drafting the extended case studies, provided by the national experts: Carole Waldvogel (France), Johanna Witte (Germany), Eglė Ozoliņčiūtė (Lithuania), Froukje Wartenbergh-Cras (Netherlands), Elisabeth Hovdhaugen (Norway) and Ramon Llopis-Goig (Spain). The validation of the data collected internally would have not been possible without the assistance of all the national experts in the 36 European countries analysed. Finally, the authors would like to acknowledge the contribution of Pamela Harbutt, whose editorial efforts gave the final report a coherent and unitary voice. Finally, this study would have not been possible without the constant support and guidance of the Steering Committee of the European Commission, DG Education, Youth, Sport and Culture (DG EAC and its Executive Agency).

Executive Summary

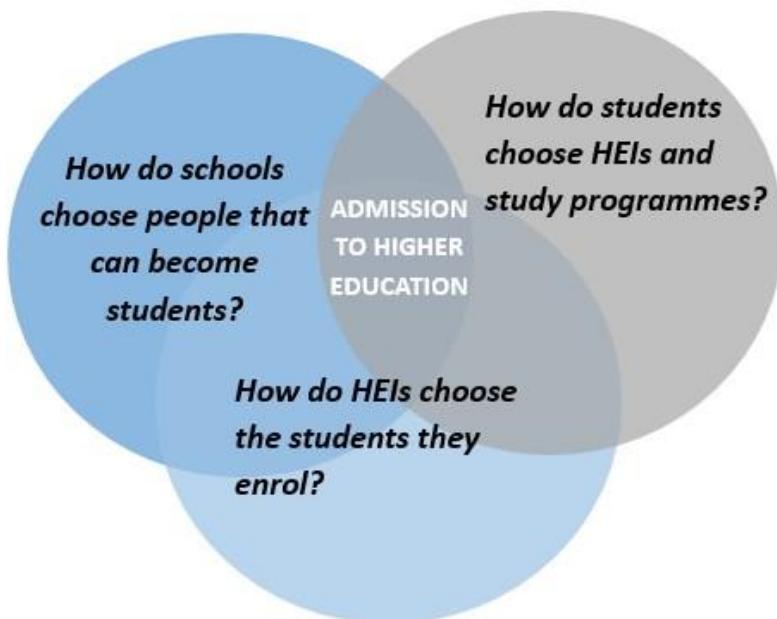
1.1 Admission to higher education as a complex process

In 21st century society, the ability to access and succeed in higher education is central to social mobility and economic security for European countries. The question of who goes on to higher education and who does not, who is steered towards it and who is steered away from it, is thus a major issue in forming dynamic and progressive societies. Whilst admission systems have the task of selecting those who have the potential to succeed in higher education, they can also limit such opportunities for certain social groups. Therefore, admission systems can be assessed on their capability to provide an efficient and effective route to study success, but also on the inclusiveness of this process.

The subject of this report is European higher education admission systems. Admission is not a simple process which occurs at the end of secondary education. It is a process which may begin from the moment a student is streamed in secondary schooling and end, in some cases, with post-admission selection at the end of the first year of studies.

To get to the core of this process, the study focuses on the impact of schools and higher education institutions (HEIs) in the selection process and on how students themselves end up choosing a pathway and a specific institution and programme of study – see Figure 1.1.

Figure 1.1: Admission to higher education as interplay between three key questions



1.2 Study approach

This study used a 2-step mixed-method approach to investigate admission systems.

- *A system-level mapping of EU Member States, EEA/EFTA countries and candidate countries.* The individual country analysis started with a standard set of description dimensions about each educational system. Data and descriptions were collected from comparative data sources and then validated by national experts in each of the respective countries. All 28 EU states were included as were Albania, the former Yugoslav Republic of Macedonia, Montenegro, Serbia, Turkey, Liechtenstein, Iceland and Norway.
- *Eight qualitative national case studies delivered by national experts.* The in-depth case studies provide a detailed view of the dynamics of higher education admission systems in these eight countries and how they work in practice. They consist of interviews with key stakeholders in each country from the higher education and policymaking fields, as well as focus groups with two different sets of students: those planning to enter higher education (last year of upper-secondary education) and those who have recently entered higher education (first year). The focus groups deliver the most insightful information on the decision-making process, highlighting differences between countries and groups within them. The case study countries were: France, Germany, Ireland, Lithuania, the Netherlands, Norway, Romania and Spain.

1.3 Four types of admission systems and their performance

Using a *four-field matrix*, this study has produced a typology of admission systems. On one side, the matrix focuses on the **freedom of HEIs to set their own criteria** for student selection; on the other side, the matrix focuses on **streaming in the secondary system** and whether all streams lead to some form of higher education, or whether there are one or more streams which end up with no direct route to higher education.

Figure 1.2: Admission systems across Europe by type

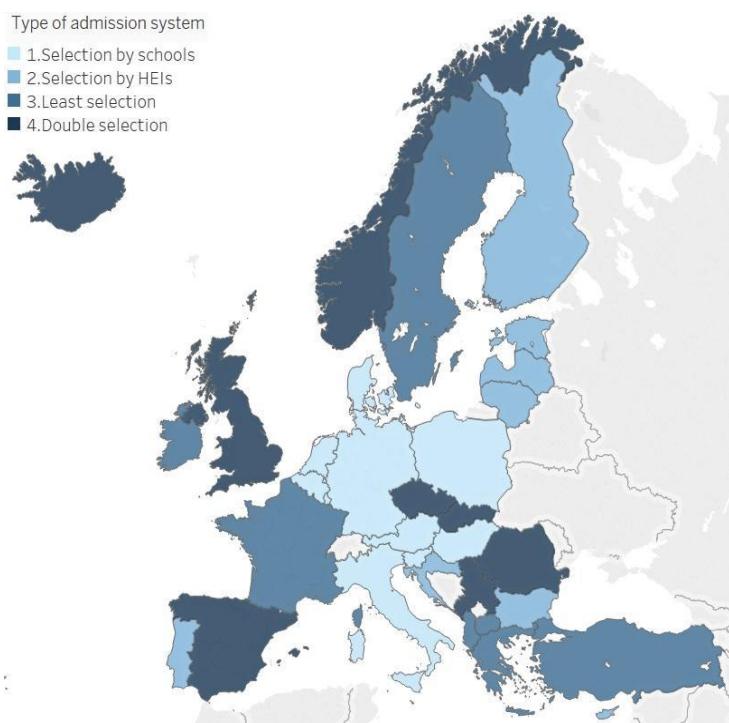


Table 1.1: A typology of admission systems

Selection Streaming	(Nearly all) HEIs can select with additional criteria	HEIs cannot select with additional criteria (in normal circumstances)
At least one pathway through the school system does not lead to a qualification enabling higher education entry (to some part of the system)	<p>Type 4: Double selection <i>Czech Republic, Iceland, Montenegro, Norway, Romania, Serbia, Slovakia, Spain, United Kingdom</i></p>	<p>Type 1: Selection by schools <i>Austria, Belgium, Denmark, Germany, Hungary, Italy, Luxembourg, Netherlands, Poland, Slovenia</i></p>
In general, all pathways may lead to higher education entry (in some part of the system)	<p>Type 2: Selection by HEIs <i>Bulgaria, Croatia, Cyprus, Estonia, Finland, Portugal, Lithuania, Latvia</i></p>	<p>Type 3: Least selection <i>Albania, France, Greece, Ireland, the former Yugoslav Republic of Macedonia, Malta, Sweden, Turkey</i></p>

This report examines admission systems in terms of who gets into higher education (an equity dimension), by how many complete their studies (an efficiency dimension) and by the final attainment and outcome post-graduation (an effectiveness dimension). The analysis showed some differences between the types on these measures:

- **Type 1 – Selection by schools:** These systems do well only on measures related to effectiveness. They tend to have low rates of unemployment among recent graduates and lower rates of growth in job mismatches. There are likely to be two factors contributing to this. On the one hand, this may be because early selection identifies students who are more likely to have a better transition to the labour market (*inter alia* due to social advantage and scholastic achievement). On the other hand, it may also be because these countries have below-average enrolment rates which produce fewer graduates (and hence have less opportunity for “over-production”). These systems do have the lowest relative participation rates by students from low social backgrounds.¹ One might therefore say that while they are effective systems, they are *only effective for those who have social advantages to begin with*.
- **Type 2 – Selection by HEIs:** These systems do not stand out much on many measures. However, they tend to have slightly higher-than-average graduation rates, and are somewhat more likely to accept (but not necessarily graduate) students over the age of 30.
- **Type 3 – Least selection:** These systems *do well in terms of equalising chances* in higher education for students from more disadvantaged backgrounds, improving balance by gender and by socio-economic background. However, they are not particularly good at securing completion rates. These admission systems also tend to have relatively flexible allocation of study places across fields of study (in part perhaps because they are also systems that tend to have higher-than-average enrolments in private HEIs).
- **Type 4 – Double selection:** These systems seem to be the *most efficient in terms of completion rates*. This result may be partly achieved by excluding more

¹The study used attainment by educational parental background as a proxy measure of socio-economic background while recognising the limitations of this approach.

disadvantaged students, but this does not seem to be the whole story. HEI selection seems to be linked with higher mature student enrolments (though not completions).

1.4 Recommendations based on in-depth analyses

It should be noted, however, that the types of admission system simply provide a constellation of processes. The way these processes occur and the opportunities provided to the school system, the HEIs and the students to use and shape these processes lead to their final impact. The case study work led to valuable *insights into how different admission systems work*.

None of the policy types identified should be considered ideal. Policy interventions of various sorts can help systems of all types to become more inclusive, efficient and effective. The comparison between countries brought out common strands, which are formulated below as recommendations, which are perhaps more relevant to some admission systems than others.

The first five recommendations can be adopted in most countries. The next three deal with parts of the admission system that are usually quite difficult to change and may be dependent on other local conditions in the countries affected. They are therefore formulated as initiatives to pilot and require further accompanying research, which can explore the implications of more radical changes to admission systems. Finally, there is the recommendation that, to be effective, policy change needs to involve both schools and the higher education sector.

IMPROVE THE ARCHITECTURE OF CHOICES PROVIDED TO STUDENTS

- HEIs need to improve the system-wide choice architecture they present to students. Firstly, this is about simplifying the way choices are presented to students. The case studies highlighted current efforts in this direction, but the sheer complexity and number of possible permutations of study choice present a challenge for student decision-making.

IMPROVE THE INFORMATION, ADVICE AND GUIDANCE (IAG) AVAILABLE ON HIGHER EDUCATION

- The case studies in the report indicate that efforts are being made to provide more information to prospective students about individual programmes and careers. But this is just one part of the puzzle. Students require contextual information and advice which is personalised and goes beyond their own social-proximity network. This is lacking. Improving information, advice and guidance will require financial investment and co-ordinated efforts involving schools and HEIs working collectively.

"... the fact that I felt well-informed is only because I knew exactly what I wanted to study." (German student)

"It isn't always easy to find your way through all the information and rules, there should be more support for that, especially if your parents find this hard as well."
(Dutch student)

LINK ADMISSION POLICY TO STUDENT AND LABOUR MARKET DEMAND

- Admission policies need to be better linked to both what students and labour markets want. To ensure that both student and labour market demand are balanced,

stakeholders from both sides need to be included in the development of national admission policies. These policies also need to be based on better evidence regarding patterns of student demand and what shapes this demand and labour market intelligence on likely future changes in employment. In specific fields of study with strong student demand, private HEIs can play an important role in helping to expand the supply of places, as they are able to operate more flexibly than many public HEIs in responding to changes in student demand.

INCENTIVISE HIGHER EDUCATION INSTITUTIONS TO BE MORE INCLUSIVE

- ⌚ In most instances HEIs do not see social inclusion as a primary mission. Institutions should be more clearly charged with a responsibility both for enabling the participation of learners from under-represented backgrounds in higher education and for supporting their successful completion. To change this, HEIs should be given incentives to enrol, support and graduate students from such backgrounds.

USE BOLOGNA TOOLS TO EASE TRANSITION THROUGH HIGHER EDUCATION

- ⌚ Students fear making 'mistakes' in choosing an institution / programme and having to incur the time and cost of re-starting a programme from the beginning. This is particularly a worry for students from low social backgrounds, but can be generalised to all students. Lowering the cost of mistakes would take much of the pressure out of the experience for students. This could be done by delaying the requirement for students to choose specific programmes for a semester or a year into higher education and it can be done by making credits easier to transfer from one programme to another. The Bologna structure, with shorter study programmes (including the growing short-cycle sector) and the European Credit Transfer System offer potential here. More programmes should make use of these to reduce disadvantages of change during the first years of study.

RESTRUCTURE SELECTION PROCESSES DURING SECONDARY EDUCATION LEVEL

- ⌚ To create the conditions for a more equitable higher education system, academic streaming away from higher education entry should be left as late as possible. Admission systems heavily reliant on selectivity and streaming during the transition from primary to secondary education and within secondary education could gradually reduce the degree of selectivity and monitor results. They could allow more students to pass through into upper-secondary education in the academic stream, or recalibrate higher education-facing exit examinations so that more students gain the appropriate qualification to enter higher education and/or to enter certain study programmes.

INTRODUCE PILOT PROJECTS TO REDUCE PRESSURE DURING THE FINAL YEAR OF SECONDARY SCHOOL

- ⌚ For increasing numbers of Europe's young people, major life events are being compressed into a very short period of time at the end of their upper-secondary schooling. Such events could be spaced out more. Any changes must be accompanied by the improvements in information, advice and guidance recommended above. The key here is to get students to think about higher education choice much earlier than the final year of secondary schooling so that this year is the culmination of a process, not the whole decision-making period.

PERMIT HEIs TO EXPERIMENT WITH DIFFERENT METHODS OF IDENTIFYING STUDENT POTENTIAL

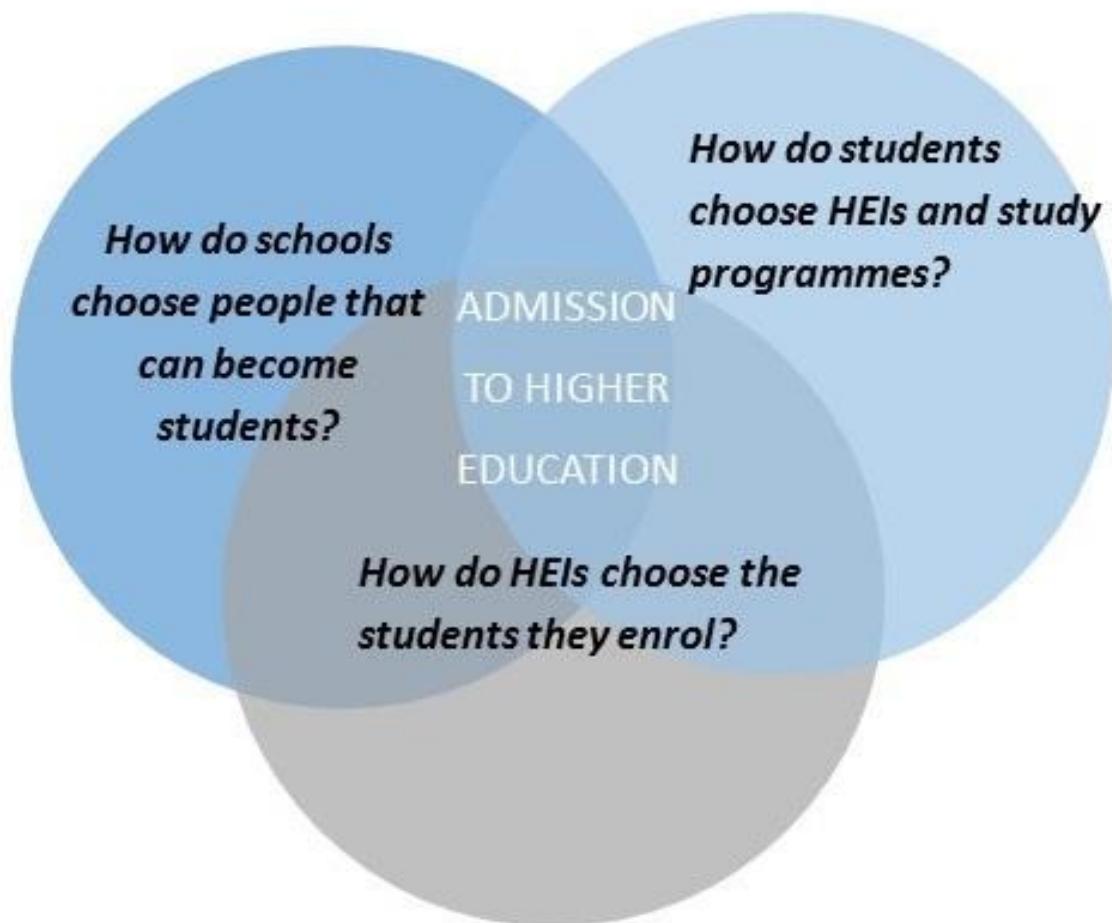
- › HEIs do want greater autonomy in admissions, but are wary of the costs involved. Mostly, they want to be able to better match students with the programmes they offer (a goal shared by many students). However, it is important that they do so while managing the tension between objectivity and fairness. Hence, pilot projects should be undertaken to grant greater autonomy given to HEIs to select their students, but within frameworks that enhance rather than constrain equitable admissions. Such autonomy may involve more use of interviews and aptitude testing.

PRIORITISE JOINT WORKING ACROSS SCHOOLING AND HIGHER EDUCATION

- › Essential to recognising the holistic nature of higher education admission systems is to build on collaborative work between schools, HEIs and policy-makers focusing on schools and higher education. Such collaboration should be a general requirement for all admission reforms.

A: APPROACH

Admission to higher education is a process with an interplay of three agencies – schools, higher education institutions and students. This section lays out this holistic approach and draws up a typology of admission systems based on this interplay and maps out European higher education systems using it.



2 Introduction

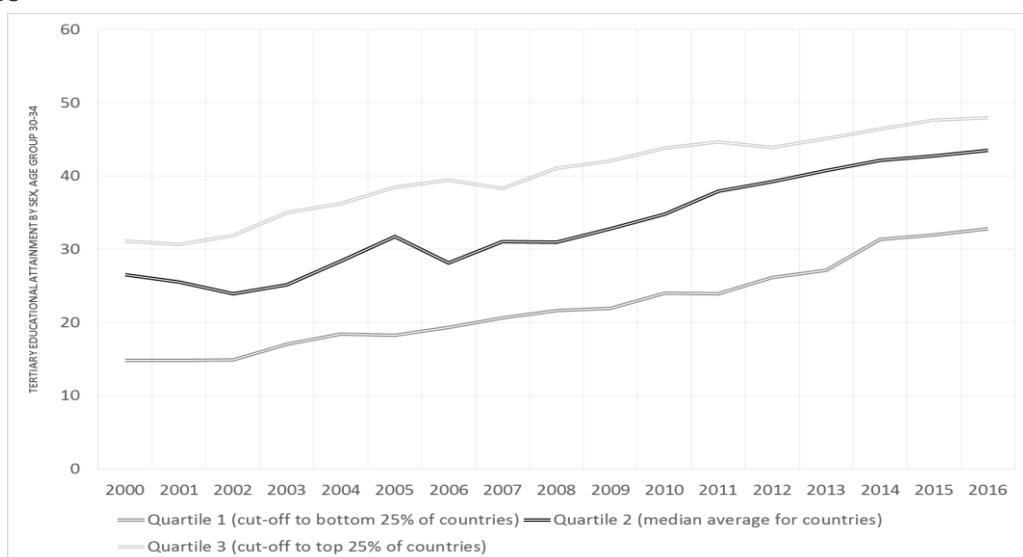
Admission systems are part of a key pipeline to better education, better work opportunities and better lives in the European political context. They provide the transition between secondary schooling and higher education, and for some people, a transition later in their lives from work or family life back into higher education. They also lay the foundation for graduate success. The admission system is a process of **matching, guidance** and **selection** which enables students to graduate with the new skills required for the networked knowledge society. These advanced skills and competences will enable graduates to benefit from future changes in the job market and will help them to become active citizens in their society.

The aim of the report is to subject admission systems in Europe to systematic and rigorous examination in order to learn more about how individual countries' systems work and how admission systems can be constructed to help reach different goals.

2.1 Current trends

The EU benchmark that 40% of people aged 30-34 will have completed some form of higher education by 2020 appears to be on track with the rate having risen from 27% in 2004 to 39% in 2016.²

Figure 2.1: Share of tertiary education attainment in the age group 30-34 years, 2000 - 2016



Source: Eurostat, t2020_41. Due to data availability 37 European countries are covered by this dataset.

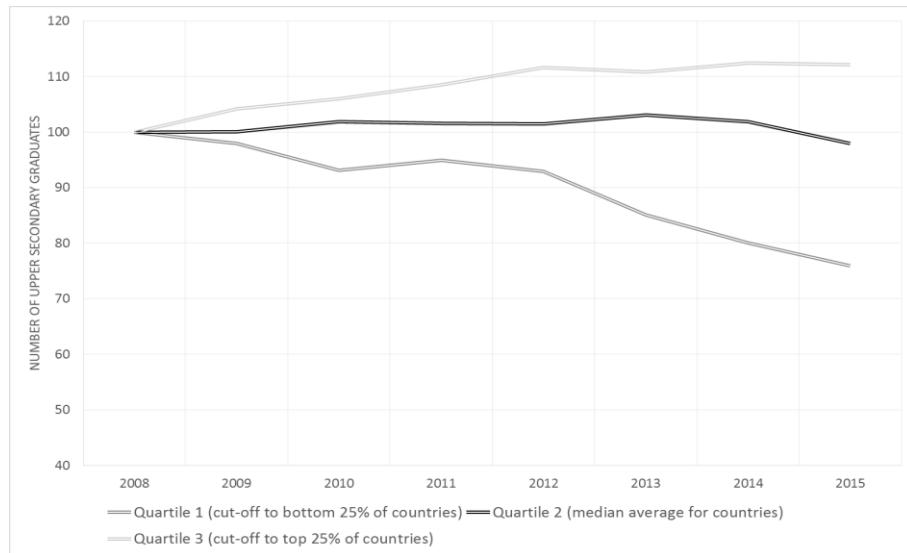
When asked to what did they attribute the growth in study numbers, European higher education leaders gave three main reasons: widening participation (41% of respondents), international recruitment (39%) and changes to admission policies (28%) (Sursock, 2015). It can certainly be argued that changes to admission policies and practices have been affecting both the size and the make-up of the study body.

However, the number of young people coming through the education pipeline, those who could become higher education students, is currently declining in many countries. The number of students graduating at upper-secondary school level is declining while the share of those obtaining a qualification which gives them the opportunity to enter

²http://ec.europa.eu/eurostat/product?code=t2020_41&language=en&mode=view

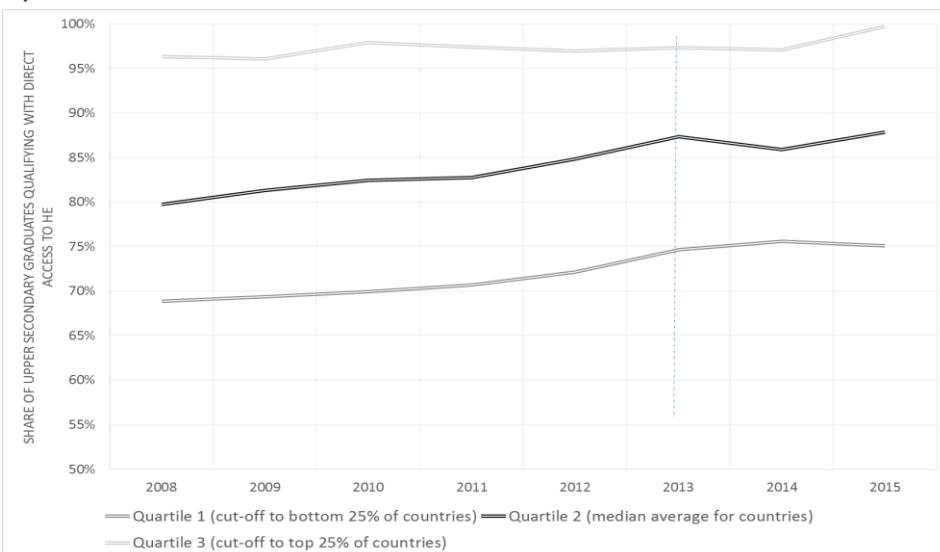
higher education is increasing only slightly. Hence, evidence suggests only a slight widening of the pool of candidates, as shown in Figures 2.2 and 2.3 below:

Figure 2.2: Number of upper-secondary graduates, 2008 – 2015 (Index 100 = 2008)



Source: Eurostat, *educ_grad2* and *educ_uoe_grad01*. Due to data availability 35 European countries covered by this dataset for most years.

Figure 2.3: Share of upper-secondary graduates qualifying for entry to higher education, 2008 – 2015

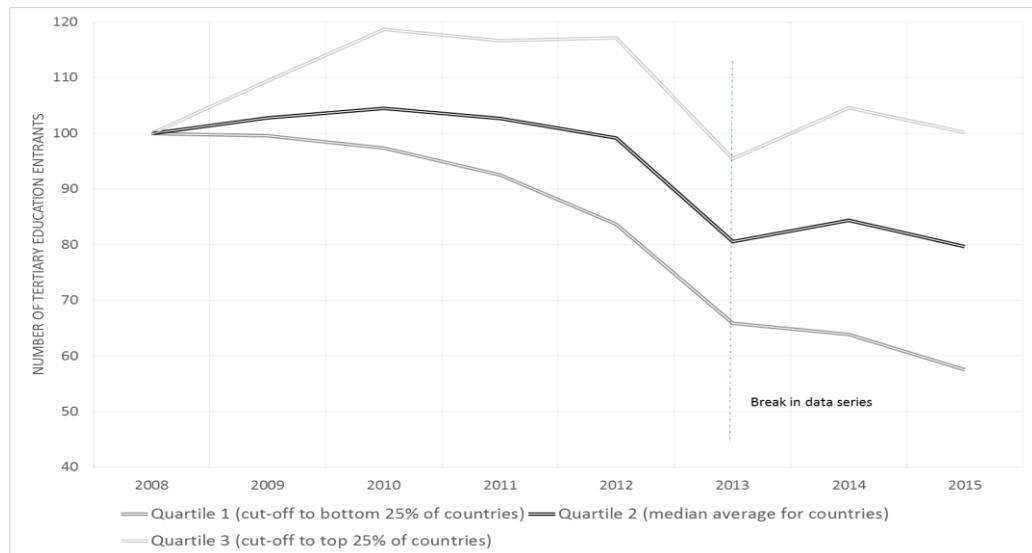


Source: Eurostat, *educ_grad2* and *educ_uoe_grad01*. Due to data availability this covers only 29 European countries.

For most countries, this slight widening of the pool has not been enough to stem the decline in the number of higher education entrants – see Figure 2.4. Indeed, asked about the future development of student enrolment in 2015 (Sursock, 2015), 14% of leaders of European HEIs responded that they expected a decline and 35% expected their enrolment numbers to remain the same. Whilst it is true that 39% expected a further increase, this was particularly the case for HEIs located in Belgium (63%),

Turkey (87%) and Switzerland (67%), countries that are less or not at all affected by demographic decline.

Figure 2.4: Number of tertiary education entrants, 2008 – 2015 (Index 100 = 2008)



Source: Eurostat, *educ_entr2tl*, *educ_uoe_ent01*. Due to data availability 35 European countries are covered by this dataset for most years. NB: Break in data series from 2013 after introduction of new ISCED 2011 classification. TE 2008 – 2012 = ISCED97 5A and 5B, TE 2013 – 2015 = ISCED2011 5-6.

The consequences for admission systems within the context above are:

- The high level of quantitative expansion over the past decade has put stress on national higher education systems, but many are now in an era of **consolidation**, quality improvement and outreach to new student groups (European Commission 2017). Policymakers are re-analysing who is applying for and entering higher education with a view to widening access to non-traditional groups. The available evidence shows clearly that higher education participation continues to fall short in terms of social equity and social reproduction (Hauschmidt, Gwosć, Netz, & Mishra, 2015), (van de Werfhorst & Shavit, 2015). This has led some countries to develop initiatives that widen participation and improve attainment (EACEA, 2013). These interventions include government support for: work undertaken by schools and through outreach and support mechanisms by HEIs.
- Many national systems have given HEIs the authority to make the final decision on the number of students they enrol³. HEIs are expected to use this **autonomy to make recruitment decisions** and to be proactive in accepting the candidates that best fit their profile. However, in the context of decline, many are also being proactive in ensuring they get sufficient candidates to fill the places available.
- Both policymakers and HEIs are also paying special attention to the initial phase of studies, with **bridging courses** and guidance to improve the attainment rates for the students enrolled in HEIs. In doing this, HEIs are expected to use their institutional autonomy to provide high quality and relevant learning experiences to these students.

³See dimension as part of tool developed by the European University Association: <http://www.university-autonomy.eu/dimensions/academic/>

Admission systems can be evaluated in terms of who gets into higher education (an equity dimension); how such decisions are made and supported to get a good match between candidate and programme (an efficiency dimension); and by the final attainment and outcome of studies (an effectiveness dimension).

2.2 Approach of the study

The aim of this study was to build on, but go beyond, the usual mapping of processes and structures of admission systems (Clancy, 2010; European Commission/EACEA/Eurydice, 2015; Orr & Riechers, 2010; Raftery & Hout, 1993; Stead, 2015; UEFISCDI, 2013; Usher & Cervenan, 2005; Usher & Medow, 2010).

Using mixed methods, this study not only captures structures and processes within this broad spread of admission systems, but also seeks to uncover behaviours, i.e. how people and institutions interact with the structures and processes of higher education admission. The mixed methods approach consists of two main elements: one highly quantitative and based on describing structures and processes, the other qualitative based on interviews.

Figure 2.5: SASH study's methodological approach



A system-level mapping of EU Member States, EEA/EFTA countries and candidate countries⁴. The individual country analysis is built on a series of dimensions of the educational system, from the early stages into higher education, based on comparable data and system level descriptors. After validation by national experts in each of the respective countries, the country mapping was used to build profiles of each of the countries mapped, as well as the identification of trends and patterns of higher education admission systems across Europe.

A series of eight case studies throughout Europe, with the different characteristics of their admission systems⁵, delivered by a team of national experts. The in-depth case studies provide a detailed view of the dynamics of higher education admission systems and how they work in practice. They consist of interviews with key stakeholders in each country from the higher education and policy-making fields, as well as four groups with

⁴all EU (28 states), EU candidate (Albania, the Former Republic of Macedonia, Montenegro, Serbia, Turkey) and EEA/EFTA (Liechtenstein, Iceland, Norway). However, Liechtenstein was excluded from the quantitative analysis as outlier.

⁵France, Germany, Ireland, Lithuania, Netherlands, Norway, Romania, Spain

two different sets of students: those planning to enter higher education (last year of upper-secondary schooling) and those who have recently entered higher education (first year). The focus groups deliver the most important consistent information on the decision-making process, highlighting differences between countries and groups within them.

3 A Holistic View of Admissions

This study takes a holistic view of what an admission system is and focuses on three aspects. Admission systems need to be understood in the context of different social, political and economic contexts. They are based on diverse philosophies of education in terms of what education can and should aim to achieve for individuals and for society. They are also the product of different actors who make a range of decisions, in the context of structural forces inside and outside higher education, over a long period of time. There are three aspects to this holistic view: that admission systems have multiple goals, that they involve multiple stakeholders and that they take place over time.

3.1 Admission systems have multiple goals

This study focuses on three of these multiple goals and they are described below.

An equitable admission system is one which focuses largely on students' potential to succeed, irrespective of their social background

To a considerable extent, inequalities in higher education are a function of broader social inequalities within and across countries. Admission systems therefore have a fundamental role to play in mediating and potentially overcoming these inequalities. Equity in higher education participation is also inherently contextual. Different countries have different groups for which they see equity in higher education as a priority concern.

The evidence from across Europe, and indeed the world, shows that participation in higher education is unequal, based on social background (Arum, Gamoran, & Shavit, 2007). Clancy describes each country as having its own legitimised approach to access and equity in higher education (Clancy, 2010). Each country and each admission system, therefore, has to seek out ways to assure the success of previously under-represented groups to improve the equity of the system, which may include setting incentives for their enrolment.

An efficient admission system is one which achieves a beneficial match between the interests and skills of the applicant and the higher education programme

The level of higher education drop-outs in Europe is high, which makes higher education inefficient, both for individuals and for society. The most recent major survey of European drop-out and completion rates in higher education suggests that most European national governments have put these issues high on the agenda and there are a wide variety of policies (financial and otherwise) that have been adopted to improve performance in this area (Vossensteyn, H.; Kottmann, A.; Jongbloed, B.; Kaiser, F.; Cremonini, L.; Stensaker, B.; Hovdhaugen, E.; Wollscheid, 2015).

The higher education admission system is not the only driver for non-completion of higher education. Student success is influenced significantly by students' sense of belonging to a particular institution and a particular field of study. Their chances of success rise as a student feels better integrated into a learning community and when they are studying something which they perceive as relevant to their future life and career. However, while much of the non-completion challenge may be associated with what happens between the student and the institution after entry, it is the admission system that supports students in selecting those study programmes that fit them best in terms of interests and skills, or indeed to decide whether higher education itself is the right choice for them. An efficient system is designed to match students with the institutions that will best 'fit' them.

An effective admission system is one which enables changes in study patterns to reflect the new and constantly changing demands of society and the labour market

In addition to facing challenges in terms of ensuring equitable access to higher education, following the expansion of enrolment and in addressing the high levels of student drop-out, European higher education systems have considerable variations in student outcomes after graduation. While employment and employability are not the only measures of success where higher education participation is concerned, the evidence clearly demonstrates the beneficial impact of higher education attainment for both society and the individual in a variety of ways. However, successful labour market outcomes for students are only partly a product of the higher education admission system. The state of economy in a particular country, as well as the nature of the higher education system itself and how it perceives its function in relation to graduate employability, all play a major part. Nevertheless, it can be argued that an effective higher education system is one which enables graduates to be successful in the labour market, now and in the future. Where higher education admission systems are concerned, the question is whether the admission system is adaptable enough to react to current and future changes in the labour market and in society in general.

3.2 Admission involves multiple stakeholders

Higher education admission systems involve multiple stakeholders. The three key stakeholders are schools, HEIs and students. The roles of these stakeholders can best be understood by looking at three specific questions, as shown in Figure 3.1.

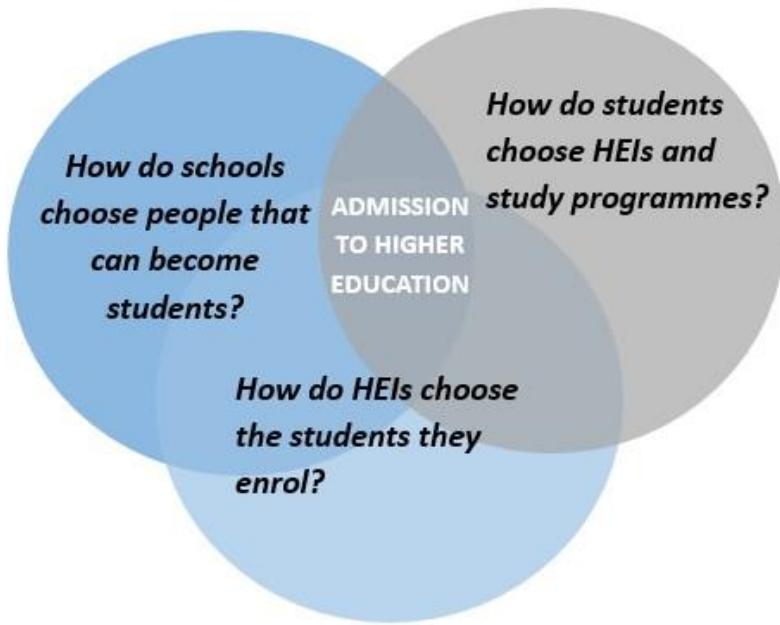
How do schools choose people that can become students?

Access to higher education begins a significant time before prospective students apply or enter a HEI. In terms of entry to higher education, there are three distinct ways in which schools can influence whether students access higher education, as well as the type of HEI or course they enter.

- In all school systems, over several years, the secondary school system assigns grades to students that can be used to examine their relative academic capabilities in various fields, while the final secondary school leaving examination acts as a *de facto* higher education entrance exam.
- In more selective school systems, the stream into which a pupil is placed during their time in a secondary system can determine to a greater or lesser extent their future options. In some countries, a major “sifting” occurs at the end of primary school or the lower-secondary level, when students are streamed into different pathways, based largely on perceived academic ability.
- To varying degrees across and within countries, schools also provide counselling and information, advice and guidance to pupils on their possible transition to higher education (Hill, 2008; LeTendre, Gonzalez, & Nomi, 2006).

The three ways in which schools enable the progression of young people into higher education can also impact differently on the future progress of pupils from different social backgrounds to higher education.

Figure 3.1: Admission to higher education as interplay between three key questions



How do higher education institutions choose the students they enrol?

In all countries, HEIs have a degree of autonomy over how they select their students, but both the extent and nature of this autonomy vary considerably across countries. Understanding a higher education admission system requires both assessing this autonomy and exploring the mechanics of how selection and guidance take place. It also requires an understanding of the role of academic ability in this process, which is assessed through a variety of different instruments (e.g. school grades, national matriculation exams, national higher education entrance exams, exams decided by each individual HEI and even portfolios and interviews).

However, alternative mechanisms of selection that involve more focus on the individual, while desired by certain HEIs / students, come with additional financial and logistical challenges. The extent of autonomy is also subject to legal constraint: in some countries institutions are compelled to admit anyone achieving a minimum standard. Finally, policy may set certain regulations or incentives, which either compel or reward the recruitment of students from certain social backgrounds – usually those from specific ethnic or socio-economic groups and / or those with disabilities – defined as under-represented in a specific context.

How do students choose higher education institutions?

The way in which candidates make their choice of one particular higher education programme or institution is a complex process. It is a product of several factors which coalesce in different non-linear ways for each individual: social background, awareness and knowledge of higher education options and support provided through family and peers, school experiences and, where they occur, advice and guidance from careers and study advisors (Moore, Sanders, & Higham, 2013). Timing and weighting differs from one individual to another. These choices are conditioned in part by academic results, the perceived prestige of various educational institutions (sometimes mediated by transparency tools such as the German CHE rankings or the English UNISTATS) and the financial cost of education, including both study-related fees and living costs, and offsetting aid in the form of loans and grants (Cabrera & La Nasa, 2000).

Regardless of how well-prepared they are for this decision-making, navigating this set of complex and often conflicting influences requires potential higher education

candidates to make individual decisions, regarding what to study, where and how, at specific times.

3.3 Admission takes place over time

A key principle of this study's holistic approach is that the process of admission to higher education begins at some point in their schooling, before students enter higher education. It may not end at the point of entry, but may include the initial phase of higher education, in some cases even going beyond the first year of higher education. Hence, this study perceives an admission system as including two stages:

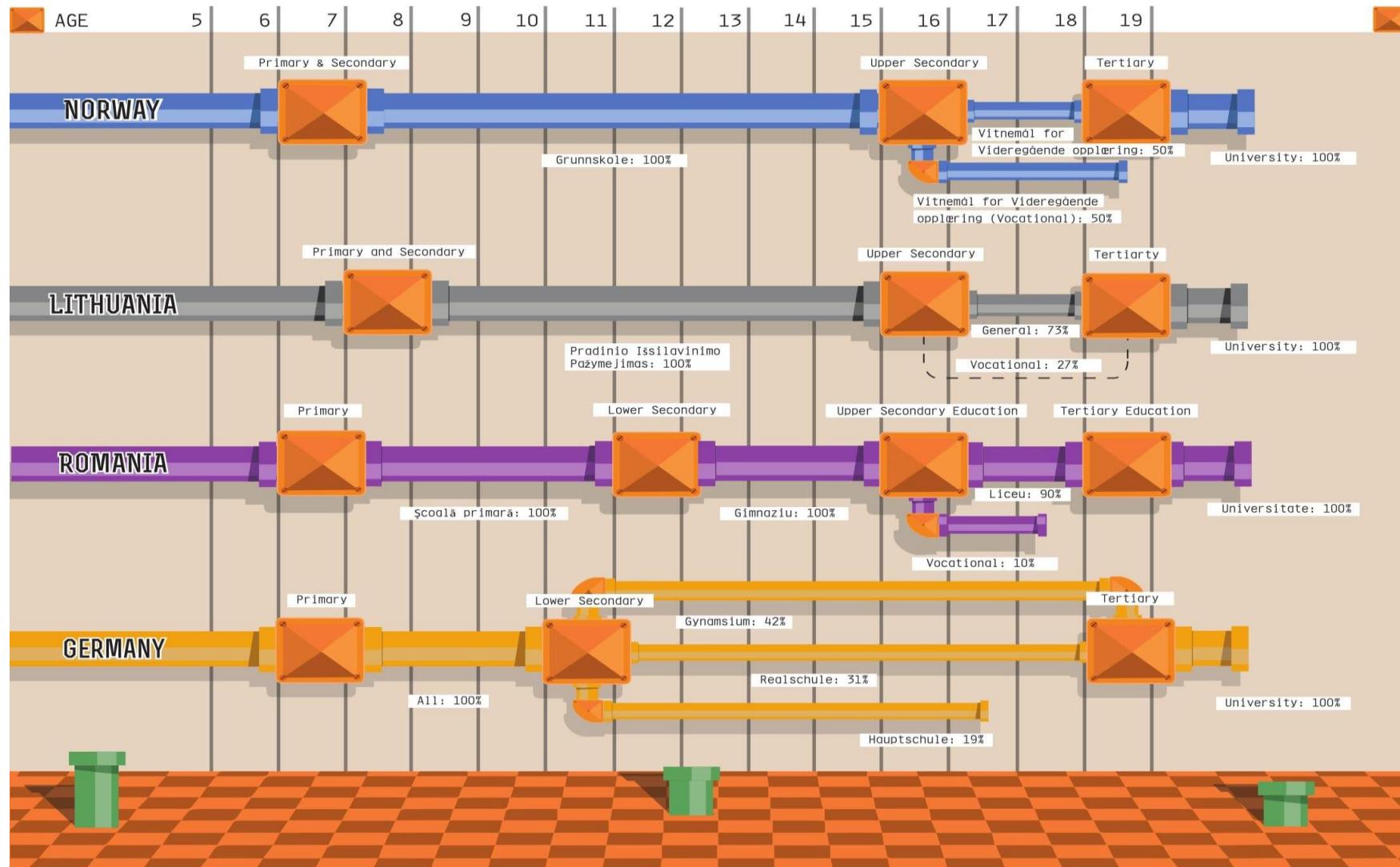
- the pre-entry period – encompassing the nature of the primary and secondary schooling system
- transition into higher education – the process of application and entry.

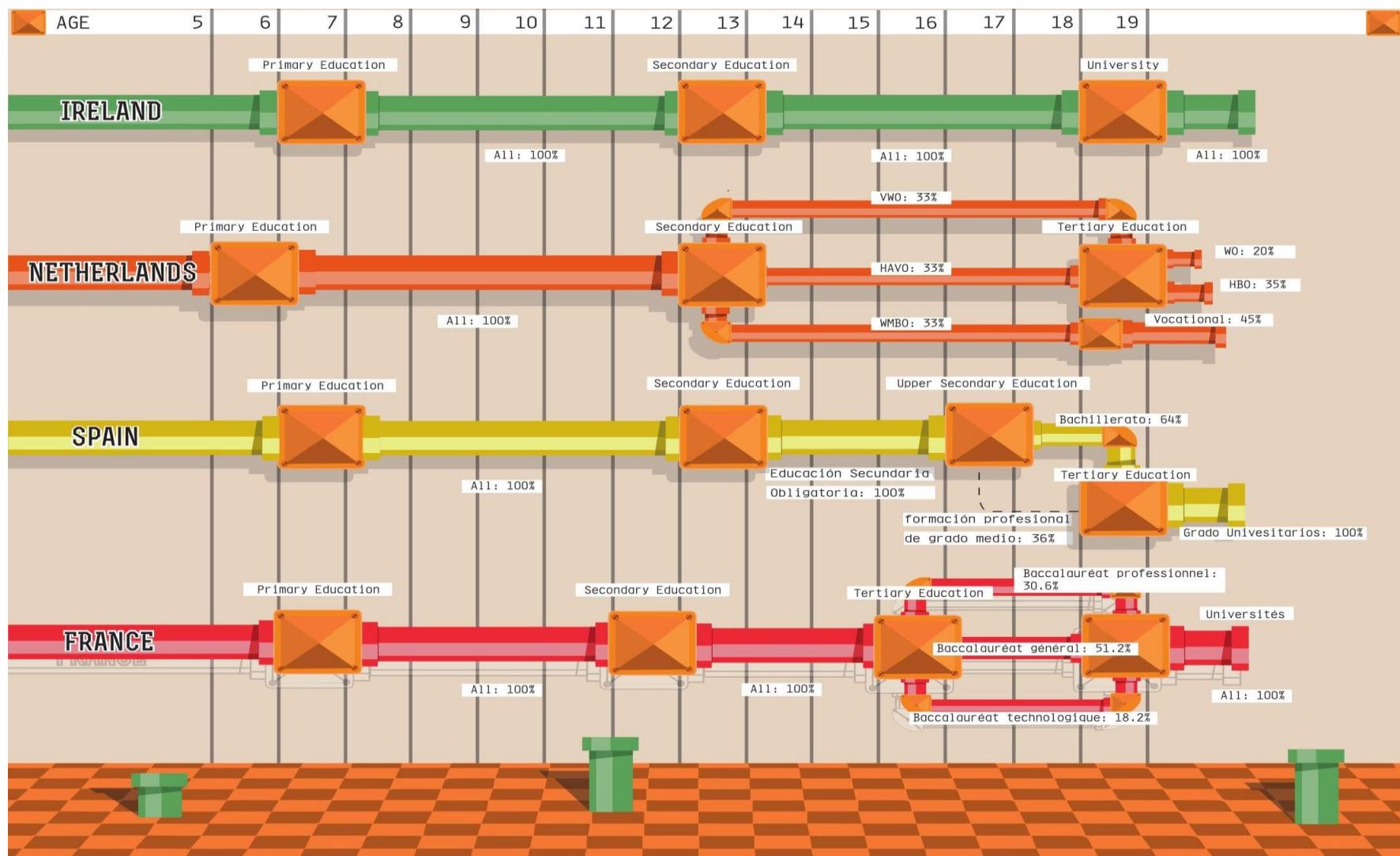
If the admission process is seen as a pipeline, carrying students from primary school into higher education, each country's pipeline looks somewhat different. It is based on the age at which streaming begins, the number of streams provided, as students progress through lower and upper-secondary school, and how each stream links to different parts of the higher education system.

Figure 3.2 shows how the pipelines compare across the eight case study countries. Across the eight in-depth European case studies, Ireland is unique in having minimal streaming⁶ in their secondary schools. Three countries (i.e. Germany, the Netherlands and Lithuania) begin their streaming process at the end of primary school, while the other four (i.e. France, Romania, Norway, Spain) begin at the end of the lower-secondary stage. Where countries have a two-stream system, the streams are simply academic and vocational. Where three streams are in place there is usually an intermediate form of vocationally-orientated qualification, which nevertheless permits entry into a bachelor's level programme (e.g. the *bac pro* in France). In some cases (e.g. Spain), students from the vocational stream are permitted to take the exams that permit entry to higher education but in practice they are at a major disadvantage because the curriculum of their vocational stream does not cover the material required to pass the exam.

⁶ While all students are eligible to take the Leaving Certificate Examination about 5% of students at upper-secondary level take the Applied Leaving Certificate Programme which does not qualify for direct entry into higher education

Figure 3.2: Overview of the pipeline to higher education in eight countries





Source: Authors

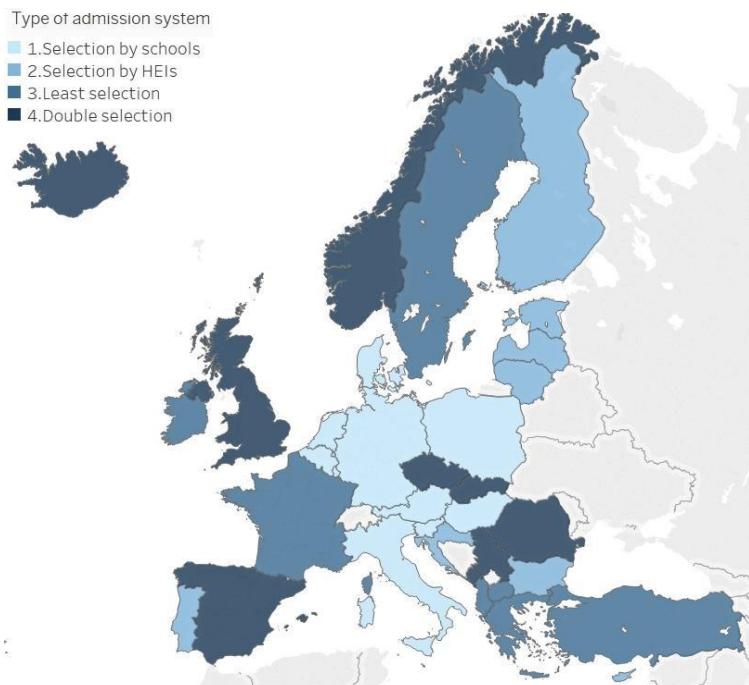
4 Typology of Admission Systems

The purpose of this chapter is to better understand how higher education admission systems in Europe are constructed. To do this, it focuses on how the key stakeholders identified in Chapter 3 above interact, i.e. schools and HEIs. By doing this, it is possible to develop different typologies of system, as described previously. More information on the method used is available in the Methodological Notes section at the end of this report.

4.1 Four types of admission system

Where admission to higher education is concerned, the most important aspects of schooling and HEIs is the extent of streaming in schools and the extent to which HEIs have autonomy in selecting their students. With respect to streaming, solely direct pathways from secondary to higher education were considered; second-chance routes are excluded from the typology as they cover very few students (see Chapter 6).

In terms of streaming, the most important question is: **do all streams lead to some form of higher education**, or are there one or more streams which end up with no possibility of progressing to higher education? This is a relatively straightforward question. Where HEI autonomy is concerned the key question is: **do HEIs have the autonomy to use their own criteria in selecting students?** This second dimension is challenging to turn into a binary measure, as there are many ways that institutional autonomy and admission procedures can be implemented. The approach taken here is described below.



Source: Authors

Using these two dimensions produces four types of admission system. These four types and which countries correspond to them are described below and in Table 4.1. It should be noted that this classification is a form of baseline model, which can be modified in each country's context through specific strategic and policy interventions and may also not be the same for every study programme or every HEI in a country. It presents a starting point for further analysis and investigation of explanations for how specific systems work in context.

- Type 1: **Selection by schools:** The matrix shown in Table 4.1 reveals the fact that 10 countries have an admission system where the school system has a high influence. At least one pathway through secondary schooling does not lead to a qualification enabling higher education entry and, additionally, HEIs are not able to

use additional criteria for further selection of applicants. This cluster includes the case study countries Germany and Netherlands.

- Type 2: **Selection by HEIs:** The opposite case is when little pre-selection occurs within the schooling system, but HEIs generally use additional criteria for making recruitment decisions. This is the case for only 8 countries. This cluster includes Lithuania as a case study country.
- Type 3: **Least selection:** If neither the school system limits students nor the HEIs select them, then students have the widest choice of whether they study or not. This cluster consists of 8 countries, including the case study countries France and Ireland.
- Type 4: **Double selection:** The final constellation is a hybrid of types 1 and 2. It consists of countries where both the school system and HEIs select students and therefore limit their decision spectrum. This is the case for 9 countries, including three case study countries: Spain, Norway and Romania.

Table 4.1: A matrix for describing admission systems

Selection	Streaming	(Nearly all) HEIs can select with additional criteria	HEIs cannot select with additional criteria (in normal circumstances)
At least one pathway through the school system does not lead to a qualification enabling higher education entry (to some part of the system)	Type 4: Double selection <i>Czech Republic, Iceland, Montenegro, Norway, Romania, Serbia, Slovakia, Spain, United Kingdom</i>	Type 1: Selection by schools <i>Austria, Belgium, Denmark, Germany, Hungary, Italy, Luxembourg, Netherlands, Poland, Slovenia</i>	
In general, all pathways may lead to higher education entry (in some part of the system)	Type 2: Selection by HEIs <i>Bulgaria, Croatia, Cyprus, Estonia, Finland, Portugal, Lithuania, Latvia</i>	Type 3: Least selection <i>Albania, France, Greece, Ireland, the former Yugoslav Republic of Macedonia, Malta, Sweden, Turkey</i>	

5 Performance differences between types

The purpose of this chapter is to encapsulate the findings of a mapping exercise of policies and outcomes across 36 European states. The chapter focuses on comparing policy outcomes such as entry rates, graduation rates, etc. across European countries and examine how they differ by type of admission system in an endeavour to show correlations between systems and outcomes. The main results are summarised in a box at the top of each subsection.

5.1 Entry rates are higher where HEIs have increased autonomy

Entry rates are linked both with the level of public HEIs' autonomy to organise further assessment and with the size of the private higher education sector.

When HEIs can set additional admission criteria, they use that power to let more people in. Figure 5.1 below shows that countries with Type 2 (selection by HEIs) and Type 4 (double selection) have the highest entry rate. As the difference between types 2/4 and types 1/3 is the level of autonomy HEIs have in organising further assessment, it is clear that the more selective a system is the more students enter higher education compared with a synthetic population (18 years).

As these results can be influenced by the differences between countries in enrolment rates in upper-secondary schools, by looking at the ratio between enrolments in higher education and upper-secondary graduates, figure 5.2 shows that again types 2 (selection by HEIs) and 4 (double selection) have the highest number of graduates that go to higher education.

Another factor that influences entry rates is the size of the private sector, since private HEIs also tend to have the autonomy to set their own admission criteria. Figure 5.3 shows that more upper-secondary graduates enter higher education in countries with a large private sector. This is the same when looking only at the number of entrants.

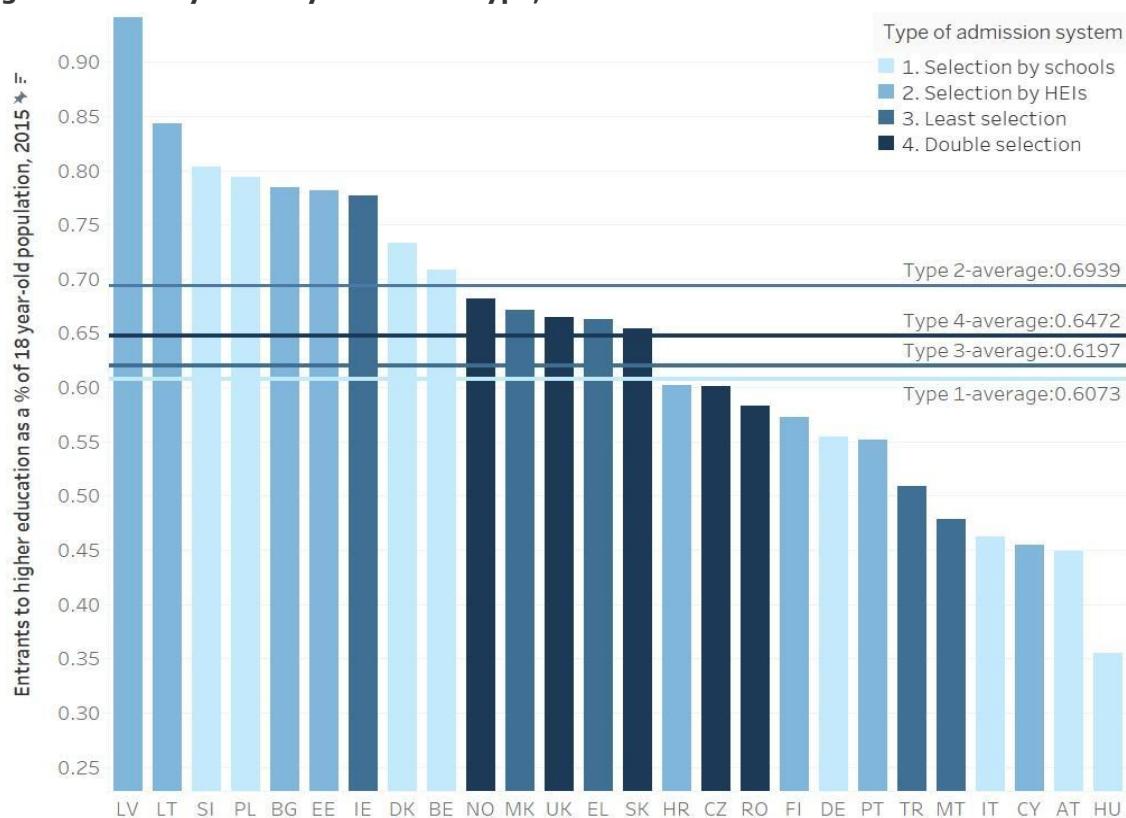
Entry rates are linked both with the level of public HEIs' autonomy to organise further assessment and with the size of the private higher education sector.

When HEIs can set additional admission criteria, they use that power to let more people in. Figure 5.1 below shows that countries with Type 2 (selection by HEIs) and Type 4 (double selection) have the highest entry rate. As the difference between types 2/4 and types 1/3 is the level of autonomy HEIs have in organising further assessment, it is clear that the more selective a system is the more students enter higher education compared with a synthetic population (18 years).

As these results can be influenced by the differences between countries in enrolment rates in upper-secondary schools, by looking at the ratio between enrolments in higher education and upper-secondary graduates, figure 5.2 shows that again types 2 (selection by HEIs) and 4 (double selection) have the highest number of graduates that go to higher education.

Another factor that influences entry rates is the size of the private sector, since private HEIs also tend to have the autonomy to set their own admission criteria. Figure 5.3 shows that more upper-secondary graduates enter higher education in countries with a large private sector. This is the same when looking only at the number of entrants.

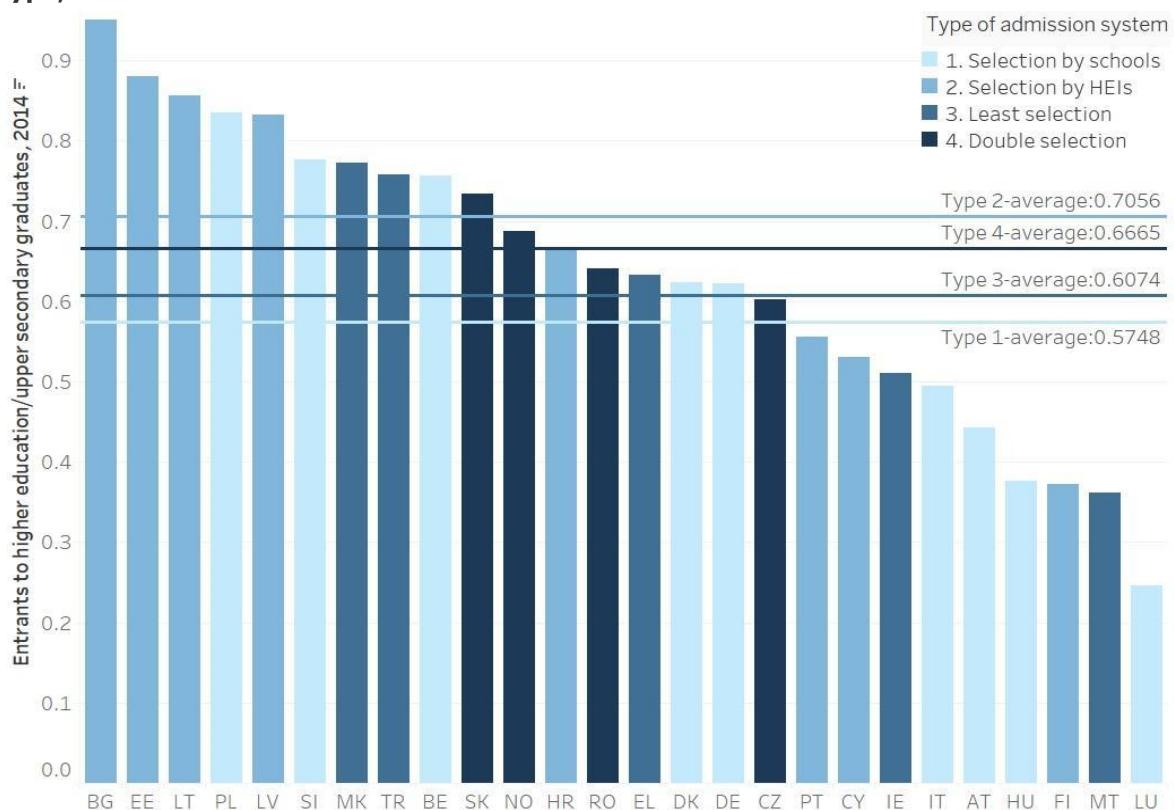
Figure 5.1: Entry rates by admission type, 2015



Interpretational note: This figure looks at how many people enter higher education (ISCED 6). The Y axis indicates the ratio of entrants (all ages) to bachelor or equivalent degree relative to the population of each country. The 18 years old population on 1st of January 2015 was used as a fictive cohort. A high Y axis value indicates a high number of entrants relative to the population. Colour shows details about the admission type. Null values were excluded.

Source: Eurostat (educ_uoe_ent01); (demo_pjan).

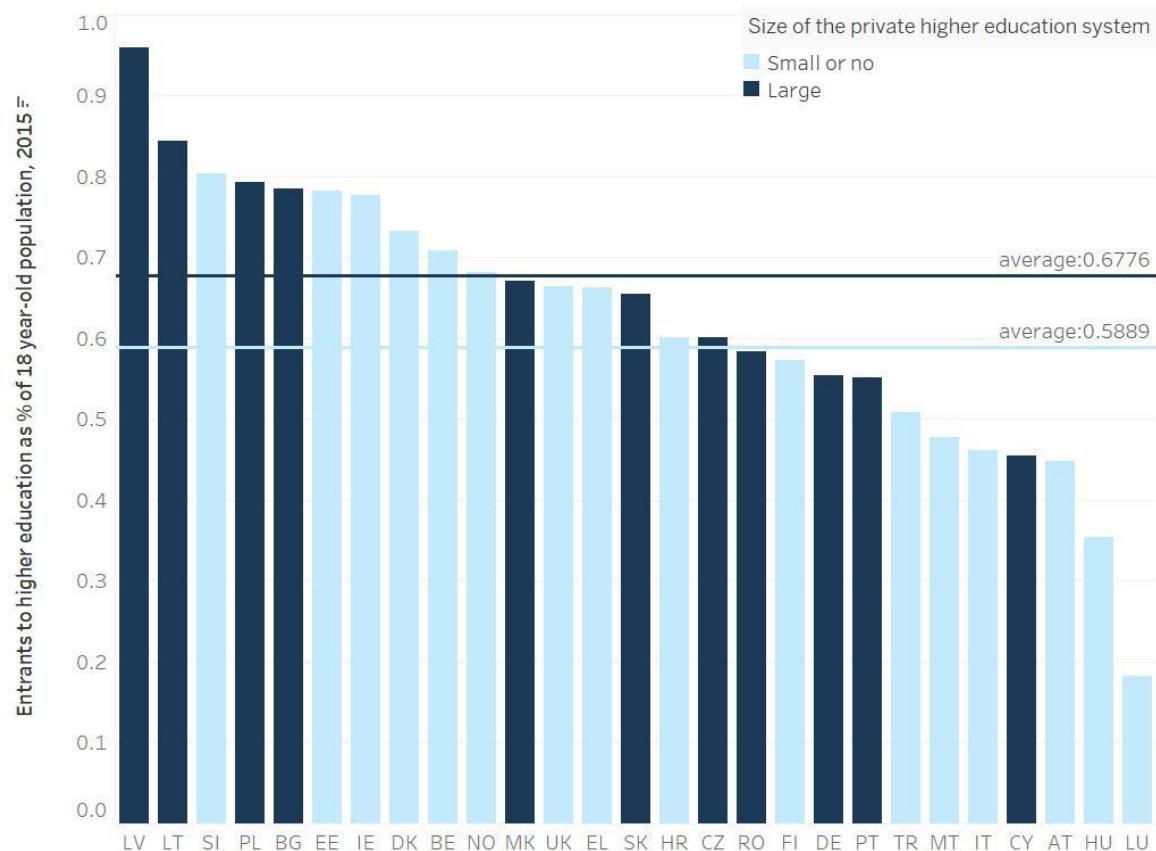
Figure 5.2: Transition from upper-secondary level to higher education by admission type, 2015



Interpretational note: This figure looks at the transition from upper-secondary education to higher education (ISCED6). The Y axis indicates the ratio between the number of entrants (all ages) and the number of graduates (all ages). A high Y axis value indicates that a high number of graduates enter directly into a bachelor programme. Colour shows details about the admission type. Null values were excluded.

Source: Eurostat (educ_uoe_grad01); (educ_uoe_ent01).

Figure 5.3: Entry rates by size of the private higher education system, 2015



Interpretational note: This figure looks at the connection between the size of the private higher education system and how many students enter higher education. The Y axis indicates the ratio of entrants (all ages) to Bachelor or equivalent degree relative to the population of each country. The 18 years old population on 1st of January 2015 was used as a fictive cohort. A high Y axis value indicates a high number of entrants relative to the population. Colour shows details about the size of the private higher education system: Large - if the number of students enrolled into private higher education institutions (levels 5-8) was over 10% of the student population; Small or none - if the percentage was under 10%. Null values were excluded.

Source: Eurostat (educ_ue_enrt01)

5.2 Social inclusion higher for graduates in least selective systems

Countries that put up the fewest academic barriers to access to higher education are also the ones with the most equitable outcomes by social background measured using highest educational attainment of graduates' parents.

Looking at the odds ratio of young adults (25-34) with highly educated parents (i.e. tertiary educational attainment) completing tertiary education over young adults (25-34) with medium educated parents (i.e. upper-secondary – ISCED 3 or post-secondary non-tertiary education– ISCED 4), countries with a Type 3 (least selection) admission system have the lowest level of inequity (see Figure 5.4).

However, the systems with the next best results are Type 4 systems (double selection), which one might assume might have the lowest level of inclusion.

The differences between the four types are not large, although the difference between the best (Type 3 – least selection) and the worst (Type 1 – selection by schools) is certainly significant. A further analysis, looking separately at the influence of school streaming and autonomy of HEIs, showed that the more significant of the two factors was school streaming (though the effect was not particularly large).

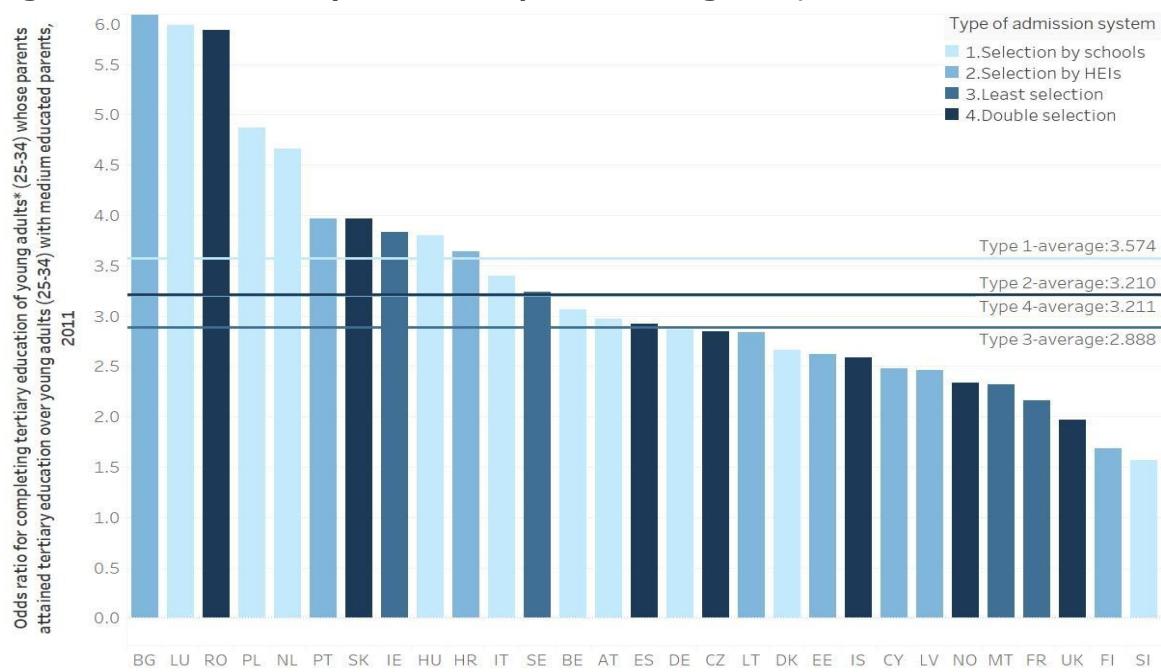
Countries that put up the fewest academic barriers to access to higher education are also the ones with the most equitable outcomes by social background measured using highest educational attainment of graduates' parents.

Looking at the odds ratio of young adults (25-34) with highly educated parents (i.e. tertiary educational attainment) completing tertiary education over young adults (25-34) with medium educated parents (i.e. upper-secondary – ISCED 3 or post-secondary non-tertiary education– ISCED 4), countries with a Type 3 (least selection) admission system have the lowest level of inequity (see Figure 5.4).

However, the systems with the next best results are Type 4 systems (double selection), which one might assume might have the lowest level of inclusion.

The differences between the four types are not large, although the difference between the best (Type 3 – least selection) and the worst (Type 1 – selection by schools) is certainly significant. A further analysis, looking separately at the influence of school streaming and autonomy of HEIs, showed that the more significant of the two factors was school streaming (though the effect was not particularly large).

Figure 5.4: Attainment by educational parental background, 2011



Interpretational note: The figure indicates on the Y-axis the ratio of the likelihood of achieving a tertiary degree for children of highly-educated vs medium-educated parents. A high value indicates a particularly inequitable system because children of medium-educated parents have much lower chances of attaining tertiary education than children of highly-educated parents; a low value indicates a more equitable system. As in previous charts, colour shows details about the admission type. Null values were excluded.

Source: Eurostat, EU-SILC ad hoc module on intergenerational transmission of disadvantages.

5.3 Participation of mature students is higher for more selective systems

Countries in which HEIs can use their own admission criteria (Types 2 and 4) are more likely to admit a higher proportion of mature students. However, the same trend does not apply when looking at graduation rates, where graduation rates tend to be lower for mature student

Where HEIs do not possess autonomy, the way into higher education usually takes the form of written examination focused on secondary school material, which students over 30 would not be well-placed to complete. If they can give modified examinations or even oral examinations then one would expect this to work in favour of older students. An exception here would be countries like Spain, which does not provide a great deal of autonomy, but does provide special routes into higher education for older students.

However, the picture changes if the focus is on graduation rather than participation. When viewing mature graduates as a percentage of all graduates instead of mature students as a percentage of all students, the data shows almost no difference in values between countries with high and low levels of autonomy (less than 3%).

This result suggests that countries with more institutional autonomy in selection may have higher rates of drop-out for older students, implying that freedom to select may have different effects for mature students than for traditional-aged ones. For traditional-aged students, autonomy in selection means students with lower levels of prior attainment are less likely to be admitted and leads to higher completion rates; for mature students, autonomy in selection is more inclusive, but leads to lower completion rates.

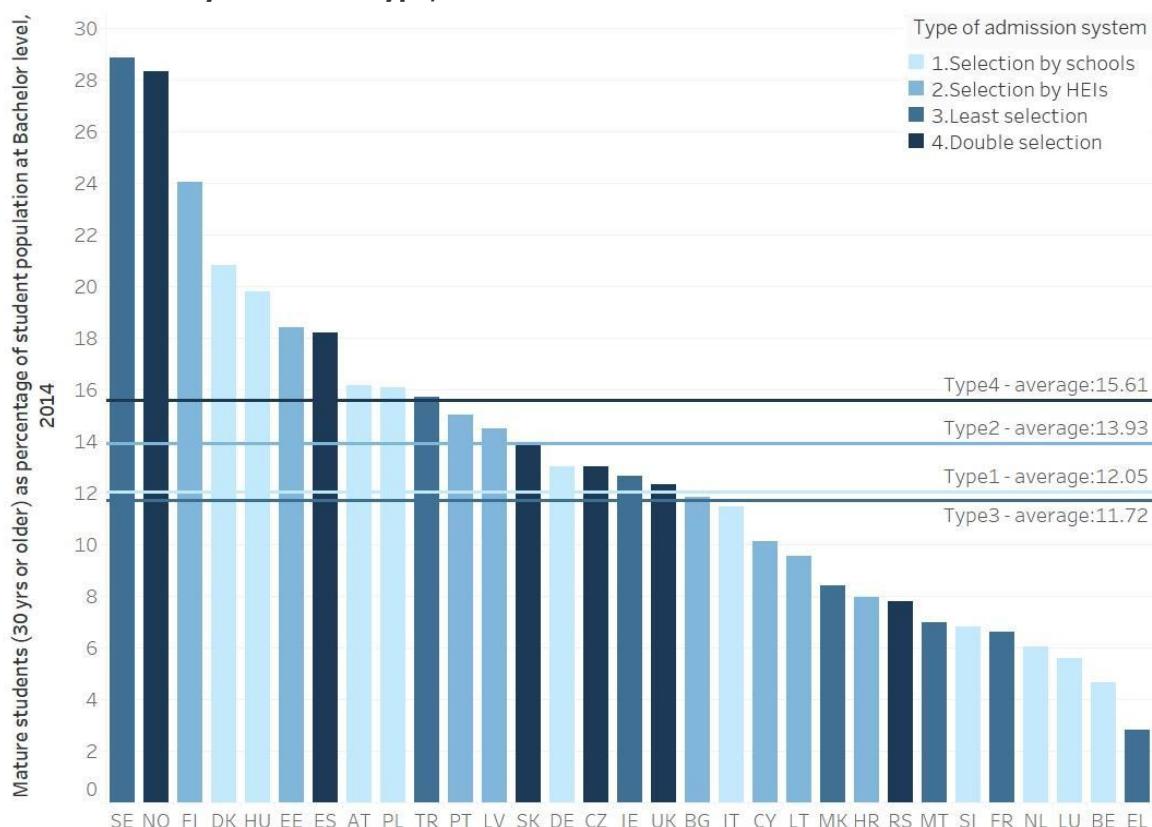
Countries in which HEIs can use their own admission criteria (Types 2 and 4) are more likely to admit a higher proportion of mature students. However, the same trend does not apply when looking at graduation rates, where graduation rates tend to be lower for mature students.

Where HEIs do not possess autonomy, the way into higher education usually takes the form of written examination focused on secondary school material, which students over 30 would not be well-placed to complete. If they can give modified examinations or even oral examinations then one would expect this to work in favour of older students. An exception here would be countries like Spain, which does not provide a great deal of autonomy, but does provide special routes into higher education for older students.

However, the picture changes if the focus is on graduation rather than participation. When viewing mature graduates as a percentage of all graduates instead of mature students as a percentage of all students, the data shows almost no difference in values between countries with high and low levels of autonomy (less than 3%).

This result suggests that countries with more institutional autonomy in selection may have higher rates of drop-out for older students, implying that freedom to select may have different effects for mature students than for traditional-aged ones. For traditional-aged students, autonomy in selection means students with lower levels of prior attainment are less likely to be admitted and leads to higher completion rates; for mature students, autonomy in selection is more inclusive, but leads to lower completion rates.

Figure 5.5: Mature students (30 years or older) as percentage of student population at Bachelor level by admission type, 2014



Interpretational note: Figure 5.5 looks at the degree to which older students are welcomed within the system. This is done by measuring the percentage of total Bachelors enrolled by country and cross-tabulating with the level of autonomy the HEIs possess in organising admissions. A high value indicates a higher percentage of mature students in the student body. As usual, colour shows details about the admission type. Null values were excluded. Note that the difference between types 4 (double selection) / type 2 (selection by HEIs) and types 1 (selection by schools) / type 3 (least selection) is the level of autonomy HEIs have in selecting with additional criteria.

Source: Eurostat (educ_ue_enrt02)

5.4 Participation of female students

In countries with streams not leading to higher education and HEIs' autonomy in organising assessment (Type 4, double selection), females have a higher increase in participation between upper-secondary and higher education.

This is related to the fact that usually the vocational streams that do not lead to higher education are male dominated streams. The average difference between the percentage of females in vocational streams and general streams is 12.5%. Also, given that women tend to have better academic results at the secondary level, this result is intuitive: they have better academic results and so are more likely to be selected in a competitive system. The differences are not large, but are robust to sensitivity checks and GDP analysis (*for more details, please see methodological notes*).

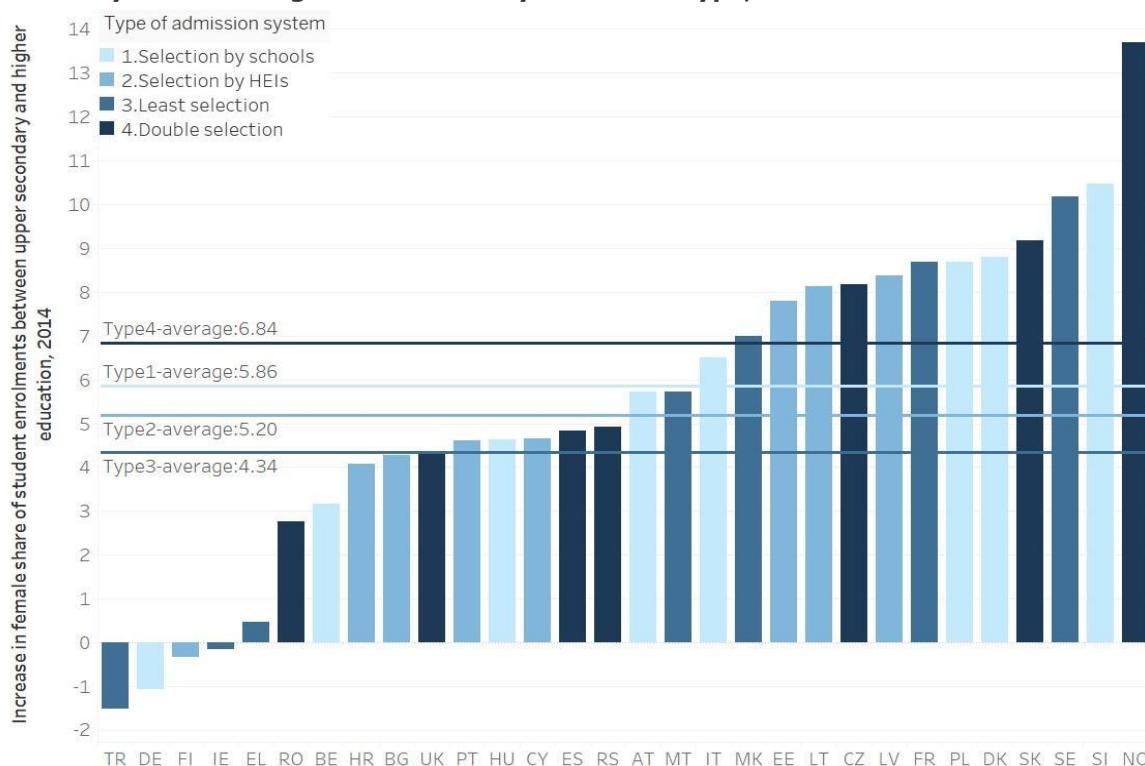
Moreover, the average percentage of female graduates is higher than the average percentage of female enrolments which seems to indicate a higher drop-out rate for males. The differences between countries with different admission systems indicate a low influence of the admission system.

In countries with streams not leading to higher education and HEIs' autonomy in organising assessment (Type 4, double selection), females have a higher increase in participation between upper-secondary and higher education.

This is related to the fact that usually the vocational streams that do not lead to higher education are male dominated streams. The average difference between the percentage of females in vocational streams and general streams is 12.5%. Also, given that women tend to have better academic results at the secondary level, this result is intuitive: they have better academic results and so are more likely to be selected in a competitive system. The differences are not large, but are robust to sensitivity checks and GDP analysis (*for more details, please see methodological notes*).

Moreover, the average percentage of female graduates is higher than the average percentage of female enrolments which seems to indicate a higher drop-out rate for males. The differences between countries with different admission systems indicate a low influence of the admission system.

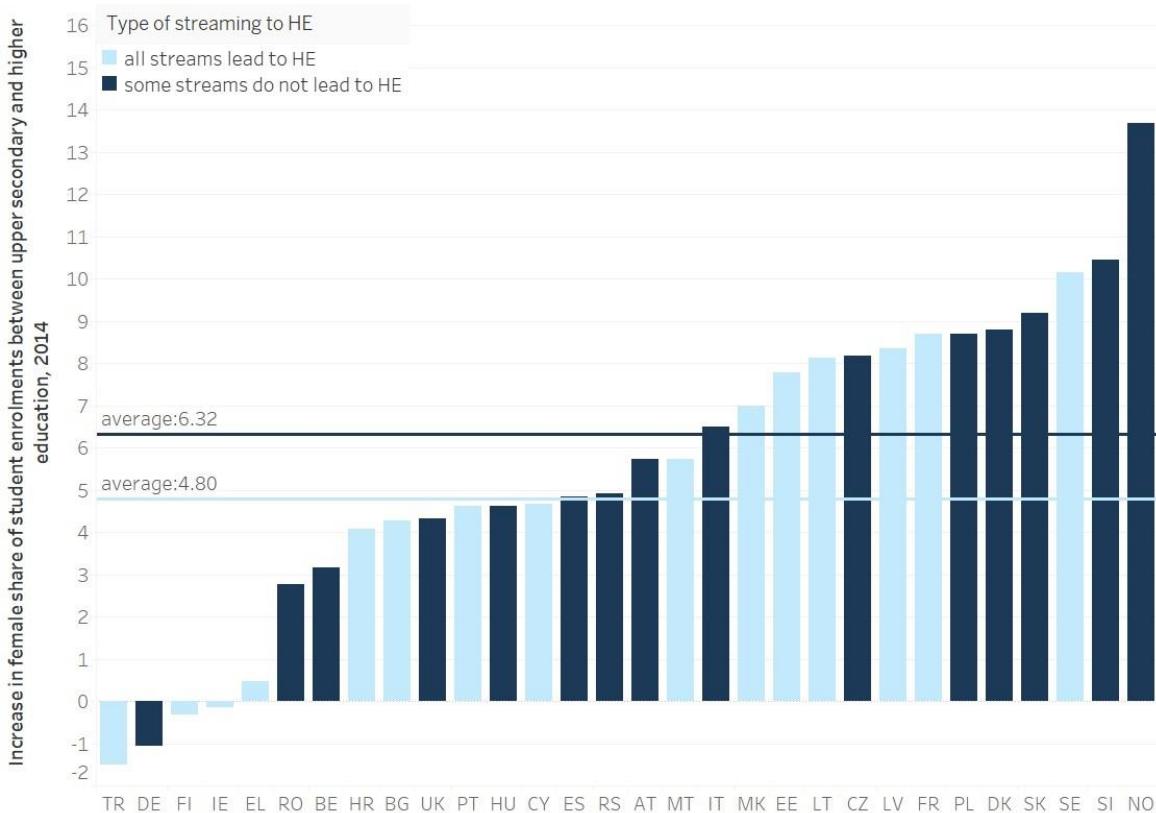
Figure 5.6: Increase in the female share of student enrolments between upper-secondary level and higher education by admission type, 2014



Interpretational note: Figure 5.6 looks at the degree to which female students are welcomed within the system. This is done by measuring the difference between the percentage of females in upper-secondary schools and the percentage of females in higher education (ISCED 6). A higher value means that the proportion of women in higher education has increased compared with secondary education. Colour shows details about the admission type. Null values were excluded.

Source: Eurostat (educ_uoe_enrt02); (educ_uoe_enrs02)

Figure 5.7: Increase in the female share of student enrolments between upper-secondary level and higher education by streaming type, 2014



Interpretational note: Figure 5.7 also looks at the degree to which female students are welcomed within the system. This is done by measuring the difference between the percentage of females in upper-secondary schools and the percentage of females in higher education (ISCED 6). A higher value means that the proportion of women in higher education has increased compared with secondary education. Colour now shows the streaming type that exists in each country. Null values were excluded.

Source: Eurostat ([educ_uoe_enrt02](#)); ([educ_uoe_enrs02](#))

5.5 Completion rates are linked to selectivity

Completion rates are linked to selectivity, and especially with the level of HEIs autonomy to organise further assessment. This indicates that the more selective a system is at the front end, the higher the completion rate, and therefore the more efficient it is at graduating students.

Figure 5.8 shows that countries with a Type 2 (selection by HEIs) admission system have the highest average completion rates (74%) while Type 3 (least selection) have the lowest (56%).

Moreover, when breaking down the categories separately by level of HEI autonomy (Figure 5.9) and secondary school streaming (Figure 5.10) the findings show that the effect of HEI autonomy on higher completion rates is somewhat stronger than the effect of the school streaming.

Looking at aggregate data for the national level, countries with a large private higher education system do not have different average completion rates (66%) compared with countries with a small or no private higher education systems (65%). All results are robust to sensitivity and GDP tests.

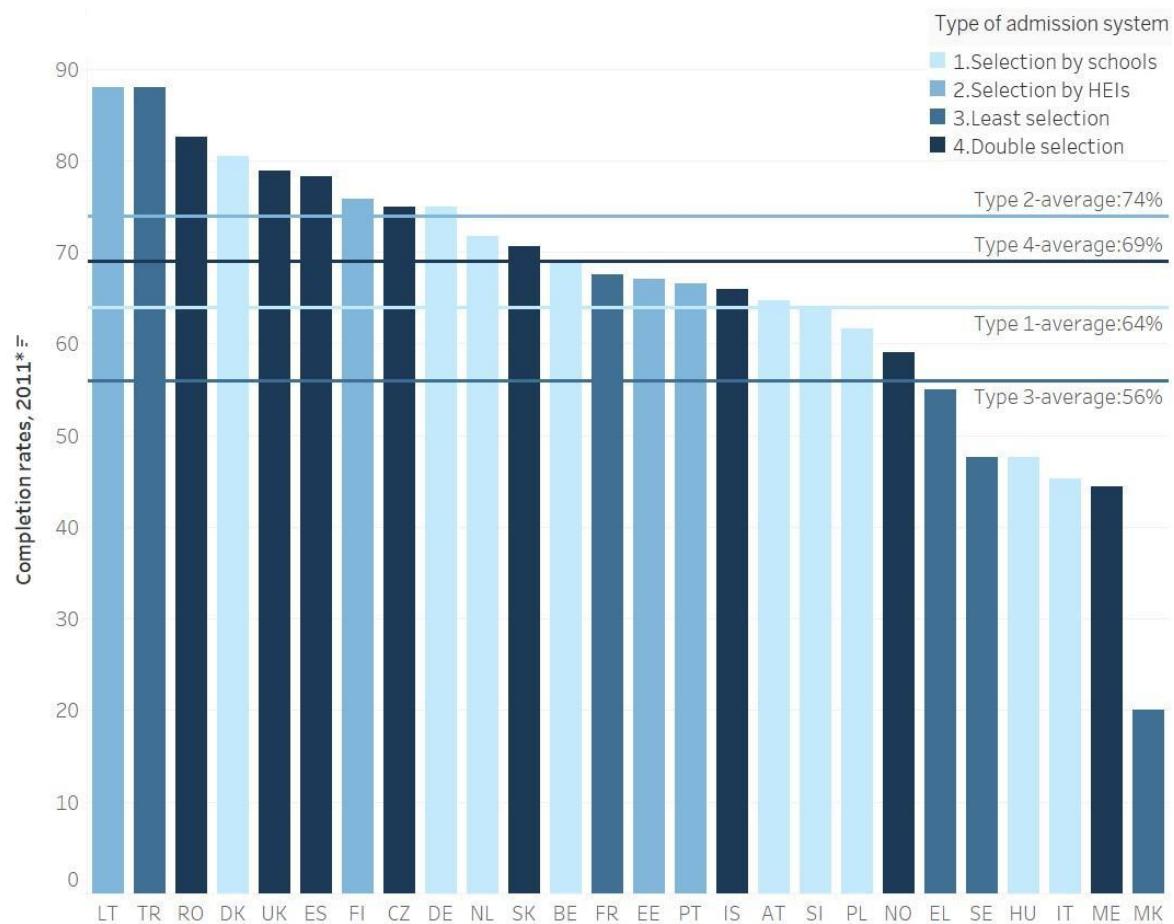
Completion rates are linked to selectivity, and especially with the level of HEIs autonomy to organise further assessment. This indicates that the more selective a system is at the front end, the higher the completion rate, and therefore the more efficient it is at graduating students.

Figure 5.8 shows that countries with a Type 2 (selection by HEIs) admission system have the highest average completion rates (74%) while Type 3 (least selection) have the lowest (56%).

Moreover, when breaking down the categories separately by level of HEI autonomy (Figure 5.9) and secondary school streaming (Figure 5.10) the findings show that the effect of HEI autonomy on higher completion rates is somewhat stronger than the effect of the school streaming.

Looking at aggregate data for the national level, countries with a large private higher education system do not have different average completion rates (66%) compared with countries with a small or no private higher education systems (65%). All results are robust to sensitivity and GDP tests.

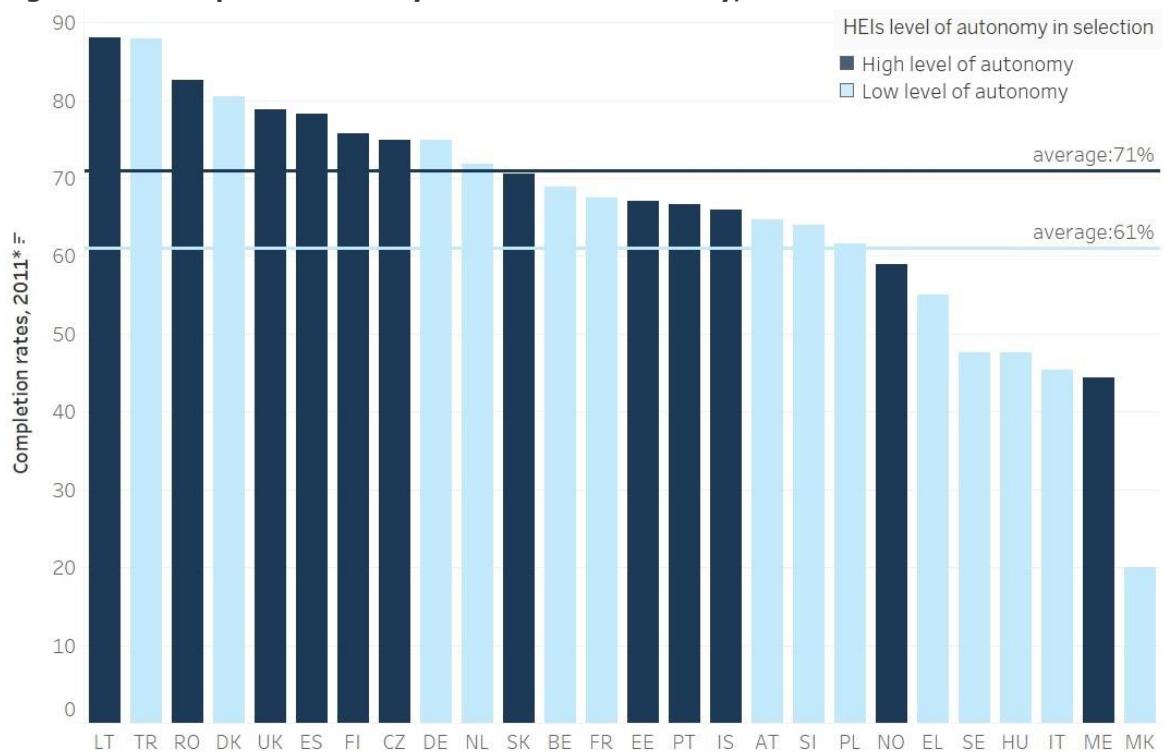
Figure 5.8: Completion rates by type of admission system, 2011*



Interpretational note: The figure looks at the completion rates for ISCED 5A programmes. As usual, colour shows details about the admission type. Null values were excluded.

Source: Education at a Glance, 2013. Note that due to lack of data for EE, IS, IT, SI the completion rates are for 2005 and for MK LT, ME, RO the completion rates are for 2011/2012

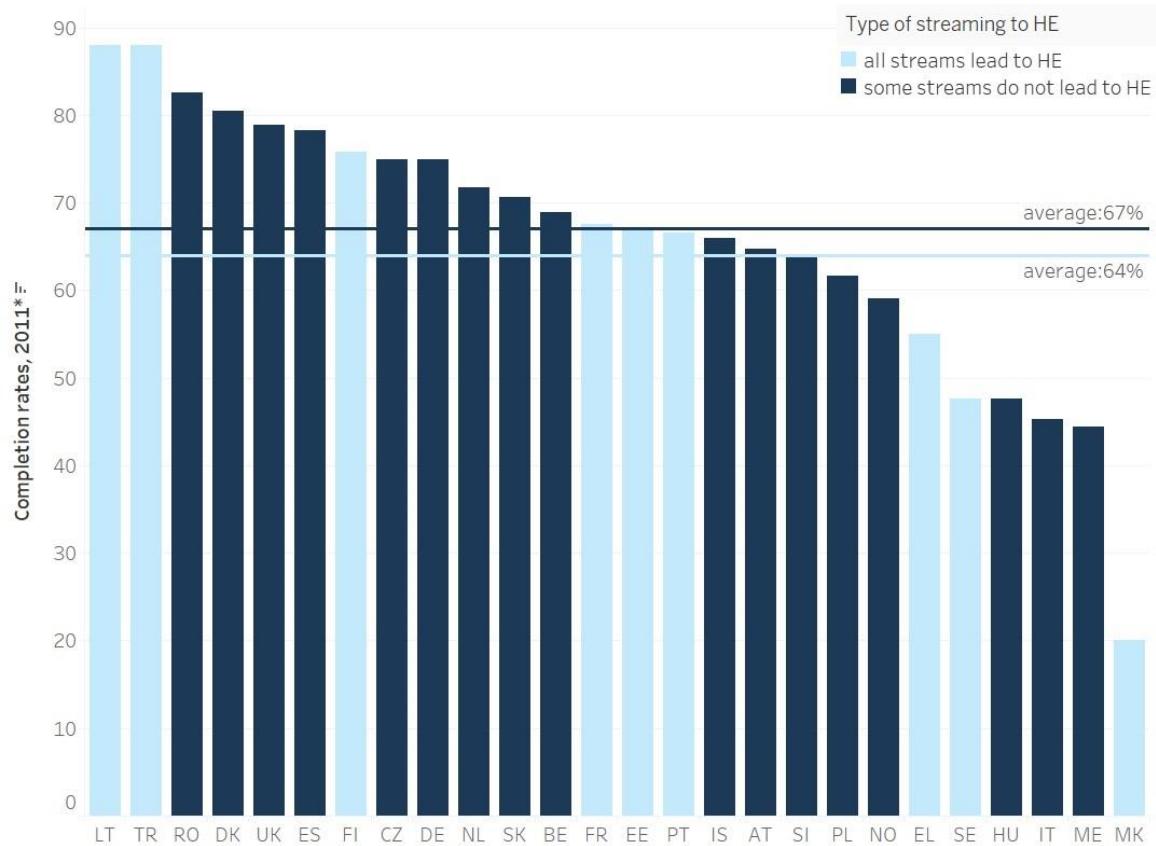
Figure 5.9: Completion rates by level of HEI autonomy, 2011*



Interpretational note: This figure also looks at the completion rates for ISCED 5A programmes. Colour shows details about the level of autonomy HEIs have in selecting with additional criteria. Null values were excluded.

Source: Education at a Glance, 2013. Note that due to lack of data for EE, IS, IT, SI the completion rates are for 2005 and for MK, LT, ME, RO the completion rates are for 2011/2012

Figure 5.10: Completion rates by streaming system, 2011*



Interpretational note: This figure also looks at the completion rates for ISCED 5A programmes. This time colour shows the streaming type that exists in each country. Null values were excluded.

Source: Education at a Glance, 2013. Note that due to lack of data for EE, IS, IT, SI the completion rates are for 2005 and for MK, LT, ME, RO the completion rates are for 2011/2012

5.6 More flexible enrolment, but higher unemployment rates for least selective systems

Countries with Type 3 (least selection) admission systems are most flexible and those with Type 1 (selection by schools) admission systems are least flexible in terms of changing the study places available from one field to another. This indicator is taken here as a proxy for the admission system's responsiveness to labour market demand (Figure 5.11).

However, in terms of matching labour market needs with graduates, countries with Type 4 (double selection) and 2 (selection by HEIs) admission systems have seen an increase in mismatch between 2010 and 2013. These are the two types in which HEIs have higher levels of autonomy. Figure 5.13 shows that, in fact, it is the level of autonomy which causes nearly all of the variation in the previous figure. While the results in Figures 5.12 and 5.13 are robust to sensitivity tests and GDP, it should be noted that most of the countries where the skills mismatch effect has grown the most over the past few years are clustered in Central-East Europe (Serbia, Slovakia, Croatia, Romania and the Czech Republic). This result therefore may have more to do with the structure of transitional economies in the region, than it does with admission systems.

In contrast, countries with Type 1 (selection by schools) admission system have the lowest unemployment rate for young tertiary graduates (aged 20-34) and type 3 (least selection) admission systems have the highest unemployment rate. This is also the case when looking at the unemployment rate for tertiary graduates after less than 3 years, where the average for Type 1 is 4% and for Type 3 is 11%. Type 2 (selection by HEIs) and 4 (double selection) have again similar unemployment ratios of 8%. These results are robust to sensitivity checks, but less so to a GDP check; in fact, one can observe here more geographic clustering, with countries with highest unemployment rates nearly all either located in the Balkans or along the Mediterranean. It can thus be concluded that the key factor to having lower unemployment rates would appear to be the secondary school system, which streams some people out of higher education early.

While the evidence is somewhat limited, it seems to point in the direction of selective systems leading to better labour market outcomes. However, the transmission mechanism here is not entirely clear. They do not appear to be more effective because their admission systems are more flexible and adapt to changes in the labour market. Rather, the results suggest that countries which appear more effective are those which place more barriers to higher education. If this is the case, then "effectiveness" may also come with a social cost of higher inequality; or vice versa: higher equity levels also require higher support levels.

Countries with Type 3 (least selection) admission systems are most flexible and those with Type 1 (selection by schools) admission systems are least flexible in terms of changing the study places available from one field to another. This indicator is taken here as a proxy for the admission system's responsiveness to labour market demand (Figure 5.11).

However, in terms of matching labour market needs with graduates, countries with Type 4 (double selection) and 2 (selection by HEIs) admission systems have seen an increase in mismatch between 2010 and 2013. These are the two types in which HEIs have higher levels of autonomy. Figure 5.13 shows that, in fact, it is the level of autonomy which causes nearly all of the variation in the previous figure. While the results in Figures 5.12 and 5.13 are robust to sensitivity tests and GDP, it should be noted that most of the countries where the skills mismatch effect has grown the most over the past few years are clustered in Central-East Europe (Serbia, Slovakia, Croatia, Romania and the Czech Republic). This result therefore may have more to do with the structure of transitional economies in the region, than it does with admission systems.

In contrast, countries with Type 1 (selection by schools) admission system have the lowest unemployment rate for young tertiary graduates (aged 20-34) and type 3 (least selection) admission systems have the highest unemployment rate. This is also the case when looking at the unemployment rate for tertiary graduates after less than 3 years, where the average for Type 1 is 4% and for Type 3 is 11%. Type 2 (selection by HEIs) and 4 (double selection) have again similar unemployment ratios of 8%. These results are robust to sensitivity checks, but less so to a GDP check; in fact, one can observe here more geographic clustering, with countries with highest unemployment rates nearly all either located in the Balkans or along the Mediterranean. It can thus be concluded that the key factor to having lower unemployment rates would appear to be the secondary school system, which streams some people out of higher education early.

While the evidence is somewhat limited, it seems to point in the direction of selective systems leading to better labour market outcomes. However, the transmission mechanism here is not entirely clear. They do not appear to be more effective because their admission systems are more flexible and adapt to changes in the labour market. Rather, the results suggest that countries which appear more effective are those which place more barriers to higher education. If this is the case, then “effectiveness” may also come with a social cost of higher inequality; or vice versa: higher equity levels also require higher support levels.

A note on measuring the ability of admission systems to provide the right graduates

The study examined the relationship between admission systems and their ability to meet labour market needs, as measured by the flexibility of enrolments, the levels of skills mismatch among recent graduates and unemployment rates.

The issue of how to measure the ability of admission systems to provide the right graduates for the labour market is a difficult one, since there is no objective measure of the "right" number of graduates. However, a number of variables which may be seen as proxy indicators of admission systems' ability to react to the labour market needs can be measured. Three proxy indicators have been analysed:

- The flexibility of the system as expressed by its apparent ability to change the study places available from one field of study to another, thus being responsive to labour market changes.
- Skills mismatch of recent graduates, i.e. the share of graduates in jobs normally considered not to require a higher education certificate.
- The unemployment rates of graduates, although this measure has limitations since such rates partly reflect overall labour market conditions.

The flexibility of admission types in order to respond to the labour market changes

The first concept examined in this section is the flexibility of the admission system in terms of how quickly study places shift from one field to another. This can be measured by taking the sum of the standard deviations of changes in the proportion of places in each broad field of study from 2003 to 2012. Countries which have very large shifts in enrolments will score highly on this index, while those with stable share of enrolments will do the opposite. The "Health and welfare" field of study was removed from this calculation because over the observed 10-year period the introduction of nursing and social work programmes into higher education led to a large, but very uneven growth in higher education across Europe.

A note on measuring the ability of admission systems to provide the right graduates

The study examined the relationship between admission systems and their ability to meet labour market needs, as measured by the flexibility of enrolments, the levels of skills mismatch among recent graduates and unemployment rates.

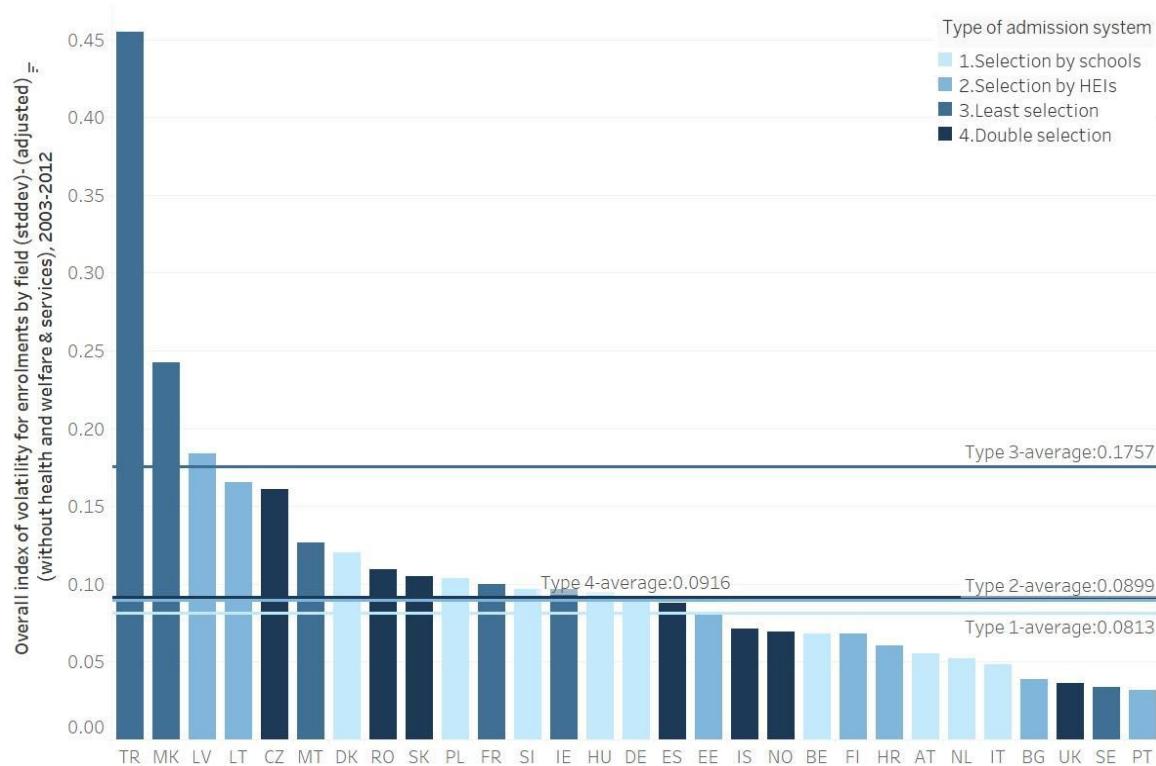
The issue of how to measure the ability of admission systems to provide the right graduates for the labour market is a difficult one, since there is no objective measure of the "right" number of graduates. However, a number of variables which may be seen as proxy indicators of admission systems' ability to react to the labour market needs can be measured. Three proxy indicators have been analysed:

- The flexibility of the system as expressed by its apparent ability to change the study places available from one field of study to another, thus being responsive to labour market changes.
- Skills mismatch of recent graduates, i.e. the share of graduates in jobs normally considered not to require a higher education certificate.
- The unemployment rates of graduates, although this measure has limitations since such rates partly reflect overall labour market conditions.

The flexibility of admission types in order to respond to the labour market changes

The first concept examined in this section is the flexibility of the admission system in terms of how quickly study places shift from one field to another. This can be measured by taking the sum of the standard deviations of changes in the proportion of places in each broad field of study from 2003 to 2012. Countries which have very large shifts in enrolments will score highly on this index, while those with stable share of enrolments will do the opposite. The "Health and welfare" field of study was removed from this calculation because over the observed 10-year period the introduction of nursing and social work programmes into higher education led to a large, but very uneven growth in higher education across Europe.

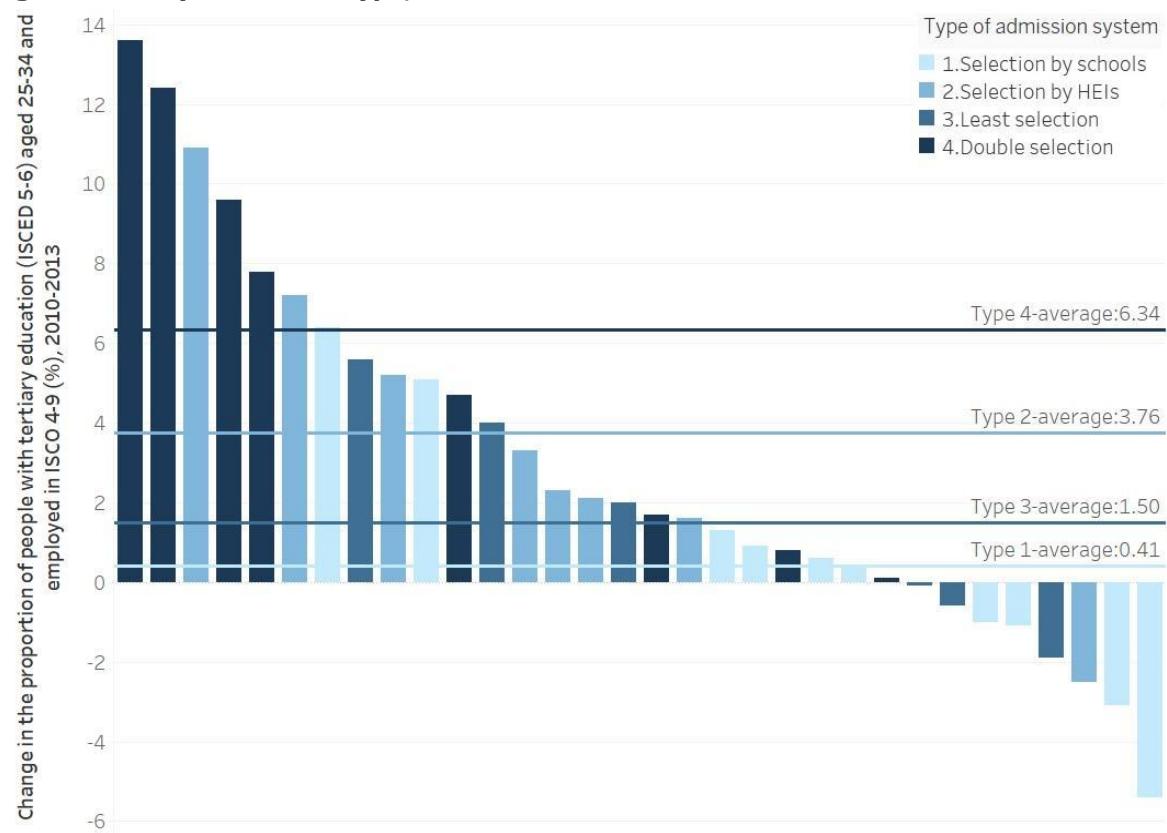
Figure 5.11: Overall index of volatility for enrolments by field (excluding health and welfare & services) by admission type, 2003-2012



Interpretational note: This figure looks at flexibility of higher education institutions in terms of changing the study places available from one field to another. Y-index shows relative flexibility of each country's enrolments over the period 2003-2012. A high index score indicates that admission systems are very flexible and that the higher education system changed its distribution of places across major fields of study substantially. A low index score indicates the opposite. Colour shows details about the admission type. Null values were excluded.

Source: Eurostat, (educ_enrl5)

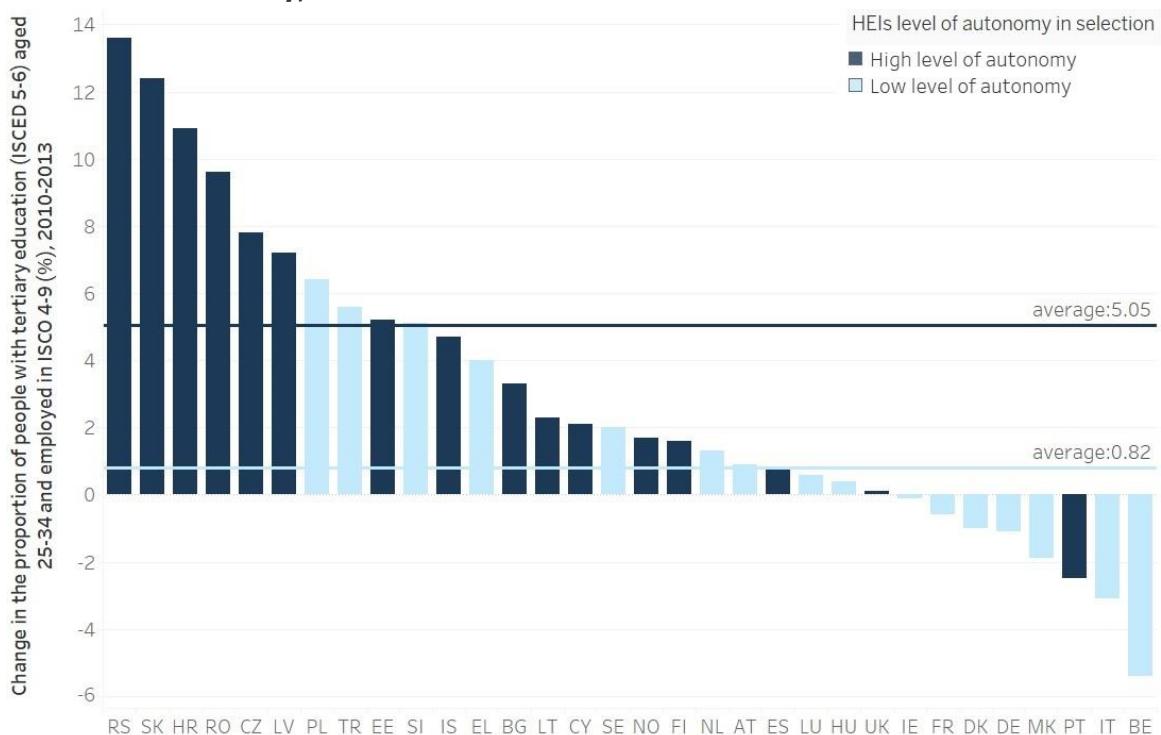
Figure 5.12: Change in the proportion of skills mismatch in tertiary education graduates aged 25-34 by admission type, 2010-2013



Interpretational note: This chart looks at the level of mismatch between higher education graduates and the labour market needs. For the purpose of this chart, mismatches are defined as the percentage of young people aged 25-34 with tertiary education occupying a job not traditionally regarded as requiring a tertiary qualification (International Standard Classification of Occupations (ISCO) occupation levels 4 to 9). A higher value indicates that the proportion of tertiary graduates employed in jobs not traditionally regarded as requiring a tertiary qualification has increased, while a low score implies the opposite. Colour shows details about the admission type. Null values were excluded.

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

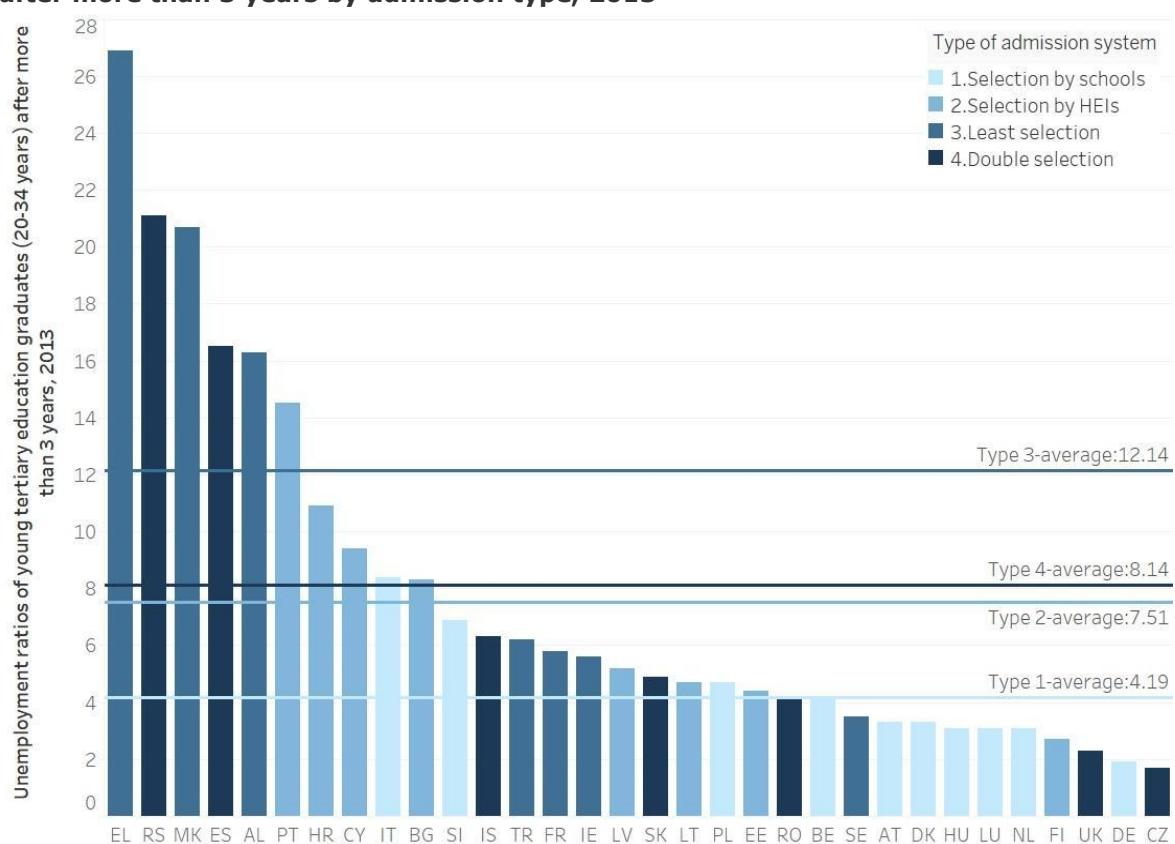
Figure 5.13: Change in the proportion of skills mismatch of graduates aged 25-34 by level of HEI autonomy, 2010-2013



Interpretational note: This chart looks at the level of mismatch between higher education graduates and the labour market needs. For the purpose of this chart, mismatches are defined as the percentage of young people aged 25-34 with tertiary education occupying a job not traditionally regarded as requiring a tertiary qualification (International Standard Classification of Occupations (ISCO) occupation levels 4 to 9). A higher value indicates that the proportion of tertiary graduates employed in jobs not traditionally regarded as requiring a tertiary qualification has increased, while a low score implies the opposite. Colour shows details about the level of autonomy HEIs have in selecting with additional criteria. Null values were excluded.

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

Figure 5.14: Unemployment ratios of young tertiary education graduates (20-34 years) after more than 3 years by admission type, 2013



Interpretational note: The unemployment ratio is calculated as the share of the unemployed in the total population of a given educational attainment level and age group. Colour shows details about the admission type. Null values were excluded

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

5.7 Overall summary on performance of admission types

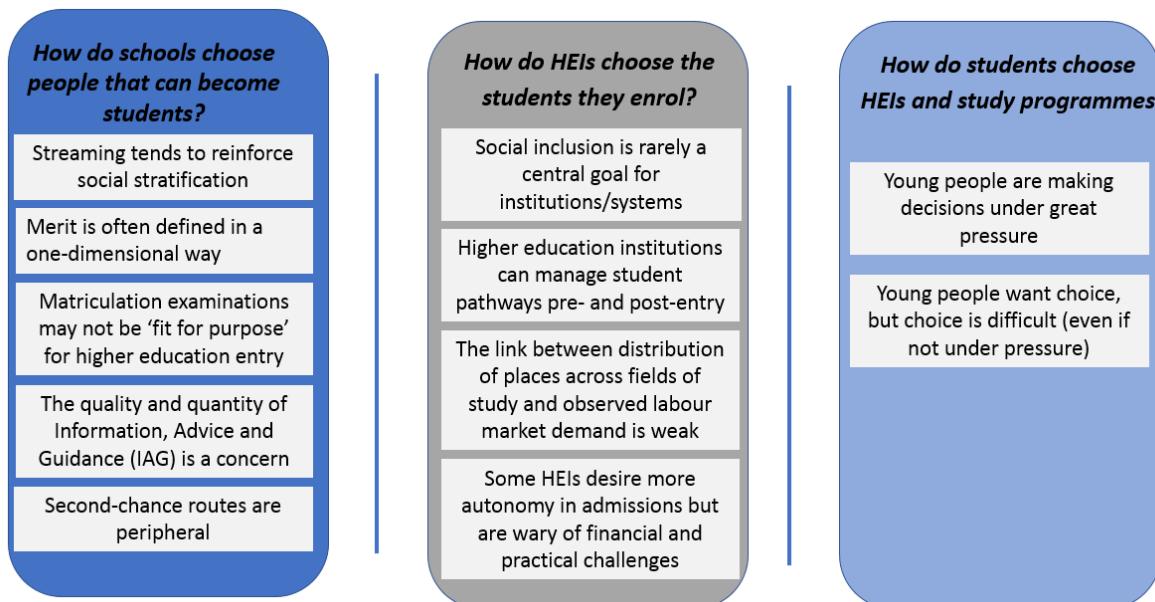
In sum, and with due respect to the difficulty in drawing firm conclusions from correlational evidence across a relatively small number of cases, the analysis suggests certain attributes for each of the four admission system types and that there is no ideal type – see Table 5.1.

Table 5.1: Summary of results by admission type

Type of admission system	Equity dimension	Efficiency dimension	Effectiveness dimension
	An equitable admission system is one which focuses more on students' potential to succeed, irrespective of their social background.	An efficient admission system is one which achieves a beneficial match between the interests and skills of the applicant and the higher education programme / HEI.	An effective admission system is one which enables changes in study patterns to reflect new and constantly changing demands of society and the labour market.
	Proxy indicator(s): <ul style="list-style-type: none"> - Participation by social background - Participation by gender - Participation by age 	Proxy indicator(s): <ul style="list-style-type: none"> - Completion rate - Entry rate 	Proxy indicator(s): <ul style="list-style-type: none"> - Change in share of students by field of study over time - Unemployment rates - Skills mismatch
Type 1 - Selection by schools	<ul style="list-style-type: none"> - lowest relative participation rates by students from disadvantaged backgrounds 	<ul style="list-style-type: none"> - lowest entry rates 	<ul style="list-style-type: none"> + low rates of unemployment + low levels of growth in skill mismatch
Type 2 - Selection by HEIs	<ul style="list-style-type: none"> + high participation (but not necessarily graduation rate) of students over the age of 30 	<ul style="list-style-type: none"> + highest completion rates 	(no notable results)
Type 3 - Least selection	<ul style="list-style-type: none"> + highest rate of social inclusion 	<ul style="list-style-type: none"> - lowest completion rates 	<ul style="list-style-type: none"> - high levels of unemployment
Type 4 - Double selection	<ul style="list-style-type: none"> + high participation (but not necessarily graduate) of students over the age of 30 + higher participation rate of females 	<ul style="list-style-type: none"> + slightly higher than average completion rates 	(no notable results)

B: FINDINGS

Central findings on how admission systems really work are drawn from the case study work and the general analysis. The structures, processes and behaviours of actors in schools and higher education institutions lead to the conclusion that young people feel pressured and lack support for making difficult choices at a stressful time of life.



6 Findings on Schools

The purpose of this chapter is to encapsulate the findings of the eight case studies with respect to the role of schools and examination processes within the admission process. There are five major findings in this area. A box at the top of each finding summarises the main points and provides some context as to in which types of admission systems the finding is most pertinent.

Finding 1: Streaming tends to reinforce social inequality

Inequality in higher education cannot be examined in isolation from the issue of streaming in secondary schools, because the latter shapes the opportunities available to students. The more students are excluded from academic pathways at an early age, the less equitable higher education will be.

This finding is particularly pertinent to countries with Type 1 (Selection by schools) and Type 4 (Double selection) systems where schools exert a higher influence on who progresses to higher education.

Inequality in higher education cannot be examined in isolation from the issue of streaming in secondary schools, because the latter shapes the opportunities available to students. The more students are excluded from academic pathways at an early age, the less equitable higher education will be.

This finding is particularly pertinent to countries with Type 1 (Selection by schools) and Type 4 (Double selection) systems where schools exert a higher influence on who progresses to higher education.

How streaming occurs

Both the quantitative and qualitative analysis undertaken in the study point strongly to **the key role that streaming plays in structuring the future trajectories of young people in Europe**. This finding is also supported by the existing relevant literature.

Typically in European countries secondary education is divided into multiple streams or tracks, with one or more tracks geared to preparing students for higher education and others geared towards preparing them for the labour market. This can happen as early as the age of ten years old (for instance in Germany and Austria) or as late as sixteen (for instance in Finland and the United Kingdom). In addition, the degree of choice students and families have over which tracks to take can vary by country. (Commission/EACEA/Eurydice, 2015) (see Chapter 5, above).

The specific way in which students are assigned to streams or tracks differs somewhat from country to country. In some countries, the students are assigned to tracks on the basis of testing, in others teachers “recommend” tracks to parents (Hill, 2008; LeTendre, Gonzalez, & Nomi, 2006), while in still others, students may self-select into various tracks (Jonsson & Rudolphi, 2011). In countries where testing is the norm, there is an ostensibly meritocratic principle at work; however, given what is known about the relationship between demonstrated academic / cognitive ability and socio-economic class (OECD 2013) this will still inevitably create socio-economic differences by track. It has been well-established by multiple sources (Becker & Hecken, 2009; Buchmann, Sacchi, Lamprecht, & Stamm, 2007; Dronkers, 1993; Gamoran, 1992, 2016; Mayer & Pollak, 2007) that the chosen **secondary school track is correlated with parental socio-economic status**.

Tracking based on teacher recommendations can lead to less social inequality, provided that teachers take into account more than simple school results (for instance, trying to gauge students' potential). However, as some authors have noted (Dronkers, 1993), the evidence points to teacher recommendations systematically guiding students from lower socio-economic and immigrant backgrounds away from academic pathways. Although most countries admit some possibility of permeability between tracks (i.e. students can switch tracks after initial entry), moving into a track leading to higher education is often highly disruptive and costly in terms of time; to a large degree therefore, **the track taken at age 10-16 has a large influence on higher education choices at the age of 17-19.**

The effects of streaming

It was argued in Chapter 5 that **Least Selection (Type 3) Systems were also the ones with the most equitable outcomes**. Subsequent analysis has shown that school streaming was slightly more correlated with this outcome than was the degree of HEI autonomy in selection (though the effect was not particularly large). It was also shown that streaming in upper-secondary level is correlated – albeit lightly – with higher completion rates. An obvious but untestable explanation for this result is that systems with early streaming produce, on average, a set of graduates more prepared to take on higher education.

Students placed in vocational streams less likely to progress to higher education

Turning to the case study countries, with the exception of Ireland, all have a form of official streaming in place prior to the end of secondary school, i.e. students are grouped by ability and sent to different types of schools, with different curricula to obtain different secondary school credentials. The age at which streaming occurs ranges from ten in Germany to sixteen in Norway. The manner in which streaming is done also varies. It is usually done through a combination of recommendations from school authorities and performance in examinations / tests, but the weight placed upon these different selection tools varies from one country to another.

In general, **students placed into a vocational stream are less likely to be able to progress to higher education**. Such streams are designed essentially to prepare students for earlier entry into the labour market. In some national systems (e.g. Lithuania, Spain) being placed in a vocational stream is not a formal barrier to higher education entry because all students may take a higher education entrance exam regardless of their upper-secondary education stream. The reality is, however, that students from vocational streams are at a major disadvantage in these exams because they focus primarily on theoretical knowledge, to which these students have not had access while being in a vocational stream. As one policymaker in Lithuania acknowledged:

"Basically, in our system, so far as it concerns the access to higher education, the school type or profile doesn't matter. The point is that a student who wants to enter higher education has to fulfil the same conditions: a student who wishes to pursue higher education must have completed secondary education and [in order to be eligible for state funding] has to pass state exams, depending on what he is going to study. [However,] General education achievements in vocational schools are lower than in mainstream schools. This is the data."

Pathways between streams deliver less than promised

In other systems e.g. Germany, the Netherlands, Romania and France, there is a view commonly held among officials that streaming does not cause adverse effects because

there are pathways that allow students to switch between streams. However, the evidence suggests that in these countries **most pathway switching, when it does occur, is from academic to vocational streams, rather than vocational to academic**. Hence, the benefits to pathway switching may not be significantly great.

In Norway for example over half of students starting on the academic track in upper-secondary education have parents with higher education, while this is only true for about one in four students starting on the vocational track. In addition, students from families where the parents have higher education are much more likely to complete the programme they have started: 82% of these students complete upper-secondary education within five years of commencing, compared to 66% of students from families where the parents have upper-secondary education and only 43% of students from families where neither parent has education beyond primary school.

In sum, **the phenomenon of early streaming tends to reinforce a process of social inequality**, whereby students from higher socio-economic strata are entered into an academic track and those from lower socio-economic strata are placed on vocational tracks. Early streaming when combined with the lack of opportunity for students to move from vocational to academic tracks, has a significant effect on both equality of opportunity and equality of outcomes at the higher education level.

Finding 2: Merit is often defined in a one-dimensional way

Access to higher education is defined in the case study analysis as being a function of merit. But merit is defined almost exclusively as the ability to succeed in exams. This approach has the benefit of being “objective”, but more holistic approaches might be fairer to certain students.

The equating of merit with examination success is something that is embedded into the schooling system from the start of the admission process. HEIs also contribute to this understanding in how they themselves construct entry processes when they have the ability to do so (see Chapter 7, findings 9 and 10). It is thus relevant to all systems from Types 1 to 4.

Access to higher education is defined in the case study analysis as being a function of merit. But merit is defined almost exclusively as the ability to succeed in exams. This approach has the benefit of being “objective”, but more holistic approaches might be fairer to certain students.

The equating of merit with examination success is something that is embedded into the schooling system from the start of the admission process. HEIs also contribute to this understanding in how they themselves construct entry processes when they have the ability to do so (see Chapter 7, findings 9 and 10). It is thus relevant to all systems from Types 1 to 4.

Merit is usually defined simply in terms of test-taking ability

Throughout most of Europe, for the purpose of entry into higher education, **merit is effectively defined – or at least measured – as the ability to succeed in academic tests during or at the end of upper-secondary schooling**. Other possible definitions of merit in use elsewhere, such as creativity, curiosity, public service (Sternberg 2010, Weisbrod & Thacker 2016) are not used, largely because they are difficult to assess objectively and hence seen as potentially unfair, if not unworkable. The use of academic testing is fair in the sense that everyone enrolled in an upper-secondary course can take the same test and the results will be seen as objective. However, **the results of these objective tests take little account either of the**

effects on the test-takers of social background or of the students' actual interests, desires and aptitudes.

Students in most of the case-study countries acknowledge that exams are objective, but some do not consider that to be a sufficient justification for an exclusive reliance on these methods. As one German student stated:

"I am in favour of not giving that much importance to grades but looking at talent, for example some have bad grades in math, this is not that important when studying social work. Talent and interest should be given more weight. Grades should be weighted by relevance for the programme in question."

Interest from both students and HEIs in more holistic assessments

Many students indicated that they would prefer the admission systems to take a more holistic view of individual capacities and interests. In several of the case-study countries, this desire to get a more holistic understanding of students was shared by HEIs.

Both students and institutional representatives recognised that such procedures might not in themselves be objective. However, they may act as a counterbalance to examinations which are largely quantitative. They are nevertheless seen, in some quarters at least, as potentially contributing to fairness.

Finding 3: Matriculation examinations may not be 'fit for purpose' for higher education entry

Matriculation examinations have two significant drawbacks. First, while used as a measure to judge suitability for higher education, they rarely do more than review material already taught, which may or may not be especially relevant. Second, they create 'backwash' – that is, their importance becomes so central to the final year of secondary schooling that teaching for the test takes precedence over broader, longer-term learning goals.

This is an issue wherever matriculation exam results are used as the basis for higher education selection, regardless of whether the selection is automatic or not. It is thus relevant to all systems from Types 1 to 4.

Matriculation examinations have two significant drawbacks. First, while used as a measure to judge suitability for higher education, they rarely do more than review material already taught, which may or may not be especially relevant. Second, they create 'backwash' – that is, their importance becomes so central to the final year of secondary schooling that teaching for the test takes precedence over broader, longer-term learning goals.

This is an issue wherever matriculation exam results are used as the basis for higher education selection, regardless of whether the selection is automatic or not. It is thus relevant to all systems from Types 1 to 4.

Exit exams or HEI entrance exam?

In the majority of the case study countries, **exit examinations are being given too many functions and these functions may be coming into conflict with each other**. This is having detrimental effects all the way through the admission system.

Results from these examinations – be they the *matura* or *baccalauréate* or any of the other secondary school examinations – perform dual roles. Firstly, they act as a means of measuring the mastery of the topics studied in upper-secondary school. But in

addition, they are used to differentiate between candidates seeking entry into higher education. These roles appear hard to combine effectively.

Secondary school officials in almost every country surveyed were clear in stating that the exams are almost exclusively concerned with reviewing material that students had learned in secondary school. These **examinations are not related to the needs of the labour market** in terms of which student skills and competencies are selected for measurement. **Nor, in most cases, are they designed to align with the curricula or programmes of higher education institutions.** For example, as was stated in Ireland by the Head of the State Examinations system:

"The leaving certificate is an assessment of what people do in school, it is not a mechanism to admit students to higher education."

Too many purposes?

Similarly, a key informant in Romania stated:

"The needs of the tertiary education system are not taken into account in the design of the tests as the objective of the Baccalaureate exam is not considered to be the admission into higher education but rather as a final exam which guarantees that the student has the needed competencies."

This might be less of an issue if HEIs were able to obtain information about the suitability of candidates from other sources. However, in many cases they are not. HEIs are in most countries legally limited in terms of using different sources of information about students. Even where HEIs are not required simply to take all students who have passed the school-leaving exam, they are usually limited to using leaving exam scores as a device to distinguish between students. **Exams, which are designed to test knowledge of secondary school curricula, are in practice being used to perform another function entirely** i.e. to filter students into HEIs and higher education programmes. When a student wishes to continue in a subject area which corresponds to the chosen specialty in higher education e.g. in science disciplines such as Physics, this may be less of a problem. But where the student is switching specialties, or (more commonly) entering a field which is not taught at secondary level, the situation may be more problematic.

'Backwash' and the effects on the curriculum

A further problem is that these examinations, which in many countries have become *de facto* 'high-stakes HEI exams', have led to what was described in a recent review of the Irish Admission System as 'backwash' through the rest of the secondary system (Irish University Association, 2011). That is to say, **the high-stakes nature of the exam means that exam preparation overwhelms all other considerations in the upper-secondary curriculum** and leads teachers to focus too much on the short-term need to help students pass exams and not enough on deeper learning. This is certainly true in countries where the exam is worth 100% of the final score for the credential (e.g. France); however, it has also been cited in systems where the exam is sixty percent or less of the final mark (e.g. Germany, Spain). As one of the Romanian students stated:

"The current Baccalaureate exam does not make us think. This is the main problem, we are just required to reproduce different things, not to think."

Recognition of this problem has led to a redesign of the Lithuanian final examination (Matura), which now includes problem-solving tasks instead of just examination of discrete knowledge. However, the challenge associated with this has been the need to re-train teachers.

Finding 4: The quality of information, advice and guidance is a concern

Many countries seem to put more of a priority on information than on guidance. This means students are forced to rely on friends and family for advice, which tends to hurt disadvantaged students since their proximity networks have less experience with higher education.

The level of consensus across the case studies regarding the limitations in the current provision implies that the need to examine information, advice and guidance provision may be relevant to all admission system types. It could be argued though that in Type 3 (least selection) where students are perhaps given the greatest responsibilities for making choices is where this issue regarding information, advice and guidance may be of importance.

Many countries seem to put more of a priority on information than on guidance. This means students are forced to rely on friends and family for advice, which tends to hurt disadvantaged students since their proximity networks have less experience with higher education.

The level of consensus across the case studies regarding the limitations in the current provision implies that the need to examine information, advice and guidance provision may be relevant to all admission system types. It could be argued though that in Type 3 (least selection) where students are perhaps given the greatest responsibilities for making choices is where this issue regarding information, advice and guidance may be of importance.

The guidance function in schools varies significantly across Europe

Students at the end of upper-secondary level who wish to continue their education are told they need to choose between thousands – in some cases tens of thousands – of different programmes. Each of these programmes may have quite different entrance criteria, financial implications, and implications for future employment. Information, advice and guidance are needed to help students navigate these choices.

Across Europe much of the focus of school guidance appears to be on the issue of career guidance. To the extent that *educational* guidance is a priority, it is often focused at the lower-secondary level, helping students choose between educational streams in upper-secondary schooling. There is limited evidence of educational guidance at the frontier between upper-secondary level and higher education; for the most part it seems to be constructed as an “intervention in constructing occupational identity” (Sultana 2004).

The guidance function in schools varies significantly across Europe. The extent to which counsellors are full-time or add their counsellor duties to those of a full-time teacher varies. So too does counsellors’ initial training, their integration into wider non-school based guidance networks, and the extent to which they are focused on career vs. educational advising; indeed, in this last area there can be significant differences *within* a country, depending on the educational stream (Watts and Sultana 2004).

The delivery model of career education in schools also varies significantly. Broadly speaking there are four models in use in Europe: (1) career education can be a stand-alone subject on the curriculum; (2) career education can be embedded in another (usually social science) subject; (3) career education concepts can be embedded widely across the curriculum and (4) it can be delivered outside the curriculum through workshops and seminars (Sultana 2004).

Some authors note a shift in guidance practice in recent years. Guidance was formerly an attempt to try to match interests and abilities with particular fields of employment

(Watts and Fretwell 2004). Over time, however, the focus has shifted to guidance as a learning experience and, in particular, the need for guidance to foster individual autonomy (Watts 2013).

Beyond accurate, timely information

One of the key findings from the case studies is that **admission systems seem more concerned with the provision of timely and accurate information to students than they do with providing guidance**. Given the expanding number of choices available to young people, the provision of timely and accurate information is indeed an important task. But information requires interpretation. As a pair of students from Ireland stated:

"I think there is a lot of information available if you know where to look for it, but you have to do that, it won't come to you."

"The basic information is there but what I needed was someone to talk to who could help me interpret it and advise me."

In a well-functioning system, this is where the roles of teachers and guidance counsellors come into play. Guidance is about helping young people apply information to their own context. It requires knowledge not just of the external environment but of the individual as well. It is **only when one is able to apply knowledge of both the institutions and the individual that one can provide true guidance**. Nor can this be a superficial knowledge of the individual. Young people are sceptical of efforts to provide advice by guidance personnel where they have little sustained contact, based solely on short interviews or examinations. As students from focus groups in Germany stated:

"90 minutes is not enough to present about 60,000 degree programmes. Experts from the Job Centre would need to come much more often and with information related to specific fields."

"When the person from the Job Centre was there, we were offered one-to-one interviews. However, we did not get any further appointments. My impression was that there were too many pupils and too little capacity."

Providing students with "better information" is a necessary, but insufficient step to help students with their transition from secondary to post-secondary education. True, personalised guidance is what makes "better information" useful: it is in effect a way to leverage information. In many of the case study countries this kind of guidance is in very short supply at the point of transition between secondary and higher education, although there was evidence of differing levels of support by schools. In schools which sent more students to higher education, and generally drew their intake from higher socio-economic groups, examples could be found of more support being provided.

One observation that emerges from the case studies is that the **importance of guidance increases where there is a lot of competition for places** and a high potential cost of failure. By contrast, in Norway, where competition for places is relatively low, there was comparatively little demand for guidance from students.

Resources for guidance vary significantly across Europe

The case studies did show a wide variety of guidance practices, the effect of some of which merit further study. Of particular note is France's very extensive national system of guidance, with its system of over four hundred regional centres, which works in connection with secondary education and provides extensive career and educational advice. It is, however, partly undone by the sheer complexity of the French admission systems, which students find very difficult to navigate. The Dutch system of guidance is not particularly extensive at the secondary level, but the new mandatory system of

guidance at the point of transition between schooling and higher education is certainly comprehensive and well worth following over time to see its resulting effect (see Chapter 7, Box 7.1).

In some case studies, however, evidence was found of what appeared to be low levels of investment in advice and guidance. In Romania for example, there is only one counsellor per 800 students. In Norway, there is a structure to deliver guidance but it is a devolved one which gives responsibility to the school. The ratio is one advisor per five hundred students and there are no formal training requirements to becoming a school guidance counsellor.

In the Netherlands, there is a current policy focus on the following areas for improvement in this context: special training for the school counsellors on study choice guidance; making guidance obligatory for every pupil; feedback to secondary schools on how their former pupils are doing in higher education; national regulations for the study choice activities provided by the HEIs; personal advice within the 'Study Choice Check' (see box 7.2 in Chapter 7); and availability of comparable study-related information.

Students will turn to family and friends for guidance

While guidance is important, it sits within the context of a range of messages that potential higher education students receive from their family members, friends or trusted teacher – what could be described as their 'proximity network'. To the extent that this proximity network is able to provide informed assistance, this works relatively well. The students in the focus groups stated:

"My brother had been through it all and he showed me what to do. He knew how to fill in all the forms and stuff and what to look for when choosing a course."
(Ireland)

However, **class and family background shape the context within which information is processed and decisions are made**. The ability to interpret data about education and careers is not distributed equally across the population. As one Irish student, who was the first in their family to go on to higher education, stated:

"My mum was so supportive – she wanted me to get away from the farm but she knew nothing about uni or how to get there."

Students whose parents have higher levels of education have more cultural capital and assistance from their parents than others. This can be enhanced by what schools can offer. In Spain, the students from the semi-private schools benefited from additional activities in the form of a cycle of conferences with former students and professionals, who visited the school to give talks and conferences about the degree they studied and their profession. As one German student astutely pointed out:

"Not everyone has relatives or friends who have already been through higher education and know how the system functions."

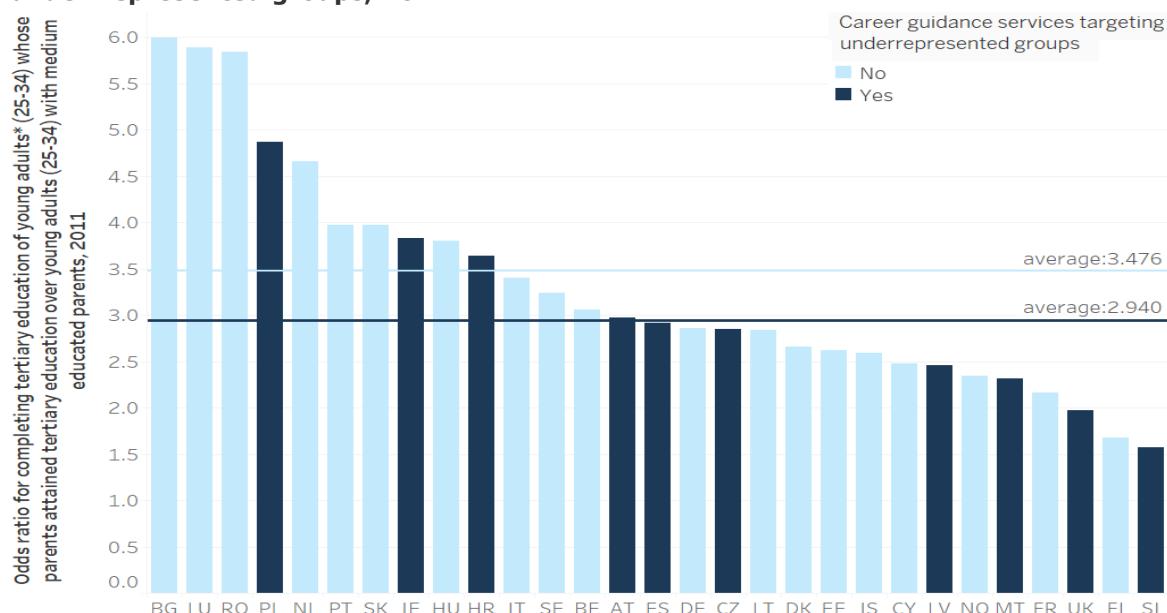
Guidance for all, but youth from lower socio-economic backgrounds need it most

Across the case studies, one consistently appearing feature is that secondary students from lower social backgrounds expressed much more frustration about the transition from secondary to higher education level than did their counterparts with families whom they could ask for support. While the availability of quality guidance is of importance to all, there is an added dimension when it comes to students from lower socio-economic backgrounds. In the event of inadequate guidance, students from higher socio-economic background fall back on family members who have experience of the system; in that way they will receive the necessary guidance. Students from lower socio-economic backgrounds, who might in any event be more cautious about undertaking higher

education, cannot. More in need of high-quality advice, they have a much harder time obtaining it. **Guidance therefore needs to be thought of as an issue of equity.**

The importance of ensuring that under-represented groups get adequate guidance is demonstrated below in Figure 6.1. This figure examines whether the provision of career guidance services targets under-represented groups, and the extent to which this correlates with a less inequitable set of higher education outcomes. The analysis, which is robust to sensitivity and GDP tests, suggests that it does, and that countries which have such programmes also provide more access to students from lower socio-economic backgrounds.

Figure 6.1: Equity of access by the existence of career guidance services targeting under-represented groups, 2011



Interpretational note: The Y-axis is the ratio of the likelihood of achieving a tertiary degree for children of highly-educated vs. medium-educated parents. A high value indicates a particularly inequitable system because children of medium-educated parents have much lower chances to attain tertiary education than children of highly-educated parents; a low value indicates a more equitable system. Colour shows details about the existence of career guidance services targeting under-represented groups. Null values were excluded.

Source: Eurostat, EU-SILC ad hoc module on intergenerational transmission of disadvantages, BFUG questionnaire, 2015.

Finding 5: Second-chance routes are peripheral

While a majority of European countries offer second-chance routes for individuals who do not leave school with a qualification permitting entry into higher education, these routes are relatively peripheral to the system as a whole.

Given that age is a barrier to higher education entry across all admission systems, the paucity of second chance routes should be a universal issue. However, Type 1 (selection by schools) and 3 (double selection) systems which do less well at admitting older students may need to examine where there is innovative practice in constructing alternative admission routes.

While a majority of European countries offer second-chance routes for individuals who do not leave school with a qualification permitting entry into higher education, these routes are relatively peripheral to the system as a whole.

Given that age is a barrier to higher education entry across all admission systems, the paucity of second chance routes should be a universal issue. However, Type 1 (selection by schools) and 3 (double selection) systems which do less well at admitting older students may need to examine where there is innovative practice in constructing alternative admission routes.

Second-chance routes across Europe

Apart from the main route into higher education direct from secondary school, many countries have "second-chance" routes, which afford additional or improved chances of entry for students who do not take the direct route. According to Inbar (1995) there are three basic principles underlying second-chance routes into education. They are: (1) the temporariness of failure (2) the right to change and (3) unlimited time. All these issues are normally bounded by the regular route into higher education, where school performance leads to a binary split between qualified and unqualified entrants for higher education.

Across Europe, there is a relatively clear geographical division between states which have such routes and those which do not. Second-chance routes exist in all the European and EFTA countries except for Greece; conversely, they are mostly absent in the later accession countries with the exception of Croatia and Malta. Sometimes, these second-chance routes involve bridging programmes, either to higher education as a whole or to specific programmes; sometimes they involve waiving normal requirements to entry. Roughly one-third of countries provide a financial incentive to HEIs to accept students on second-chance access routes (EACEA 2015). See Box 6.1 for the case of Ireland.

Second-track routes too small to offset non-linear educational pathways

Amongst the case study countries, there are a limited number of second-chance pathways and those that exist are relatively peripheral. There are numerous examples of schemes that reserve places for specific populations (e.g. Roma in Romania), or of allowing students from vocational streams to access higher education by taking the same examinations as students from academic streams. These can sometimes be quite significant: in the state of Bavaria, 42% of Abitur holders come from outside the academic track (Gymnasium) and many end up in higher education (usually a Fachhochschule). Bavaria also has a particular track for students building on special vocational routes into higher education, and some students with insufficient grades to enter a numerus clausus programme are allowed in, simply because they have been on the waiting list a long time.

But properly speaking, these are alternative first choice routes, rather than genuine second-choice routes for people who have left the education system to enter the labour market and who wish to return to studying. These do exist: Spain has different sets of higher education entrance exams for individuals returning from the labour force, and a different one again for those over 40 with work experience related to the degree they wish to access. Similarly, Norway has a separate "competency test" for individuals wishing to enter after the age of 25. But continent-wide these routes are relatively peripheral. Even in the countries with the most developed schemes they do not amount to more than 10% of new entrants. **These routes are important, and valuable, but mostly peripheral to the main flow of students from secondary to higher education.** Their small size means they do not and cannot act as a significant counterweight to the inequality that occurs during normal educational streaming processes.

Box 6.1: Support for under-represented groups - HEAR/DARE in Ireland

Access to higher education in Ireland is competitive based on scores in the Irish Leaving Examination, and some programmes will have higher requirements for access than others. The Higher Education Access Route (HEAR) is a preferential college admissions scheme, in which most HEIs participate. Under the HEAR scheme, institutions reserve a small number of places (usually under 10% of the total available) each year for students who meet "a range of financial social and cultural indicators". Students who are considered HEAR-eligible, but have leaving certificate results below the stated minimum for entry for a particular course, may apply for these reserved places. Places under HEAR are still competitive – that is, for a given number of reserved spaces, it is still the HEAR students with the best results among those who do not meet the normal minimum who will be awarded the places. Successful HEAR applicants also receive a range of social and academic support both prior to entering higher education, and when they enter higher education. Prior to entering higher education these include mentoring from existing higher education students and additional tuition to help examination achievement.

In the first year of HE, HEAR or DARE students have access to advice on financial matters, and dealing with academic or pastoral challenges. It is important to recognise that HEAR and DARE is itself a holistic package of support for students under-represented in higher education. The HEAR programme is open to students from families with incomes of €45,790 or less (assuming four or fewer children in the family; higher rates apply otherwise) and who meet a specific configuration of other "disadvantage" tests, including whether the family has received means tested social or health benefits, living in an area of "concentrated disadvantage", attending a school designated as being in a disadvantaged area and being a child of parents who are semi- or unskilled manual workers or part of the "Non-Manual Workers" group.

The Disability Access Route to Education (DARE) is essentially parallel to the HEAR scheme, only for students with disabilities.

7 Findings on Higher Education Institutions

The purpose of this chapter is to encapsulate the findings of the eight case studies with respect to the role of Higher Education Institutions and their selection mechanisms within the admission process. There are four major findings in this area. A box at the top of each finding summarises the main points and provides some context as to in which types of admission systems the finding is most pertinent.

Finding 6: Social inclusion is rarely a central goal for higher education institutions

Education is a means of social reproduction and higher education can perpetuate inequality across generations if social inclusion is not explicitly targeted. But while all countries embrace the goal of social inclusion in higher education at some level, it is only rarely a central goal for the system, and almost never for individual HEIs. This calls for new policy levers.

Greater efforts to admit learners from under-represented groups should be a concern for all systems. As was shown clearly every country displays inequality in participation by proxy measure of socio-economic class. There was overall a relative lack of examples of interesting practice in the case study countries. The most comprehensive approach was seen in Ireland, a Type 3 system.

Education is a means of social reproduction and higher education can perpetuate inequality across generations if social inclusion is not explicitly targeted. But while all countries embrace the goal of social inclusion in higher education at some level, it is only rarely a central goal for the system, and almost never for individual HEIs. This calls for new policy levers.

Greater efforts to admit learners from under-represented groups should be a concern for all systems. As was shown clearly every country displays inequality in participation by proxy measure of socio-economic class. There was overall a relative lack of examples of interesting practice in the case study countries. The most comprehensive approach was seen in Ireland, a Type 3 system.

Higher education can perpetuate inequality if inclusion is not a central goal

Innumerable studies have shown that, regardless of policy regimes such as admission systems or tertiary fee policies, **youth from higher socio-economic strata are more likely to end up in higher education than those from lower strata**. Cross-national studies of this nature (e.g. Arum, Gamoran & Shavit, 2007) confirm that this kind of **intergenerational social reproduction is universal and that national differences are mostly a matter of degree**.

Inequalities in access are not simply about socio-economic background. Students from urban settings, have access to much better secondary schools than do students from rural ones (partly due to economies of scale in large urban centres and partly due to better resourcing) and hence have better school and examination results, which in turn leads to better exam outcomes and more places in better HEIs (Chankseliani, 2013). Other dimensions of potential inequity covering a range of characteristics include disabilities, ethnicity, etc.

It is not beyond the ability of HEIs to compensate for these kinds of inequalities and devise policies which foster inclusion. However, HEIs have many other goals related to research and discovery, knowledge dissemination, third mission, etc. There is also the

additional challenge of instituting outreach and inclusion policies in a context where some HEIs are also striving to increase their level of selectivity. This can work at cross-purposes to the goal of inclusion since selectivity is usually based purely on academic criteria and students from disadvantaged backgrounds may have lower levels of prior academic attainment. Outreach efforts must compete with these other priorities and are very rarely *primus inter pares*.

Objectivity versus inclusion

While there are examples of HEIs and policy-makers prioritising the progression into higher education of certain groups as well as their success when they enter higher education, as with the second-chance routes described above, in all systems apart from Ireland in the eight case study countries, it would have to be described as a peripheral concern. Among countries covered in the case studies, Ireland was the only one where the analysis identified a national strategy to widen access into higher education, which covered the whole of the admission system from early schooling to early higher education study, encompassing numerous social background characteristics. Elsewhere, **the emphasis in admissions is less on inclusion and fairness but on “objectivity”**, with the existence of a single national exam open to all cited as proof of a meritocratic and objective system. There is often **little acknowledgement that social background plays a very large role in shaping higher education outcomes** and that “objective” outcomes might not be inclusive ones. This is perhaps historically understandable in some former socialist countries, where previous admission systems favoured social background over merit; elsewhere the reasons for this emphasis are far less clear.

National approaches to inclusion

In terms of the case study countries, there were broadly speaking three sets of institutional approaches to the issue of inclusion. The first – which appears to have been the norm in Spain, Romania, Germany and Lithuania – is that inclusion in the sense of outreach to secondary students is simply not part of an institution’s remit. Extending access to higher education is the responsibility of the schooling system. Once students arrive at their HEI, most institutions do take responsibility by putting in place certain supports for particular groups of students (most notably but not exclusively for students with disabilities). That said, in those European countries where demography is putting pressure on student numbers, HEIs are having to work harder to maintain their enrolment numbers and in these cases extra attention is being paid to recruiting non-traditional students.

Among the other four countries (France, Ireland, Netherlands and Norway) there is a mix of two types of strategies, although they are not widespread in any country except for Ireland. There are special outreach efforts directed at students with specific characteristics, to encourage them to attend higher education and additional support is offered to help students achieve better examination results. This is evident mainly in Ireland and at one HEI in France.

The second is positive discrimination, in which students from specific backgrounds have study places in higher education reserved for them (e.g. Romania’s Roma policy). Examples of this were identified at *Sciences Po* in France (which dedicated a certain number of seats to students from disadvantaged areas) and Ireland (which accepted disadvantaged students with lower entrance points). A similar scheme to offer extra points for admission to certain under-represented students is in place in Norway, but it was focused on gender rather than economic deprivation.

Box 7.1: Alternative access route to elite HEI - the "Conventions Éducation Prioritaires" at Sciences Po

In response to persistent evidence that its student intake was not inclusive of students from underprivileged backgrounds, the Institut d'Études Politiques (also known as "Sciences Po") in Paris in 2001 introduced a programme known as the "Conventions Education Prioritaires" (CEP). The CEP created a new, distinct system of admissions for approximately 10% of the HEI's places specifically for students attending lycées in economically disadvantaged neighborhoods ("zones d'éducation prioritaire, or ZEP), primarily in the Île-de-France.

Prior to the introduction of CEP, the route into Sciences Po for domestic students was via an institutional examination. The CEP system created a new pathway in which students from lycées in ZEPs were identified as early as age 16 and given special support and academic preparation. Students from these schools could enter Sciences Po and were selected to a considerable extent based on oral interview (*les jurys d'admission*) which probes for traits such as curiosity, academic potential and talents demonstrated outside of formal exams.

The CEP is nearly as competitive as the regular examination procedure: in 2016, 163 students were admitted via the CEP route out of 956 applications, an acceptance rate of 17% (the exam route, in contrast, has an acceptance rate of 14%). As of 2016, 1611 students have been admitted through this procedure, and more than half of these came from "*catégories socio-professionnelles défavorisées*." Within Sciences Po, the programme is generally seen as successful. An evaluation of the programme in 2012 found that graduation rates of CEP students were similar to those of students entering from other tracks and that CEP graduates had slightly better track records of finding post-graduation employment (Tiberj 2012).

The CEP is not uncontroversial even within Sciences Po, with some decrying it as a departure from Republican meritocratic principles, and nothing more than an import of US-style affirmative action (due to the geographic areas targeted by the ZEP, a large majority of CEP students are first or second-generation immigrants to France).

In Ireland, around half of younger students who enter higher education from lower socio-economic backgrounds do so through a specific application route called the Higher Education Access Route (HEAR). A similar programme, the DARE (Disability Access Route) does the same for disabled students (see Box 6.1 above). HEAR and DARE are also complemented by broader institutional efforts to widen access. These include at one HEI a programme to support teachers in increasing their knowledge and skills and at another an attempt to embed the commitment to access in the institutional framework, by developing a cross-institutional widening access committee made up of senior representatives from across departments. This type of outreach is not unknown elsewhere: in France an interesting example of an elite HEI itself prioritising this kind of outreach work was identified. However, Ireland was the only case study country where such institutional efforts were underpinned by national strategies.

In sum, **there are ways in which both systems and HEIs can work to counteract tendencies to social exclusion.** They should do so more often.

Finding 7: Higher education institutions can manage student pathways pre- and post-entry

While national policies on inclusion are important, HEIs have their own set of policy tools to manage student pathways and improve student persistence. These tools can be deployed before, during and after the actual admission decision.

In principle, this finding relates most closely to the question of an admission system's effectiveness, thus it is particularly relevant that Types 1 and 3 systems (which tend to be weaker on completion rates) are aware of the range of practices that can be undertaken. It is interesting then that the Netherlands, a Type 1 system based on school selection, is also the country which, as can be seen above, has made some of the most innovative efforts here.

While national policies on inclusion are important, HEIs have their own set of policy tools to manage student pathways and improve student persistence. These tools can be deployed before, during and after the actual admission decision.

In principle, this finding relates most closely to the question of an admission system's effectiveness, thus it is particularly relevant that Types 1 and 3 systems (which tend to be weaker on completion rates) are aware of the range of practices that can be undertaken. It is interesting then that the Netherlands, a Type 1 system based on school selection, is also the country which, as can be seen above, has made some of the most innovative efforts here.

HEIs have to manage pathways

One common line of argument with respect to so-called open access systems (that is, open at the point of entry) is that the countries which have done the most to widen participation in Europe have also tended to see higher drop-out rates, because the act of widening participation necessarily means providing access to students who may not be as well prepared, on average, as previous student cohorts. This is particularly true where systems have only a single-entry route into higher education. Countries may have more success in increasing participation by expanding the number of pathways into higher education level, but again, the lower preparedness of the students for whom access is being widened may be a challenge (Vossensteyn, H.; Kottmann, A.; Jongbloed, B.; Kaiser, F.; Cremonini, L.; Stensaker, B.; Hovdhaugen, E.; Wollscheid, 2015).

However, HEIs can be active in **managing student pathways to improve student outcomes**. Furthermore, this management can extend both forwards and backwards from the actual point of admission and point of entry. To this aim, institutions should take full advantage of the policy tools at their disposal.

Prior to entry

In the case studies, there was some evidence that HEIs engage actively with potential students through guidance and interaction at school level, enabling them to recruit the students they want. They do so to achieve sufficient student numbers in general but also to recruit students from under-represented backgrounds. In other cases the intervention includes forms of positive discrimination and can have real effects on equity (see also Finding 9). In addition, some institutional outreach activities aim to improve students' preparedness for higher education, which can result in improved retention. In the Netherlands for instance, all institutions are obliged to offer students what is described as the 'Study Choice Check', a process students must undergo prior to

enrolment to evaluate whether the programme of study they have chosen does in fact fit their talents and interests (see Box 7.2).

At the point of entry

The case studies did find examples of attempts to support student choice-making at the point of entry. However, many of these were based on the initiative of individual HEIs. In Germany, for instance, the Leuphana University offers a first semester as an induction period. It is called the “Leuphana Semester” and all new entrants to the Bachelor courses take this together. It focuses on general competencies required for later studies (e.g. how to work with scientific data) and interdisciplinary courses, but still includes modules in the student’s chosen major.

Box 7.2: Improving study choices – The Studiekeuzecheck (“Study Choice Check”) in the Netherlands

Studiekeuzecheck, or “Study Choice Check”, is a recent innovation in Dutch higher education. As of 2017, it became mandatory that every student applying to a Dutch HEI or HBO who completed their prior education in the Netherlands, Aruba, Bonaire, Curacao, Saba, St Eustatius or St Maarten, must undergo a “check” to evaluate their fit with their selected study programme. The idea is to improve student-programme matching so as to reduce the number of drop-outs in the Dutch higher education system. The result is meant as guidance.

The purpose of the Study Choice Check is to help students get a better understanding of their own interests and abilities and to obtain a more realistic picture of the course of training and the career opportunities associated with it. At some HEIs and programmes this is done through a direct interview; elsewhere it is done through a digital questionnaire administered on the internet. As one HEI representative from the case study stated:

“Our study choice check is set up as a trial study day at the HEI: a day in the life of a student. They have to do some homework ahead, attend lectures, do a test, follow a session in a working group and reflect on the day. On that basis, they can check if it was as exciting as they thought it would be, or not so much... And also important, have a chance to reflect: “can I do this?”

This instrument is meant to evaluate students’ personal situations and competences and study abilities, the nature of their previous education, their knowledge of and interest in their selected programme, previous education and overall to examine their motivation to complete the programme. Based on the results, HEIs make a recommendation to the student about their suitability for their chosen programme. HEIs may, on the basis of the results, recommend to students that they re-consider their programme choice and offer suggestions about how to find another one. The choice, however, remains with the student; a HEI may not reject a student because of a perceived bad fit.

After entry

HEIs can support students by providing both social and academic support, as well as academic counselling. For those students who leave their first programme of studies, this is particularly important in helping them find and integrate into a new programme once they have enrolled, and it helps to ensure that their pathway through higher education will be successful. These programmes while having common aims, vary between HEIs. At a more rural HEI in Norway, they have a programme called “førstesemester” (first semester) which integrates social and academic activities,

helping to make students feel at home at the institution; it is organised by the institution together with student organisations and student services.

In Spain one of the smaller private HEIs featured in the case study provides four types of guidance services: first year students tutored and mentored by students already in the HEI; a series of courses where they are counselled about aspects related to their studies, working in groups, and preparing for exams, among other things; "zero courses", which take place at the beginning of the school year and are designed to boost the first-year students' foundation level in certain subjects where they may have deficiencies; and "welcoming courses", which are designed to introduce the students into the degree programme.

Many similar initiatives have recently been introduced in Germany through the publicly funded so-called Quality-Pact, with the aim of improving study success and completion rates.

Another dimension to post-entry assistance is seen in countries which practice a form of post-entry selection. This phenomenon is best exemplified in France, where as a matter of policy, programmes like PACES (the general first-year health sciences programme) are specifically designed to be open-intake at the point of entry but also to fail large sections of the student body (in some cases up to 80%) during the first year of studies, thus preventing them from entering the second year. In programmes such as these, an extensive course of guidance is required to help those students who do not make it through to the second year, so that they can re-orientate themselves and find other programmes of study.

Finding 8: The link between distribution of study places and labour market demand is weak

Admission to higher education can have economy-wide effects if they lead to students enrolling in programmes which systematically under- or over-produce certain skills. Yet, for reasons ranging from conceptions of the HEI to the inflexible nature of the higher education workforce, few systems or HEIs seem to take much account of shifting labour market demands in the allocation of places.

This finding should prompt further reflections on the effectiveness question for European admission systems. Since studies happen at HEIs, this is the place where most strategic initiatives can be expected. In systems where HEIs have a large influence on the incoming students' study programmes (Type 2, but also Type 4), they can affect the allocation of places directly. In the other admission systems, they have to work more closely with schools and prospective students in demand formation.

Admission to higher education can have economy-wide effects if they lead to students enrolling in programmes which systematically under- or over-produce certain skills. Yet, for reasons ranging from conceptions of the HEI to the inflexible nature of the higher education workforce, few systems or HEIs seem to take much account of shifting labour market demands in the allocation of places.

This finding should prompt further reflections on the effectiveness question for European admission systems. Since studies happen at HEIs, this is the place where most strategic initiatives can be expected. In systems where HEIs have a large influence on the incoming students' study programmes (Type 2, but also Type 4), they can affect the allocation of places directly. In the other admission systems, they have to work more closely with schools and prospective students in demand formation.

Higher education systems could allocate places dynamically...

There are two ways that HEIs and governments, depending on how the provision of study places is organised, can react to changes in the labour market. Firstly, they can react directly to such changes by surveying economic trends and adjusting programme intakes pro-actively. Secondly, they can react indirectly to what may be perceived as changes in labour market demand by responding to changes in student demand (though the link between what students perceive as "desirable" courses and what the economic labour market demand is open to question).

The case studies did find instances of labour market demand playing a significant role in this process of allocating study places. In the Netherlands, the HEIs of applied sciences have a "*beroepenveldcommissie*" (commission for profession fields), which endeavours to maintain a direct link between provision of programmes and labour market demand. Any new study programme is required to demonstrate in its accreditation that the labour market needs (more) staff in that specific professional area. Something similar is being established in Lithuania. In Ireland, the government also attempts to shape course provision in certain specific subject areas, by providing financial incentives for HEIs to work together to increase the number of study places.

A side note can be added about the alternative approach taken in Germany for special programmes, which offer graduates both certificates for an apprenticeship and a Bachelor programme. This is an interesting innovation, but it should be noted that less than 5% of students are enrolled in these courses and the scalability is questionable at present.

...but more often than not they fail to do so

Based on the eight case study countries, **there is little evidence of well-developed strategies to connect the number and nature of students admitted to various higher education programmes with labour market demand, either at the system- or the institutional-level**. The majority of HEIs in the case study countries make their decisions regarding the distribution of study places on a strategic basis, seeking to balance a number of concerns including institutional income, as summarised by this HEI respondent in Romania:

"When looking at the number of students enrolled, there are two issues the HEI deals with: for Sciences programmes, attracting the sufficient number of students is more challenging (although these programmes can bring international recognition and prestige to HEI); for the Social Sciences programmes, it is relatively easy to ensure a sufficient number of students, but these areas do not necessarily bring prestige; there must be a balance between students enrolled in these two categories, in order to ensure both the HEI's financial sustainability and prestige, internationalisation and recognition of scientific impact of study programmes."

In many countries, shifts in enrolments need to be negotiated between governments, HEIs and accrediting agencies. In Spain, for example, student numbers in public HEIs are determined through negotiation with provincial governments; and the government will set, in conjunction with the rectors of that province's public HEIs, a total number of students to be funded in particular fields of study. This complexity means that **the decision to shift student numbers from one programme area to another is not strongly tied to changes in student or labour market demand**.

Sometimes there is simply **no financial incentive for HEIs to adjust their enrolment in such a way as to meet labour market demand** (e.g. Romania, Germany, France), even when there may be financial incentives to increase enrolment. At the same time, HEIs are themselves active agents and direct financial incentives are not always a pre-condition for HEIs to try and accommodate shifts in student demand.

For instance, one of the French HEIs interviewed was trying to accommodate as many students as possible in achieving their preferred options as far as possible.

In other cases, **resistance to aligning admission systems with labour markets may be a matter of how countries conceptualise the purpose of higher education**. In those with stronger Humboldtian traditions, the mission of higher education will tend to be associated more strongly with knowledge and inquiry than with the labour market; in these countries such linkages may be harder to construct. However, even in countries where the logic of high-participation in higher education has led to a somewhat more instrumental understanding of the purpose of higher education, there remain difficulties in coming up with specific mechanisms to determine study places in response to changing labour market needs. The nature of academic staff contracts makes the re-deployment of provision challenging. Finally, it is also a matter of how admission systems are perceived. In interviews with higher education sector representatives in Germany for example, this issue of meeting labour market demand was not seen as a matter to be considered by the higher education admission system.

A positive role for private HEIs

This is perhaps where **private HEIs can make an important and positive difference in the admission process**. Previous studies have shown that public HEIs are far less flexible in their student intake than private ones (Orr, Usher, Wespel 2014). In Spain, for instance, new private HEIs have been taking in many students in areas, such as communications, kinesiology and certain branches of engineering and health sciences, where public HEIs have been unable to meet demand.

Nonetheless, private HEIs continue to react primarily to shifts in student demand rather than directly to changes in labour market demand. As an official at a private HEI in Romania said:

"We are looking back each year to the number of enrolments from the previous years (i.e. if there were candidates for the places offered the previous years). We also work with a marketing company to study the market needs and the trends identified by the European Commission and we use all these pieces of information in a multi-criterial system to determine how many students we enrol within each programme and then it depends on what candidates we have for those places, their grades etc."

Finding 9: HEIs want more admissions autonomy, but are wary of challenges

Greater institutional autonomy in selection may bring benefits both to higher education systems and individual HEIs. However, selection imposes transaction costs on the HEIs doing the selection, and the more individualised and personalised the selection – for instance, the use of individual personal interviews – the greater the cost to the HEI. This creates some understandable ambivalence about the benefits of autonomy.

The mixed benefits of autonomy in admission systems may be a reason that when they have more possibilities to use their own selection criteria (e.g. in Types 2 and 4), they still largely rely on metrics from the school system or exit examinations. It is indeed unlikely that systems will shift en masse from Types 1 and 3, to 2 and 4, even if HEIs are given the opportunity to be more autonomous.

Greater institutional autonomy in selection may bring benefits both to higher education systems and individual HEIs. However, selection imposes transaction costs on the HEIs doing the selection, and the more individualised and personalised the selection – for instance, the use of individual personal interviews – the greater the cost to the HEI. This creates some understandable ambivalence about the benefits of autonomy.

The mixed benefits of autonomy in admission systems may be a reason that when they have more possibilities to use their own selection criteria (e.g. in Types 2 and 4), they still largely rely on metrics from the school system or exit examinations. It is indeed unlikely that systems will shift en masse from Types 1 and 3, to 2 and 4, even if HEIs are given the opportunity to be more autonomous.

The benefits of autonomy in selection

Over the past few decades **the trend in admission systems across Europe has been towards placing more responsibility on the higher education system itself** (or in some cases on individual HEIs) for determining student intake (Eastermann, Nokkala, & Steinel, 2011; Fumasoli & Huisman, 2013; Orr & Jaeger, 2009). This appears to lead to three potential outcomes. The first is that systems where HEIs have more autonomy appear to have larger student populations, possibly because there are potential rewards in doing so, either from tuition fees or funding formulae. The second is that where HEIs have more choice in selecting, they will try to attract and retain students who are perceived as a better fit for the existing study programmes and thus more likely to pursue studies through to completion (O'Keefe et al., 1993; Tinto, 1975). Both these potential outcomes are positive. However, there is understandable concern that institutional selection could be used for purposes of elevating institutional prestige by cultivating a more exclusive student body and rather than combatting it, this could lead to accentuating social exclusion.

Existing levels of autonomy vary widely across Europe

This study reveals that in all the case study countries, **governments seek to limit the ability of HEIs to affect the composition of their student body**. In most, but not all of them, there was some evidence to suggest that HEIs preferred more autonomy, though the extent to which this was a priority varied from country to country. In Romania for example, HEIs already have a great deal of formal autonomy over admissions, which they use mostly in order to maximise income in various ways. A

similar situation exists in Lithuania, although key informants tended to deplore this situation, saying:

"The voucher system (money follows the student), which is prevalent now, has increased the competition very sharply. It has encouraged HEIs to compete in ways that harm higher education quality: to excessively increase the number of study programmes and to over concentrate on making their names sound attractive."

In Ireland, as one policy-maker explained:

"The position is that entry requirements for admission to higher education institutions in Ireland are determined by the institutions themselves, as they are legally autonomous and academically independent."

However, from the point of view of at least one Irish HEI, the situation is better described as 'quasi-autonomous'; the government does try to influence student demand and supply by using both financial rewards and dialogue. For example, HEIs receive a premium for recruiting students into science disciplines. However, there were examples of Irish HEIs using what freedom they had to construct the courses they offered in such a way that higher grades would be required for entrance; thus they would be perceived as more selective. The aim was to attract more highly-qualified students in an attempt to obtain higher institutional prestige.

In Spain public HEIs have very little freedom to select, being restricted to using scores from the *PAU*, which they do not believe are always useful as a guide to a student's interests and talents (see also Finding 3). Private HEIs, on the other hand, have considerable freedom and use a range of tools to establish whether to admit a student, including: (1) student letters of motivation (2) letters of reference from teachers or guidance counsellors (3) in-depth interviews with a HEI psychologist and (4) a test of competencies used to diagnose the student's level when entering higher education.

In France, the public / private divide is similar to that in Spain; additionally, within the public sector there are certain HEIs (*les "grandes écoles"*) which are highly selective, and while access to parts of most HEIs is open to all with a *baccalauréat*, other parts (notably Engineering programmes run through the *instituts universitaires de technologie*) are selective. Here there was little pressure for greater selectivity, but this appeared to be because the system was substantially selective to begin with. In the Netherlands, there have been recent attempts to introduce greater autonomy for HEIs to select their students, yet the HEIs examined in the case studies were split, with some not in favour of greater selection on principle. In Norway the HEIs interviewed seemed relatively satisfied with the system from the perspective of admission decisions being based very much on examination results; the same was true in Germany.

Sometimes costs outweigh benefits

One of the reasons that the demand for more autonomy is not more widespread is that **while HEIs see benefits from greater selectivity, they are also sensitive to the additional costs resulting from a selection process**. Many of the policy-makers interviewed praised standardised examinations for their objectivity, but another benefit is that they reduce transaction costs for HEIs.

Dedicated tests to enter a specific field of study or HEI (such as in Romania) are expensive and complicated to conduct. So too are interviews. In the Netherlands, the combination of decentralised selection and the introduction of the 'Study Choice Check' have meant a rise in both time and resources required to conduct selection. As a result, contrary to expectation, there has been a reduction in the number of programmes that apply selection rules. In France, those elements of French HEIs that already use interviews for selection not only have to go to the trouble of scheduling meetings and paying staff to conduct them, but also to spend a great deal of time training

interviewers, developing response rubrics, ensuring inter-rater reliability, etc., to ensure that results remain as objective as possible. **The costs associated with these tasks constitute a real deterrence to the broader take-up of selection measures.**

Compressed schedules favour simpler admission systems

Time is also an issue. As one of the case study HEIs in Norway explained, while they had considered using more interviews to select students to popular programmes, there were practical barriers mitigating against this, as many students applying to take these popular programmes come directly from upper-secondary education. In Norway, secondary grades are official around July 1st, and the admission process is supposed to be done by July 20th. As there are many highly qualified applicants, it would be hard to conduct several hundred interviews in just a few weeks. Similar considerations are at play in Spain, which also has a constricted schedule.

The constraints on exercising more diverse selection techniques stand in contrast to the efficiency of a situation where passing an exam gives a guaranteed place at an HEI. In this situation, the HEI has no decision to make and hence the admission process incurs no cost. If the only score a HEI is permitted to consider is a standard exam score (or a standard combination of exam score and school mark, such as the Spanish *selectividad*), then only a minor cost is involved in creating algorithms that accept or reject students for a particular programme. If a lottery is used to determine places (as is the case in some HEIs in France and until recently in the Netherlands), then this also involves a relatively low cost. In short, **while there are some benefits to greater selectivity**, increased costs are an obvious disadvantage, and as a result **there is understandable ambivalence among HEIs about extending its use.**

8 Findings on Students

The purpose of this chapter is to encapsulate the findings of the eight case studies with respect to how students experience the admission process and how to make it less stressful and demanding for them. There are two major findings in this area. A box at the top of each finding summarises the main points and provides some context regarding the types of admission system the finding is most pertinent to.

Finding 10: Young people are making decisions under great pressure

The proximity of high-stakes examinations to the point in time at which students must make life-altering decisions around higher education and choice of programme and HEI means the choice process takes place while students are under considerable stress and time pressure.

The students who appear to feel the most pressure are those where the school examination system plays a significant role in higher education entry – they are from countries from Types 1 to 3. (It would have been ideal here to have the opportunity to speak to young people from Type 2 to see whether pressure was less here.) Other contextual factors play a role across systems – Norway for example, where there is less competition for places, appears to have relatively less of an issue here.

The proximity of high-stakes examinations to the point in time at which students must make life-altering decisions around higher education and choice of programme and HEI means the choice process takes place while students are under considerable stress and time pressure.

The students who appear to feel the most pressure are those where the school examination system plays a significant role in higher education entry – they are from countries from Types 1 to 3. (It would have been ideal here to have the opportunity to speak to young people from Type 2 to see whether pressure was less here.) Other contextual factors play a role across systems – Norway for example, where there is less competition for places, appears to have relatively less of an issue here.

The key to institutional choice is programme choice

The admission process is not something that just happens to students; they are active agents in it, and shape it themselves with their choices – albeit choices that are constrained by the behaviour of other actors in the system and by their own background. But **making reasoned and informed choices takes time and many admission systems deprive students of this vital resource**.

Though there is an extensive literature on institutional choice process in North America (Hossler & Gallagher 1987, Litten 1982, Chapman and Jackson 1987, Kotler & Fox 1995), the evidence from the case studies presented here suggests that for European students the choice process is quite different. Students in the focus groups across the case study countries usually indicated that **the choice of HEI was secondary to the choice of programme** – that the latter effectively conditioned and informed the former. This contrasts with the choice process in North America, where students are more likely to choose a HEI first and a field of study later. This is a combination of two factors: firstly, the tendency of students in many (though not all) European countries to pick a HEI close to the family home and secondly the greater specialisation of European HEIs. In effect, once a field of study is chosen, it may be that only one local HEI is able to provide such a programme.

High-stakes examinations contribute to stress

One consistent finding that emerged over the course of the focus group consultations was that **students felt under great pressure when at the end of their teens they were making what seemed to them momentous decisions regarding programmes of study**. At the same time, they were being asked to take highly stressful examinations. In several countries, students stated that these exams were placing them and their friends under stress:

"I'm in conflict about whether I should continue to work so hard that I get a burn-out in order to optimise my grades or not." (Germany)

"It is not right to make people feel like this. Some of my friends are getting ill with stress." (Ireland)

"Sometimes I feel panic, I ask myself why did I pick a certain exam, I think I won't be able to pass it...There is such fear and lack of confidence." (Lithuania)

Students felt this pressure was exacerbated, in some cases, by the attitude of teachers.

"Teachers say, if you don't pass you will end up cleaning streets." (Lithuania)

"My teacher said that this exam would define the rest of my life and was the most important thing I would ever do." (Ireland)

The extent to which students felt under this pressure was related to the level of competitiveness for entry into the courses students wished to enter. Students in Norway, for example, where there is no excess of demand over supply of study places, expressed less concern about stress than, for instance, students in Ireland or Lithuania.

Decision time on higher education programmes coincides with high-stress exams

It was not simply that they felt there was a lack of guidance available at the correct moment to make the decision. It was also that many secondary school systems place heavy priority on study at the same moment that the students are supposed to be making decisions about HEIs; that is, during the months either side of Christmas in the final year of school.

The impression gained from the case studies was that **students are experiencing a degree of cognitive overload**: there is simply too much going on at the time choices need to be made. As one Irish student stated in January,

"It is difficult to find time to think about future plans, I am too stressed."

A significant part of the problem seems to be that **making mistakes during the transition is costly** and that if students do change their mind, they have to start again from the beginning and "lose" a year. This is not simply a question of lost money, in terms either of fees, food or living expenses; it is the cost of having to stay out of the labour market for another year.

In Europe, the introduction of the European Credit Transfer System (ECTS) has always been seen as providing an instrument for the recognition of credit points obtained in one programme being credited to another programme and most legal frameworks foresee this provision. However, the early specialisation of many Bachelor degrees, with a large number of programme prerequisites, may limit the mitigating effect of this tool for students who wish to change their programme.

It is in the interest of governments, both from the point of view of public expenditure and that of individual students, to **support students to make the optimum choices when they enter higher education**. This may require policies which either increase the amount of time available to students when making their choices or reduce the cost of poor programme decisions or both.

Finding 11: Increased choice should not mean increased complexity

Students desire more choice in higher education programmes. But increasing numbers of programmes means increased complexity of choices, which creates difficulties for students. Guidance can mitigate this to some extent, but there is a need to keep the overall admission process simple to understand.

This finding is particularly relevant to systems such as Type 3 (Least selection), where students can exercise a great deal of choice. It is also of course particularly relevant to other system types in particular 1 (Selection by schools) and 2 (Selection by HEIs) which may be looking to shift the balance of control towards students (e.g. in the Netherlands).

Students desire more choice in higher education programmes. But increasing numbers of programmes means increased complexity of choices, which creates difficulties for students. Guidance can mitigate this to some extent, but there is a need to keep the overall admission process simple to understand.

This finding is particularly relevant to systems such as Type 3 (Least selection), where students can exercise a great deal of choice. It is also of course particularly relevant to other system types in particular 1 (Selection by schools) and 2 (Selection by HEIs) which may be looking to shift the balance of control towards students (e.g. in the Netherlands).

Choice is good, but choice complicates

A consistent refrain heard from students during the focus group consultations was that although they appreciate choice in higher education programmes, and in many cases they want more choices than they currently possess, it is nevertheless seen as somewhat intimidating, even frightening. Many focus groups involved students who indicated that at some point in the secondary-higher education transition they felt a sense of fear in terms of making the wrong choice, and therefore incurring the costs of a lost year.

As a result, there is tension at work here: **choice is seen as good, but more choice means more options and more options increases the possibility of making a costly mistake in programme choice, leading to lost time.** Solutions to this problem offered by students usually take the form of more experiential opportunities at secondary level in order to get a wider understanding of specific professions or fields of study through, for example, interacting with students. As one German young person suggested:

"Schools should provide the framework for better information. They should not only invite the Job Centre, but also students who tell us what studying is really like."

This is very much in keeping with the modern theories of career guidance as practised in Europe. However the success of this approach still depends to some degree on the complexity of choice available to students.

Even well-resourced guidance systems struggle in face of complexity

The French case is a good example of this. Guidance functions are carried out by specialised counsellors (*conseillers d'orientations-psychologues*, or COPs) who are employed by the ministry but are not usually attached to individual HEIs. Rather, COPs work from one of 420 regional *centres d'informations et orientations* (CIOs) spread throughout France and will work with schools throughout a particular area. In total, there are 3,700 full-time COPs spread across France. Provision of career guidance and

exposure to different employers and workplaces is as extensive as anywhere in Europe. It also has a centralised admission process (the *Admission PostBac* or APB), which - according to its own goals - matches students and HEIs / programmes efficiently and transparently.

Yet French students remain at least as much paralysed by choice as anyone else, in part at least because the country's selection system is perhaps the continent's most complicated. It mixes undergraduate programmes which are direct-entry from secondary school with others that require one or two years of preparatory classes, programmes that are open access with others where HEIs can select their students, and HEIs which are both public and private. In addition, the selection process imposes restrictions on enrolment based on geographic factors. As French students stated:

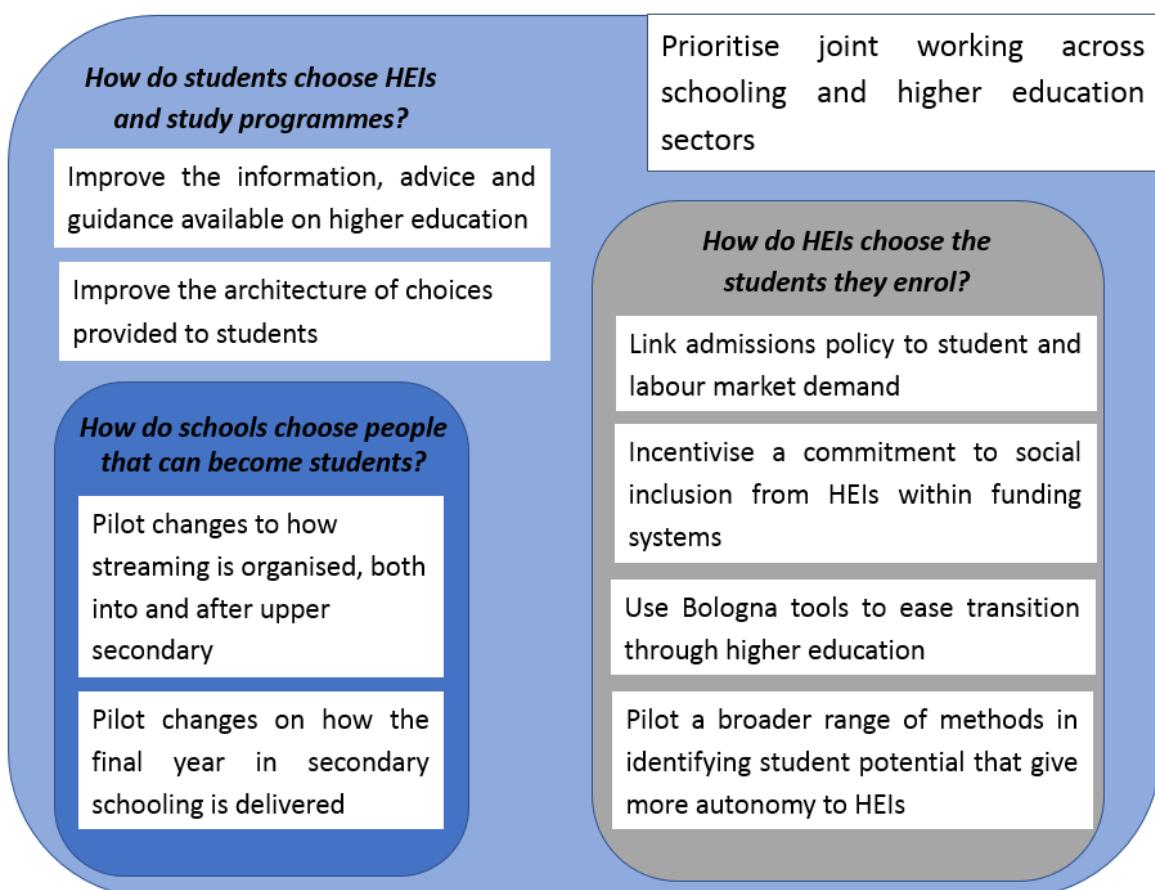
"We have no comprehension of the APB. No one ever really explained to us how it works – the only thing our teachers know about APB is how to use it to make us more stressed."

"It's like flailing in the dark: that's how it feels to depend on a system you don't understand."

In short, **as choice increases and admission systems become more complex, more guidance is needed**. But beyond a certain level of complexity, the ability of guidance to provide clarity begins to diminish. Ensuring that student choice does not become more complicated to navigate as the number of course choices increases is key to improving student outcomes.

C: RECOMMENDATIONS

Putting students and their decision-making processes at the centre, this section presents nine recommendations for change and innovation on the part of the school system and higher education institutions. They should aim to improve advice and guidance and support students' learning pathways.



9 Conclusions and Recommendations

This report argues that it is necessary to take a holistic approach to understanding higher education admission systems. This means examining how both schools and higher education institutions impact on higher education entry, whilst also placing the views and needs of students at the centre of the admission process. The previous chapters drew out a series of findings that indicate the challenges that policymakers face in trying to develop equitable, efficient and effective systems. This final chapter outlines how policymakers might be able to address these challenges through policy options. It commences with general policy principles and moves on to formulate specific recommendations for different parts of the admission system.

9.1 Balancing policy principles across the admission system

Policy principles often form the backdrop to specific policy interventions. For this reason, this section highlights three key tensions in admission systems, which require balancing in the design of such a system.

9.1.1 Balancing equity and efficiency

Admission systems with less selection (especially Type 3) appear to have more equitable student bodies. At the same time, such systems also appear to have lower graduation rates and higher levels of graduate mismatch. Some caution is in order with respect to these findings, given the small size of samples and given that correlation is not causation, but theory would also suggest this conclusion.

If efficiency is simply determined by completion or employment rates, it is understandable that a more selective system can be a more efficient system. Existing evidence suggests that students who enter higher education with a lower level of prior attainment, and / or less prior preparation in terms of development of appropriate study skills, are not as likely to complete their higher education.

But **selectivity based purely or mainly on demonstrated academic talent is not neutral** with respect to equity. There is significant evidence from many countries that students from higher socio-economic backgrounds and students from major urban areas tend to perform better, in terms of academic achievement and standardised testing. While the report shows that there may be a trade-off between these two goals at present, detailed examination of different admission systems also shows that there are efforts underway to ameliorate these tensions through outreach efforts and second-chance routes. However, it would be possible to achieve far more in this respect.

9.1.2 Balancing objectivity and fairness

One strength of standardised exams is that they represent an objective standard against which merit can be judged. This is particularly important for admission systems based on school exit exams (Type 1).

The case studies illustrate that though the content of the exams may not always command universal respect, their adjudication does and they are seen to represent impartiality. This was particularly important, for example, in Lithuania and in other post-Communist countries where political and historical factors have in the past led to the distribution of higher education places based on political and class connections.

However, what was also recognised extensively is that such **objective examinations can be considered unfair** in at least two senses. Firstly, they measure a narrow set of competencies in which those from higher socio-economic backgrounds tend to do well. Secondly, the case studies indicate that many students view exam-only systems as unfair and wish there was a way to showcase other facets of themselves – drive,

ambition, personality, etc. – to the people who control admission to specific programmes. In addition, the study shows that in many countries HEIs would also like to use a broader set of measures to select students into specific programmes, because they think they would receive a more balanced and more committed student body as a result. Neither party is naïve about the risks that a less quantitative approach such as this would bring, but it seems nonetheless that there is widespread appreciation of the benefits to more qualitative approaches in matching students with individual programmes.

In many countries, **second-chance routes are being used to resolve this tension**, at least for part of the student body, but this option is only available to a small percentage of those previously excluded. In many of the case studies, the question of scalability and impartiality was raised as a consideration against mainstreaming more holistic tools. However, in admission systems where HEIs can use their own criteria for selection (Type 2 and private HEIs), this can be done differently by each HEI.

9.1.3 Balancing completing secondary education and making future choices

A third tension relates to scheduling. While the admission process can, in some countries, begin at the end of primary school and sometimes finishes within the higher education system (see the pipelines for the case study countries in Chapter 3), **two key functions – exam-taking and selection of study programme and HEI – often take place together** over the very short space of a few months.

Furthermore, it is argued strongly that students are frequently under great stress in this period and that this situation is not one that policy-makers should be willing to accept. These pressures are partly due to the exams themselves being high-stakes and thus stress-inducing, whilst simultaneously, students are being asked to make important choices about their careers with limited information. This also has to be borne in mind by prospective students in systems where selection is partly through HEIs (Types 2 and 4).

The conflict arises because all systems rely to an extent on examinations in making higher education entry decisions, and meanwhile students require the maximum available time to consider their higher education choices. Guidance at school level and management of student pathways by HEIs can help to alleviate these tensions.

9.2 Recommendations

The recommendations below should be interpreted in the context of a continent with differentiated individual higher education admission systems. They are designed to aid policy-makers in managing the tensions set out above and in creating more equitable, efficient and effective admission systems. The first six recommendations can be clearly recommended for all admission systems. It is suggested that the final three recommendations should be piloted, on the understanding that such elements of an admission system are usually more difficult to change and may be dependent on contextual factors and local conditions in the countries affected.

Recommendation 1 – Improve the architecture of choices provided to students⁷

A corollary of offering additional ways into higher education is the increase in complexity (this is the case for Type 3 systems, but also a general trend in most countries). Many of the students in the focus groups are already complaining of too much information, making choice even harder. Just as schools need to improve guidance, HEIs need to improve the system-wide choice architecture they present to students.

⁷ See also finding 8

Firstly, this is about **simplifying the way choices are presented**. Governments and HEIs are becoming increasingly conscious of the need to provide accurate and timely information. The case studies highlighted current efforts in this direction, with the (voluntary) Dutch 'Study Choice Check' and the various German study-interest tests. In the case of France's APB system, much work has been done, but the sheer complexity and number of possible permutations which underlie the system remain a challenge for student decision-making.

The point here is not to criticise individual efforts being made to present choices to students. The issue is that the architecture of that choice is often set up in a way that is administratively convenient for HEIs rather than intuitive to students. It is recommended that this point be considered together with the task of improving information, advice and guidance as a whole.

Recommendation 2 – Improve the information, advice and guidance available on higher education⁸

Evidence suggests that an improvement in information, advice and guidance would benefit higher education systems throughout Europe. The case studies in the report indicate that efforts are being made to provide more information to prospective students about individual programmes and careers. The German (Bavarian) case provides an innovative approach to this: projects in upper-secondary schools focus on the future careers of pupils and involve collaboration with HEIs and businesses. However, this is just one part of the puzzle. **Students require contextual information and advice which is personalised and goes beyond their own social-proximity network.** Improving information, advice and guidance will require financial investment (in nearly all case studies it appeared under-funded), and coordinated efforts that involve schools and HEIs working collectively. It should also engage students in the first year of higher education in countries where selection extends to this point. This investment should be universal, but also have a particular focus on students who are under-represented in higher education. In the absence of proper available guidance, students will fall back on family resources of cultural capital, which are not distributed equally. See Box 9.1 for further recommendations.

⁸ See also findings 4, 7, 10, 11

Box 9.1: A deeper dive: Options for better Information, Advice and Guidance

Information, advice and guidance (IAG) is central to the needs of a holistic admission system. A review of evidence and experiences from the case studies, but also reference to other sources (cf. ARC Network 2013), suggests that such a strategy should consider the following tools:

- **Interaction and collaboration between schools and HEIs:** Guidance should be augmented through collaboration between schools and HEIs. Tools for such collaboration and interaction between the sectors can be: open days, visits of student counsellors from local HEIs, visits from trained undergraduate and postgraduate students to give structured mentoring support and additional tutoring. Such support needs to be sustained and begin at early secondary level not in the final year of secondary schooling.
- **Support along the admission pipeline:** Studies call for support of prospective students throughout their journey towards a final study decision and into the first year of study. This may also start early in secondary schooling and be intensified during the upper-secondary level. It should continue for the first year of higher education.
- **Training of professional IAG staff:** This work needs to be led by staff trained to professional standards who understand and communicate impartially to students information on higher education and labour markets. Teachers should be involved as they are the people to whom school pupils will first turn when seeking advice and whom they will trust.
- **IAG aimed at a prospective student's social proximity network:** Successful IAG strategies also recognise that students are being influenced by their family and friends (and for adult learners: their employers) and hence IAG should be targeted at these groups as well.
- **Study motivation and aptitude tests:** These are being used in many countries currently, the most prominent example being from the Netherlands (see Box 7.2). However, the focus groups generally found results inappropriate and questioned their predictive value; existing tests in this field therefore need to be further developed.
- **Technology-assisted IAG journeys:** New tools are being developed which bridge the gap between schools and HEI counsellors through use of social networking technology (JISC 2017). These may be useful tools to help address the challenge of resource-intensive support for prospective students during the whole transition period, but they should not be used as a low cost alternative means of improvement here; genuine investment is needed at a deeper level.

Recommendation 3 – Link admission policy to student and labour market demand⁹

Admission policy and labour market demand are not strongly connected, and the focus group discussions with students found that one of the most stressful aspects of admission was the fear of not getting into a preferred programme. If places could be realigned more quickly, there would be fewer bottlenecks in the system and the admission process could become less high-stakes for students, i.e. most study choices would lead to personal success for students and success in the labour market.

Admission policies need to be better linked to both what students and labour markets want. There is no reason to believe that the preferences of students will necessarily match the future demands of the labour market, at the same time the labour market

⁹ See also finding 8

finds it hard to predict future skills requirements. One major element in the work of linkage is therefore to determine the graduate attributes to which most high-quality higher education programmes should lead (e.g. 21st Century Skills).

At the same time, disciplinary skills remain key. Some countries (e.g. Lithuania) are using or trialling policy instruments such as ring-fenced funding for HEIs that agree to provide additional student places focused on specific subject areas. Private HEIs can play a role in helping to expand the supply of places in particular fields, as they are able to operate more flexibly than many public HEIs. However, **to ensure balance between student and labour market demand, stakeholders from both sides must be included in the development of national admission policies.** These policies also need to be based on better evidence regarding patterns of student demand and how it is shaped, as well as labour market intelligence on likely future changes in employment.

Recommendation 4 – Incentivise Higher Education Institutions to be more inclusive¹⁰

The majority of HEIs do not consider social inclusion to be a primary mission. They should be more clearly charged with a responsibility both to enable learners from under-represented backgrounds to participate in higher education and to support the successful completion of their participation. To help them discharge this responsibility, **HEIs should be given strong financial incentives to enrol and graduate students** from such backgrounds. As the examples from different countries show in Chapter 7, HEIs can lead outreach activities capable of better preparing learners from equity groups for higher education and can deliver second-chance routes for older learners. The United Kingdom has a universal system of equity performance agreements across its four nations, and in the last 10 years England (despite the very high cost of student tuition) has increased higher education participation amongst students from lower socio-economic groups. Other countries (such as Croatia and Austria) have included equity improvements in their target agreements, whilst Germany has offered a specific funding programme to support enrolled students in their orientation and progress.

The evidence suggests that HEIs already have within their institutions the tools to deploy resources more aggressively, in order to help such students enter and succeed. Yet in most instances, HEIs are not doing so, because they do not see this as their responsibility. These activities are however vital in helping to manage the tension between equity and efficiency described above. They can enable learners from equity groups to increase the likelihood of successfully completing higher education. Such work is not a silver-bullet solution, but combined with reforms to streaming and to the methods by which HEIs select students, these activities can contribute to making European higher education more equitable.

Recommendation 5 – Use Bologna tools to ease transition through higher education¹¹

Students fear making mistakes in choosing a HEI and a study programme and having to incur the time and cost of re-starting a different programme from the beginning. Reducing the consequences of mistakes would take much of the pressure off the experience for students. This could be done by postponing the requirement on students to choose specific programmes for a semester or a year into their higher education, or by making credits easier to transfer from one programme to another. The Bologna structure, with **shorter study programmes** (including the growing short-cycle sector) **and the European Credit Transfer System both offer potential** here. More programmes should make use of these to reduce the disadvantages of changing courses during the first year of study.

¹⁰ See also findings 5,6

¹¹ See also finding 7

Recommendation 6 – Restructure selection processes during secondary education level¹²

In order to create the conditions for a more equitable higher education system, streaming into programmes not leading to higher education should be left as late as possible (as is found in Types 2 and 3). Systems where streaming occurs at an early age (especially Type 1) appear to embed social inequality into higher education entry and, as students get older, make further policy interventions related to equity harder to deliver.

Admission systems heavily reliant on selectivity and streaming during the transition from primary to secondary education and within secondary education (Types 1 and 3 in the current typology) could **gradually reduce the degree of selectivity and monitor their results**. They could allow more students to pass through into upper-secondary education and the academic stream; alternatively, they could recalibrate higher education-facing exit examinations (like the German Abitur or the Italian Maturita) so that more students gain the appropriate qualification to enter higher education and / or certain study programmes.

Recommendation 7 – Introduce pilot projects to reduce pressure during the final year of secondary school¹³

The tension between the needs of the schooling system and those of higher education described above is a difficult challenge to resolve, but reform is required to try and separate out the taking of examinations from the selection of a programme of higher education. For increasing numbers of Europe's young people, major life events are being compressed into a very short period of time at the end of upper-secondary level. Such events could be spaced out more. One option would be to move final exams to an earlier point in the last upper-secondary year. This might mean that systems would need to switch away from exams intended to encapsulate an entire upper-secondary education in favour of something which was at least partially psychometric in nature, such as the Swedish SAT. This might be challenging, but the positive resulting effect might be to make the entire curriculum less exam-focused. Another option would be to move higher education applications to an earlier point in the final year (which is essentially what is currently being trialled in the Netherlands). However, it is recognised here that these changes are ambitious and could not in themselves guarantee better outcomes. Any changes must be accompanied by improvements in information, advice and guidance such as those recommended above. The key thing here is to **ensure that students think about higher education choice much earlier than in the final year of secondary schooling**. This last year is then the culmination of a process, not the whole decision-making period. However, for this to happen it is essential that information, advice and guidance be vastly improved.

Recommendation 8 – Permit HEIs to experiment with different methods of identifying student potential¹⁴

HEIs do want greater autonomy in admissions (i.e. those in Types 1 and 3), but nevertheless they view this cautiously given the costs involved. However, they also want, as students do, a better match of applicants with the programmes they offer. If systems are going to expand equitably and efficiently, they need to **manage the tension between objectivity and fairness**. Hence, while accepting the caution above, greater autonomy needs to be given to HEIs to select their students, although this increased freedom needs to be controlled through a framework that enhances rather than constrains equitable admissions. Such autonomy might involve more use of interviews and aptitude testing.

¹² See also finding 1

¹³ See also findings 3, 10, 11

¹⁴ See also findings 2,9

Recommendation 9 – Prioritise joint working across schooling and higher education¹⁵

In recognising the holistic nature of higher education admission systems, it is essential to build on collaborative work between schools, HEIs and policymakers who focus on schools and higher education. Such **collaboration should be a requirement for all admission reforms**. There was little evidence of such work happening in the case studies undertaken, the prevalent view being that schooling and higher education are separate domains. As illustrated in Chapter 5, the best way to classify admission systems is by looking at how schools and HEIs contribute collectively to the admission system. Hence, these actors must work together to improve admission systems. Such work should in each case be part of a national strategy for improving admission systems.

¹⁵ See also findings 1 to 11

Annex – Methodological notes

Developing the typology

Using criteria to underpin the typology

Four criteria were adhered to in order to ensure that the typology was both based upon existing work into admission systems and relevant to policymakers.

Highlighting admission systems which are "open at the point of entry" and those which are not (usually referred to as "selective" systems)

- Admission systems are often divided into "open" (meaning that admission is a right to all those who have gained entry to a particular type of upper-secondary school such as the French baccalaureat) and "selective" (meaning that HEIs have the right to choose their students and admission to HEI is not guaranteed). This approach was most recently used in a study for the European Parliament (McGrath et al., 2014). A more nuanced approach to this split has been taken here, including many more differentiating elements in the mapping of countries' admission systems and their context. This means the term "open" is defined more precisely as "open at the point of transition".

Accounting for the interplay between selective mechanisms within the school system and those employed by HEIs

- A weaker link between exiting a preceding educational level (e.g. upper-secondary education) and entering the next level (here: higher education) will normally lead to an entrance examination. In the case of higher education, this may be operated by the HEI itself, by groups of HEIs or it might be operated centrally for all applicants. Such examinations have been on the increase in the past two decades, developing in parallel to the increasing autonomy of HEIs and the expansion of upper-secondary schooling.

Capturing the respective influence of the school system, HEI and higher education candidate on final study decision

- A central argument in this study has been that the admission system 'works' through the interplay of three major agents – school system, HEI and student – and this interplay is moderated (encouraged, regulated etc.) by the policy-maker.

Developing a typology can be used to focus on existing and recommended policy interventions aiming to make the higher education system more efficient, more effective and more equitable

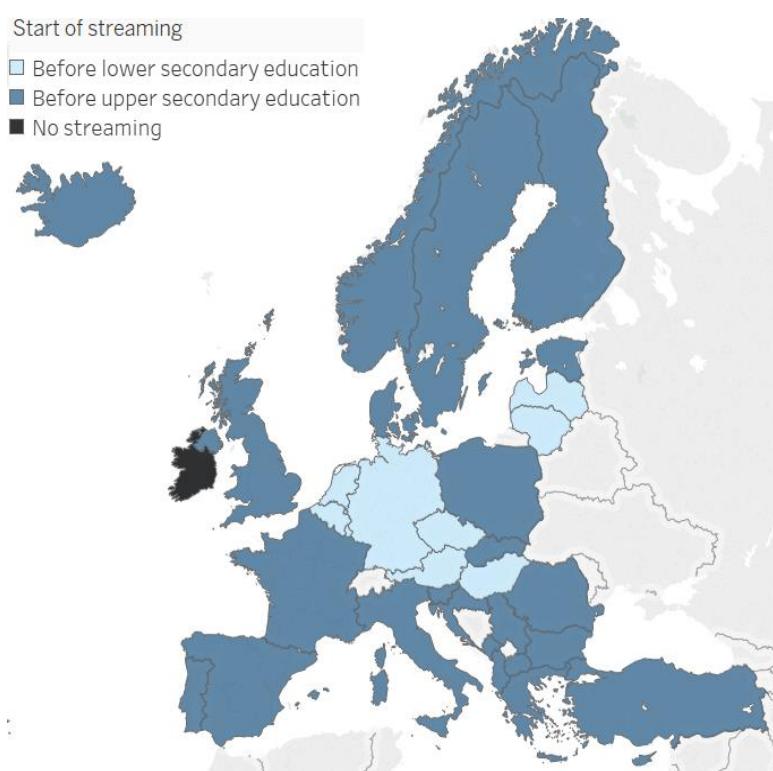
- The purpose of this study is to be able to classify admission systems simply and as a result to suggest where the policy-maker is likely to be or should be active.

Measuring the extent of streaming

For the purposes of the typology, the countries were grouped into a binary classification:

- At least one pathway through the school system does not lead to a qualification enabling higher education entry (to some part of the system) – “Some streams do not lead to higher education”.
- In general, all pathways may lead to higher education entry (in some part of the system) – “All streams lead to higher education” and “Some streams lead to some higher education”.

Figure 10.1: Map of Europe: Do streams lead to higher education?



Source: Authors

This classification of countries' access routes was undertaken using the following rules:

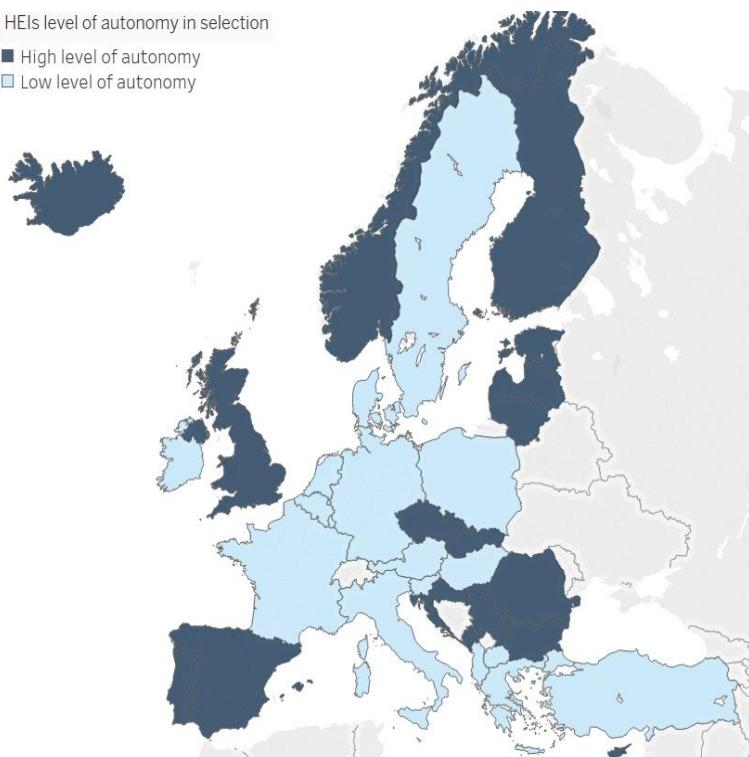
- Access to higher education included only higher education programmes ISCED 6-7, both academic and professional, but not ISCED 5 (short-cycle) as this created problems in international comparison.
- The streams that led only to professional higher education programmes ISCED 6-7, were retained in the “all streams lead to higher education” category, as there are different practices in terms of reporting between academic and professional higher education programmes in international comparison.
- Streams for special needs education were not taken into account.
- Adult education was not taken into account.
- Streams that had less than 10% of the total number in lower- / upper-secondary enrolments were not taken into account.
- Streams that led to ISCED 4-5 programmes (including bridging programmes) which in turn can lead to ISCED level 6 programmes were not taken into account.
- Where upper-secondary education (ISCED 3) is divided into stages, the final stage was taken into account if it led to higher education.

Measuring the extent of higher education autonomy

For the purposes of the typology, the countries were grouped into a binary classification:

- (Nearly all) HEIs can select with additional criteria – Broadly speaking this is equivalent to what authors such as McGrath et al. (2014) describe as “selective” systems. HEIs can choose to use additional criteria, even if this includes results of the ‘school exit exam’ or grades for selected disciplines in upper-secondary schooling.
- HEIs cannot select with additional criteria (in normal circumstances) – all other variations. Broadly speaking, this is equivalent to what are described as “open” systems.

Figure 10.2: Map of Europe: autonomy of HEIs in selections



Source: Authors

This classification was undertaken based on a re-grouping of the six main ways in which the autonomy of HEIs and selection interact:¹⁶

1. HEIs cannot organise any further assessment of students and the decision regarding students is taken based on national regulations with regard to the related discipline that pupils have achieved when graduating from high school and a random allocation mechanism (e.g. weighted lottery) – HEIs with low level of autonomy.
2. HEIs cannot organise any further assessment of students and the decision regarding students is taken based on national regulations regarding school exit results: results in the “school exit exam” or the grades for some disciplines in high schools – exceptions may exist for military / arts / EU regulated programmes – HEIs with low level of autonomy.
3. HEIs cannot organise any further assessment of students but they have the discretion to choose between accepting the results of the “school exit exam” or the grades achieved for some disciplines in high schools – exceptions may exist for military / arts / EU regulated programmes – HEIs with low level of autonomy.
4. HEIs cannot organise any further assessment of students but, apart from the national exit exam, there is a national entrance exam which provides further

¹⁶Sources used: Eurypedia, <https://webgate.ec.europa.eu/fpfis/mwikis/eurydice/index.php/Countries>; 2012-2015 BFUG questionnaires (Question 3.13, 3.14, 3.15); input from national experts.

- assessment – exceptions may exist for military / arts / EU regulated programmes – HEIs with low level of autonomy.
5. HEIs can organise further assessment but can also base their decision on school exit results: results in the “school exit exam” or the grades for some disciplines in high schools – HEIs with high level of autonomy.
 6. Only some HEIs can organise further assessment (apart from the mentioned exceptions that may exist for military / arts / EU regulated programmes) – HEIs with low level of autonomy.

Consistency check for the quantitative analysis

The sensitivity test used in the quantitative analysis shows if the exclusion of the first and last countries has an impact on the results shown for a specific group in the chart. The GDP test shows if the results are highly influenced by the GDP per capita (PPS) level of the countries – if more than a third of the countries of a specific group have the GDP over or under the EU 28 mean the test is passed.

References

- Arum, R., Gamoran, A., & Shavit, Y. (2007). *More inclusion than diversion: Expansion, differentiation, and market structure in higher education.*
- Albouy, V., & Wanecq, T. (2003). Les in{é}galit{é}s sociales d'acc{è}s aux grandes {é}coles suivi d'un commentaire de Louis-Andr{é} Vallet. *Economie et Statistique*, 361(1), 27–52. <http://doi.org/10.3406/estat.2003.7351>
- Becker, R., & Hecken, A. E. (2009). Why are working-class children diverted from universities? - An empirical assessment of the diversion thesis. *European Sociological Review*, 25(2), 233–250. <http://doi.org/10.1093/esr/jcn039>
- Bray, M. (2011). *The challenge of shadow education - private tutoring and its implications for policy makers in the European Union.* European Commission.
- Brinbaum, Y., & Guégnard, C. (2012). Parcours de formation et d'insertion des jeunes issus de l'immigration au prisme de l'orientation. *Formation Emploi*, 118(61–82), 61–82.
- Brinbaum, Y., & Guégnard, C. (2013). Choices and Enrollments in French Secondary and Higher Education: Repercussions for Second-Generation Immigrants. *Comparative Education Review*, 57(3), 481–502.
- Buchmann, M., Sacchi, S., Lamprecht, M., & Stamm, H. (2007). {Switzerland}: Tertiary education expansion and social inequality. *Stratification in Higher Education: A Comparative Study*, (1995), 321–348.
- Cabrera, A. F., & La Nasa, S. M. (2000). Understanding the College-Choice Process. *New Directions for Institutional Research*, (107), 5–22. <http://doi.org/10.1002/ir.10701>
- Chankseliani, M. (2013). Rural Disadvantage in Georgian Higher Education Admissions: A Mixed-Methods Study. *Comparative Education Review*, 57(3), 424–456.
- Clancy, P. (2010). Measuring Access and Equity from a Comparative Perspective. In H. Eggins (Ed.), *Access and Equity. Comparative Perspectives*. Sense Publishers.
- Clancy, P. (2015). *Irish Higher Education: A Comparative Perspective*. Dublin: Institute of Public Administration.
- Dronkers, J. (1993). Educational reform in the Netherlands: did it change the impact of parental occupation and education? *Sociology of Education*, 66(4), 262–277.
- Eastermann, T., Nokkala, T., & Steinle, M. (2011). *University Autonomy in Europe II: the Scorecard*. Brussels.
- EACEA. (2013). *Education and Training in Europe 2020: Responses from the EU Member States. Eurydice*. <https://doi.org/>
- European Commission/EACEA/Eurydice. (2014). *Modernisation of Higher Education in Europe: Access, Retention and Employability*. Publication Office of the European Union. <http://doi.org/10.2797/72146>
- European Commission/EACEA/Eurydice. (2015). *European Higher Education Area in 2015: Bologna Process Implementation Report*. Publication Office of the European Union.
- Felczak J and Julkunen I (2016), "Educational and Vocational Guidance Support Mechanisms in Schools" in "Governance of Educational Trajectories in Europe: Pathways, Policy and Practice", Andreas Walther, Marcelo Parreira do Amaral, Morena Cuconato, Roger Dale (eds)
- European Commission. (2017). EC Communication on a renewed EU agenda for higher education (COM(2017)). Retrieved from <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52017DC0247&from=EN>

- Fumasoli, T., & Huisman, J. (2013). Strategic Agency and System Diversity: Conceptualizing Institutional Positioning in Higher Education. *Minerva*, 51(2), 155–169. <http://doi.org/10.1007/s11024-013-9225-y>
- Gamoran, A. (1992). The Variable Effects of High School Tracking. *American Sociological Review*, 57(6), 812–828. <http://doi.org/10.2307/2096125>
- Gamoran, A. (2016). The Variable Effects of High School Tracking Author (s): Adam Gamoran Source : American Sociological Review , Vol . 57 , No . 6 (Dec ., 1992), pp . 812-828 Published by : American Sociological Association Stable URL : [http://www.jstor.org/stable/20961, 57\(6\), 812-828](http://www.jstor.org/stable/20961, 57(6), 812-828).
- Green, F., & Henseke, G. (2016). *Should governments of OECD countries worry about graduates.*
- Härle N and Lezcano E (2016) *Career Guidance in German Schools: recent reforms, best practice and lessons learned.* London: Institute for Public Policy Research
- Hauschildt, K., Gwosć, C., Netz, N., & Mishra, S. (2015). *Social and economic conditions of student life in Europe (EUROSTUDENT V 2012-2015).* W. Bertelsmann. <http://doi.org/10.3278/6001920bw>
- Heath, a., & Brinbaum, Y. (2007). Guest editorial: Explaining ethnic inequalities in educational attainment. *Ethnicities*, 7(3), 291–304. <http://doi.org/10.1177/1468796807080230>
- Henseke, G., & Green, F. (2015). "Graduate Jobs" in OECD Countries: Development and Analysis of a Modern Skills-Based Indicator. Centre for Learning and Life Chances in Knowledge Economies and Societies.
- Hill, D. H. (2008). School Strategies and the "College-Linking" Process: Reconsidering the Effects of High Schools on College Enrollment. *Sociology of Education*, 81(1), 53–76. <http://doi.org/10.1177/003804070808100103>
- Huo, J. (2015). *How Nations Innovate.* Oxford: Oxford University Press. <http://doi.org/10.1093/acprof:oso/9780198735847.001.0001>
- Inbar, D. E. (1995). Second chance routes in education - principles and rituals. *The Journal of General Education*, 44(1), 26–44.
- Jonsson, J. O., & Rudolphi, F. (2011). Weak performance-strong determination: School achievement and educational choice among children of immigrants in Sweden. *European Sociological Review*, 27(4), 487–508. <http://doi.org/10.1093/esr/jcq021>
- LeTendre, G. K., Gonzalez, R. G., & Nomi, T. (2006). Feeding the Elite: The Evolution of Elite Pathways from Star High Schools to Elite Universities. *Higher Education Policy*, 19(1), 7–30. <http://doi.org/10.1057/palgrave.hep.8300108>
- Mayer, K. U., & Pollak, R. (2007). Institutional Change and Inequalities of Access in German Higher Education. *Stratification in Higher Education: A Comparative Study*, (January), 240–265.
- McGrath, C. H., Henham, M. L., Corbett, A., Durazzi, N., Frearson, M., Janta, B., ... Schweppenstedde, D. (2014). *Higher education entrance qualifications and exams in Europe: A comparison.* Brussels: European Union.
- Moore, J., Sanders, J., & Higham, L. (2013). *Literature review of research into widening participation to higher education.* HEFCE.
- O'Keefe, P., Kerr, S., Johnson, V. K., Gans, S. E., Krumrine, J., & Tinto, V. (1993). Leaving college: Rethinking the causes and cures of student attrition. *College Student Journal*, 45(4), 195–199. <http://doi.org/10.3102/00346543045001089>
- OECD. (2008). *Tertiary Education for the Knowledge Society.* OECD Publishing. <http://doi.org/10.1787/9789264046535-en>
- OECD. (2015). *Education at a Glance 2015: OECD Indicators.* OECD Publishing.

- Oppedisano, V. (2009). *Open university admission policies and drop-out rates in Europe* (No. 200944).
- Orkodashvili, M. (2015). Higher Education and Access Policies in the Post-Soviet Region: Standardisation, testing, corruption. In V. Stead (Ed.), *International Perspectives on Higher Education Admission Policy - A reader* (pp. 280–290). Peter Lang.
- Orr, D., & Jaeger, M. (2009). Governance in German Higher Education: competition versus negotiation of performance. In J. Huisman (Ed.), *International Perspectives on the Governance of Higher Education* (pp. 33–51). London: Routledge.
- Orr, D., & Riechers, M. (2010). *Organisation des Hochschulzugangs im Vergleich von sieben europäischen Ländern [Organisation of higher education access in comparison of seven European countries]*. HIS GmbH.
- Prakhov, I., & Yudkevich, M. (2015). Admission policy in contemporary Russia: Recent changes, expected outcomes and potential winners. In V. Stead (Ed.), *International Perspectives on Higher Education Admission Policy - A reader* (pp. 83–101). Peter Lang.
- Raftery, A. E., & Hout, M. (1993). Maximally Maintained Inequality: Expansion, Reform, and Opportunity in Irish Education, 1921–75. *Sociology of Education*, 66(1), 41–62. <http://doi.org/10.2307/2112784>
- Santiago, P., Tremblay, K., Basri, E., & Arnal, E. (2008). *Tertiary Education for the Knowledge Society". Equity, Innovation, Labour Market, Internationalisation (volume 2)* (Vol. 2). Organisation for Economic Cooperation and Development.
- Sclater, N., & Mullan, J. (2017). Jisc briefing: Learning analytics and student success – assessing the evidence. Effective Learning Analytics. Retrieved from http://repository.jisc.ac.uk/6560/1/learning-analytics_and_student_success.pdf
- Stead, V. (Ed.). (2015). *International Perspectives on Higher Education Admission Policy - A reader*. New York: Peter Lang.
- Sternberg, R.J. (2010) College Admissions for the 21st Century. Cambridge: Harvard University Press
- Sultana R.G. (2004) Guidance Policies in the Knowledge Society: Trends, Challenges and Responses across Europe. A Cedefop Synthesis report. Luxembourg: CEDEFOP.
- Sursock, A. (2015). *Trends 2015: Learning and Teaching in European Universities*. Eua Publications 2015. Retrieved from http://www.eua.be/Libraries/publications-homepage-list/EUA_Trends_2015_web
- Tinto, V. (1975). Dropout from Higher Education: A Theoretical Synthesis of Recent Research. *Review of Educational Research*, 45(1), 89–125.
- UEFISCDI. (2013). *Equity in the Romanian Higher Education System*.
- UNESCO. (2015). *The Transition from Secondary Education to Higher Education: Case Studies from Asia and the Pacific*. UNESCO Publishing.
- Usher, A., & Cervenan, A. (2005). *Global Higher Education Rankings: Affordability and Accessibility in Comparative Perspective*. Educational Policy Institute.
- Usher, A., & Medow, J. (2010). *Global higher education rankings 2010: Affordability and Accessibility in Comparative Perspective*. Higher Education Strategy Associates.
- van de Werfhorst, H., & Shavit, Y. (2015). The limits of education's impact on equality | World Education Blog on WordPress.com. Retrieved June 25, 2015, from <https://efareport.wordpress.com/2015/01/22/the-limits-of-educations-impact-on-equality/>
- Vossensteyn, H.; Kottmann, A.; Jongbloed, B.; Kaiser, F.; Cremonini, L.; Stensaker, B.; Hovdhaugen, E.; Wollscheid, S. (2015). *Drop-out and Completion in Higher Education in Europe*. <http://doi.org/10.2766/826962>

Waterkamp, D. (2000). *Organisatorische Verfahren als Mittel der Gestaltung im Bildungswesen [Organisational procedures as a way to structure educational systems]*. Waxmann Verlag.

Watts A.G. (2013) "Career Guidance and Orientation" in Revisiting Global Trends in TVET. Paris: UNESCO

Watts A.G. and Sultana R.G (2004) "Career Guidance Policies in 37 countries: Contrasts and Common Themes" in International Journal for Educational and Vocational Guidance Vol 4. pp. 105-122

Weisbrod R and Thacker L (2017) *Turning the Tide: Inspiring Concern for Others and the Common Good Through College Admissions*. Cambridge: Harvard Graduate School of Education. Downloaded May 29th 2017 from <https://mcc.gse.harvard.edu/collegeadmissions>.

HOW TO OBTAIN EU PUBLICATIONS

Free publications:

- one copy:
via EU Bookshop (<http://bookshop.europa.eu>);
- more than one copy or posters/maps:
from the European Union's representations (http://ec.europa.eu/represent_en.htm);
from the delegations in non-EU countries (http://eeas.europa.eu/delegations/index_en.htm);
by contacting the Europe Direct service (http://europa.eu/europedirect/index_en.htm) or
calling 00 800 6 7 8 9 10 11 (freephone number from anywhere in the EU) (*).

(*) The information given is free, as are most calls (though some operators, phone boxes or hotels may charge you).

Priced publications:

- via EU Bookshop (<http://bookshop.europa.eu>).



Publications Office

ISBN: 978-92-79-71859-5