Agriculture and Rural Development

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HIGHER EDUCATION ENTRANCE QUALIFICATIONS AND EXAMS IN EUROPE: A COMPARISON

STUDY

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CULTURE AND EDUCATION

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Abstract

The study analyses admission systems to higher education across ten countries, covering some countries of the European Union (France, Germany, Italy, Slovenia, Sweden and the United Kingdom), a candidate country (Turkey) as well as commonly used international comparators (Australia, Japan and the US). These countries are compared on three axes: the equity of admissions, their quality and their ability to encourage students' mobility. On this basis, recommendations are provided with regard to admission to higher education in Europe.

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GLOSSARY OF TERMS

Admission is defined as a 'specific activity undertaken to admit students to universities' for the purpose of this study (Matross Helms, 2008: 2). This definition is narrower than definitions provided elsewhere, which included for instance: 'the process from when a potential student develops an interest in entry to higher education until enrolment in a particular institution and course takes place' (Harman, 1994: 318). Considerations related to admissions in this study include entry qualifications and examinations, application procedures (e.g. length), and the regulation of such entry criteria to higher education. The study does not cover certain broader factors such as the drivers of the choice of students regarding particular higher education institutions and disciplines, e.g. rankings (Horstschraeer, 2012). This study concentrates on admissions to undergraduate education in universities and academic degrees, and excludes admissions in postgraduate education, short degrees or more vocational routes.

An **open admission system** exists when holders of relevant secondary school certificates have an automatic right of access to higher education (Sargent et al., 2012: 24).

A **selective admission system** is a system where applicants have to meet other criteria in addition to holding a secondary school certificate to be admitted to higher education institutions (Sargent et al., 2012: 24).

Inbound mobility rate is the number of students from abroad studying in a given country, expressed as a percentage of total tertiary enrolment in that country (UNESCO, 2012).

Outbound mobility ratio is the number of students from a given country studying abroad, expressed as a percentage of total tertiary enrolment in that country (UNESCO, 2012).

Qualifications include any diploma or other certificate issued by a competent authority attesting the successful completion of an education programme and giving the holder of the qualification the right to be considered for admission to higher education, according to the Convention on the Recognition of Qualifications concerning Higher Education.

Access to higher education refers to the opportunity to enter higher education, though is not a guarantee for admission. The principles of inherited merit, equality of rights and equality of opportunity have been used to frame access policies according to Clancy and Goastellec (2007: 137-38). Access includes two categories of students: those who enter higher education for the first time ('new entrants'); and those who use the facilities of higher education ('enrolled students') regardless of how many years they have already spent in higher education (Keiser et and O'Heron, 2005: 17). This study concentrates on new entrants to an undergraduate level/first cycle of higher education. Where admission practice is restrictive or selective, the distinction needs to be made between conditions for access, and conditions for admission (Bergan, 2007).

Several types of admission systems and requirements exist. These admission systems and requirements include secondary leaving examinations, entrance examinations, standardized aptitude tests, multiple examinations, interviews, earlier grades which use applicants' past performance upon application. The following definitions combine existing typologies by Matross Helms (2008) and Palmer et al. (2011).

Secondary leaving examinations typically lead to the acquisition of a high school diploma or certificate(s) and are often administered institutionally, regionally or nationally. Entry to higher education may be based on the scores acquired during the exams (e.g. university access requires the completion of the pass grade (10/20) for the baccalauréat in France). Secondary leaving examinations can also be combined with other measurements of student characteristics, such as grade point average, interviews, portfolios, application essays, referee reports and evidence of extra-curricular activities.

Entrance examinations measure acquired knowledge in certain subjects, and may be considered with other factors in the admission process. For example, students take a national exam (the Ögrenci Seçme Sınavı, or ÖSS) in Turkey. The high school grade point average is combined with the ÖSS results to match candidates to an institution in the centrally planned process.

Standardized aptitude tests provide a quantifiable method to evaluate all applicants' potential rather than achievement, including measurements of cognitive abilities, comprehension, and generic skills. Standardised Aptitude Tests are administered by independent organisations, e.g. College Board regarding the Scholastic Aptitude Test (SAT) in the US, Educational Testing Service regarding the TOEFL (Test of English as a Foreign Language). Applicants in Sweden take the Swedish Scholastic Aptitude Test (SweSAT) for example.

Multiple examinations include examinations held in addition to secondary high school examinations or entrance examinations. The practice is common in Finland, Japan or the French Grandes Ecoles, for example.

Interviews are additional instruments that allow higher education institutions to have a rounded perspective of an applicant. The literature notes that they may favour certain sets of students and introduce a perception bias (Burke and McManus, 2011).

No examination may be required in some systems, although a majority use some form of examination in the admission process. Systems with no examination use secondary school academic performance in selecting students, as is the case in Norway or Canada.

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PREFACE

The European Union (EU) considers higher education to have a certain obligation to help improve the acquisition of skills necessary for economic growth, in addition to its traditional functions of teaching and research. In parallel, EU institutions see it as their obligation to reflect on whether and how EU policy initiatives might support the more effective operation of higher education systems facing economic and social pressures. European Union institutions have supported the modernisation of higher education among Member States and encouraged greater cooperation since the late 1990s with the integration to the Bologna process.

Europe's systems are struggling to respond to the established mass demand for higher education in response to a proportional decline in available resources per student, and, more generally, to balance the demand for ever longer education with a reduction of the population of working age due to demographic decline. There is no single trend in response to the current economic climate; in some countries public funding has increased, while in others public funding resources have been reduced with potentially serious consequences for equity in admission to higher education. These challenges make a study on admission in higher education highly relevant.

Our study also meets the increasing interest of the European Parliament in higher education, recently exemplified by the 'Report on the contribution of the European institutions to the consolidation and progress of the Bologna process' and the European Parliament resolution of 13 March 2012 on the same topic.

This comparison of admission requirements for higher education analyses how admission systems can tackle these challenges. The study also aims to draw out some policy implications of interest to EU institutions at a time when EU strategy is closely concerned with how to meet the challenges of renewed growth in a globally competitive economy, and in a context in which higher education is under pressure.

Supporting the European Parliament's view that it is important that higher education systems build greater capacity in relation to student mobility, this study breaks new ground by focusing on the different aspects of admission systems as they reflect equity for individuals and systemic quality. It explores admissions systems as a way to regulate the supply of higher education places and stresses the importance of political debate and knowledge of how admission systems are conceptualized and managed internationally. The study employs international comparisons to provide insights into what unites European systems as well as what distinguishes them. This is with a view to provide recommendations on admission to higher education in Europe.

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EXECUTIVE SUMMARY

The study analyses admission systems to higher education across ten countries, covering some countries of the European Union (France, Germany, Italy, Slovenia, Sweden and the United Kingdom), a candidate country (Turkey) as well as three countries commonly used for international comparison (Australia, Japan and the US). The analysis is structured along three axes, assessing the **equity** of admission systems, their **quality** and their ability to encourage students' **mobility**.

The research design relies on multiple methods, including a review of the academic and policy literature, interviews with stakeholders, and descriptive analysis of statistical datasets. Reliance on relatively unstructured data and a case study approach causes the researchers to be cautious regarding the generalisability of the claims presented, in particular considering the great diversity in processes and requirements observed across the ten admission systems analysed through the case studies.

Given these limitations, the study opened several avenues for further research, including a systematic and in-depth analysis of the relationship between equity and quality in admission systems across countries, focussing on how different admission systems define and comply with the notion of 'fair' treatment as well as how recent trends in higher education (e.g. e-learning) may impact admission requirements.

The study suggests that the European Parliament considers the policy recommendations listed in Chapter 7, and tests the feasibility of these options through a stakeholder workshop in Brussels, as well as through further analysis, particularly regarding application patterns among mobile students.

The study is divided into seven chapters. Chapter 1 provides the introduction, setting out the context and defining the key concepts employed in the study. Chapter 2 presents the method used to compile the findings. Chapter 3 provides a descriptive overview of admission systems in the ten selected countries. Chapters 4, 5 and 6 assess these systems based on the three dimensions of analysis, namely equity (Chapter 4), quality (Chapter 5) and mobility (Chapter 6). Chapter 7 provides conclusions, including policy recommendations for the European Parliament and Member States to consider.

These chapters lead to the following main findings on equity, quality and mobility.

Main findings on equity

- **Admission systems are an important component of equity in access to higher education**. However, admission systems are limited in what they can achieve, and policy needs to take processes unfolding before the point of admissions and after enrolment in higher education into account.

- **Admissions systems are not just limited to entry to higher education.** They should also contribute to helping students have a successful academic career and graduate by matching them to relevant courses of degree.

- **Providing students with accurate information prior to their enrolment in university improves their ability to select suitable study routes**. High quality information for applications can ensure stronger retention and higher graduation rates, which is in turn a central policy objective on both equity and quality grounds.

- **Improving equality of opportunity for all higher education is complex** and does not automatically imply open access higher education. A particular challenge remains regarding the recognition and equivalence of skills, competencies and qualifications for non-traditional learners.

Main findings on quality

- **The adoption of autonomy laws implies changes to admission systems**. The adoption of autonomy laws mean that the traditionally centralised forms of governance in some European countries, including France and Germany, currently coexist with a system which gives universities greater freedom of choice over many aspects of their admissions policies.

- The **centralised management of applications** is perceived as a way to ensure uniform standards, but increasingly co-exists with some space for autonomous university input.

- **Supporting higher education institutions with the creation of specialised networks or agencies to promote the exchange of best practices** would help universities to develop their own admission policies. Specialised networks or agencies which promote an exchange of best practices regarding admissions tend to be developed only in countries with a long tradition of autonomous institutional decision-making.

- **Providing more autonomy to universities in admissions could facilitate better matching of students and courses, but may lead to administrative failures if universities do not have the capacity to administer the process.** In this respect, the skills and preparation of the administrative personnel of universities processing the applications should be an important concern.

- **Operating admissions procedures earlier in the academic year would prevent adverse consequences** for both students and universities.

- International evidence suggests that **secondary school grades are a better predictor of student achievement than standardised scores**. However, secondary school leaving examinations tend to be reflective of test scores in high school. Additional information on students, including application forms and interviews, may help to assess the student's likelihood to graduate.

- Multiple **admission criteria and increased information to prospective students under certain conditions ensures the higher predictive capacity of students' future academic success.** Multiple admission criteria can be used to increase the selectivity of the system, and in this respect may act as a deterrent. But using such procedures does not necessarily translate into increasing the selectivity of the process. It can be achieved by introducing non-selective entry tests and strengthening pre-university orientation.

Main findings on mobility[1]

- **The numbers of mobile students, both within the EU and internationally, are increasing**. Some countries have set up barriers for the mobility of students, for example through quotas or different regimes of tuition fees and financial aid.

- Although the equivalence of qualifications and diplomas acquired in the European Union is relatively well recognised, **transaction costs may be high for students and higher education institutions/admissions agencies in processing multiple country applications.**

- However, the **evidence for these transaction costs remains qualitative.** Comparable European-wide data should be compiled regarding the mobility patterns of first entrants to higher education.

Policy recommendations for greater cooperation in admissions across the European Union

There is scope for much more exchange of information on admission requirements across Europe. Measures to facilitate the exchange of information and support national admissions' agencies in managing the applications of mobile students would reduce the transaction costs related to mobile applications, as well as increase the attractiveness of each of the European higher education systems to non-national applicants.

These suggestions do not necessarily imply a greater harmonisation of admissions systems, a move which would be contrary to the provisions of the Treaty on the Functioning of the European Union (TFEU).[2]

Three possible courses of action for the European Union

The study proposes three possible courses of action to improve the equity and quality of admission systems, and to promote mobility. Two of the recommendations would require a proactive initiative of the European Union institutions.

- **Option 1: Maintaining the baseline.** Maintaining the baseline would imply that students continue to find information in the country of destination or the country of origin. Maintaining the baseline would be cost-neutral to European institutions, but it would result in relatively high transaction costs especially if students submit multiple applications.

- **Option 2: A registry of admission agencies in order to exchange best practices.** The European Union could facilitate the exchange of information regarding admissions through a European registry of national admissions' agencies. The European registry would imply some minimal set-up costs but bear many benefits: the exchange of information would help to promote mobility, quality and equity in admissions, as well as the recognition of qualifications.

- **Option 3: A support system for national agencies regarding multiple applications across states.** European institutions could also conceive a platform which would support national admission systems for mobile students and would

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[1]   The study concentrated on intra-European mobility, in other words the mobility of EU applicants between EU member states.
[2]   Article 165 Treaty of the European Union.

concentrate on the particular issue of those who wish to submit several applications.

Options 2 and 3 would imply some set up costs, but reduce the transaction costs of applications across Member States for students, administrators and universities.

The study recommends that the European Parliament considers these three possible courses of action and tests their feasibility through a stakeholders' workshop in Brussels.

Recommendations for the national governments of EU Member States

Given the great diversity of national admission systems, the study does not provide a rigid set of recommendations to national governments, but it rather develops a toolkit of sensible policy options that do not necessarily apply across Europe, but that need to be critically assessed against specific contextual features at the country-level.

Recommendations are clustered around the three main dimensions of the analysis and include the following:

Regarding equity, the study recommends that Member States:

- Design, in accordance with the respective national traditions, admission systems that provide as much information as possible to prospective applicants to increase graduation rate: a central objective on both quality and equity grounds;

- Capture through the admission systems the ability of students to progress towards a successful completion of degrees rather than only the fulfilment of the criteria for entry;

- Evaluate current practices with regards to admission, especially regarding non-traditional learners, and consider measures such as introducing (or increasing) opportunities for recognition of prior learning beyond secondary school qualifications; or the impact of the hidden costs of higher education applications and their effects on admission.

Regarding quality, the study recommends that Member States:

- Encourage universities to employ sufficient and high-skilled personnel to administer admissions, to ensure that the process is homogenous across higher education institutions;

- Encourage relevant admission bodies to think critically of the timing of application, and consider – where applicable – to launch and finalise the application process in the academic year prior to the beginning of the degree;

- Strengthen cooperation between universities and secondary schools to ensure that students make well-informed choices, a recommendation that bears relevance on equity grounds as well, as pointed out above.

Regarding mobility, the study recommends that Member States:

- Commit to exchanging information on application and enrolment data by country of origin across EU member states;

- Remove barriers to student mobility at any stage of higher education, including entry to the first year of university.

1.   INTRODUCTION

1.1. Worldwide trends influencing admissions

University admission systems have to adapt to three main trends worldwide. First, admission systems have to moderate the higher education systems' capacity to absorb an ever increasing demand for higher education. The European Council has set an attainment target of 40% of graduates among the population of 30-34 year olds by 2020,[3] continuing the expansionary trend started in the 1960s, and possibly set to go further. The influential US Lumina Foundation has set a 'Big Goal' of 60% of graduates by 2025 in the US.[4] The international surge to drive up higher education attainment has put several higher education systems under pressure. By some measures there has been an overall decrease in equity in attainment in higher education based on the socio-economic background of parents since the 1980s in Europe (Koucky et al., 2010).

Second, admission systems have to adjust to the changed higher education landscape resulting from the expansion of the student population. For example, private higher education institutions form a considerable or increasing part of the higher education sector in some European countries.[5] This expansion parallels a worldwide trend in the expansion of the private and for-profit sector, largely catering for a demand for higher education that the public system cannot accommodate, as is the case in the US and Turkey, for example (Dittrich and Weck-Hannemann, 2010).

Third, admission systems have to adapt to the increasing mobility of students. For example, inbound mobility flows nearly doubled in Slovenia between 2005 and 2011 according to UNESCO.[6]

Taken together, these trends raise questions which go to the heart of the relationship between the university and society. Universities are not only instruments of society; they are also institutions of society (Olsen 2007:27). Within Europe, the fact that access to higher education has traditionally been seen primarily as a right in some countries, while as a privilege in others, reflects the different ways states have conceived the role of the university. The various ways in which the university relates to society is described as a contract by various scholars (Gibbons et al., 1994; Delanty, 2002; Kweik, 2014) or as a pact, the term preferred in a recent authoritative study: pact emphasises the long term, non-market aspect of a relationship which requires large forces to change it (Maassen and Olsen, 2007). Others, however, will see the university as an organisational instrument for achieving preferences and interests predetermined by an 'other' which might be the state, the stakeholder or the individual 'customer'. But whichever term is chosen, it should be noted that the nature of an embedded bond, which recognises universities as having rights and responsibilities is engraved in foundational documents of European higher education, such as the Magna Charta Universitatum (1988), the Bologna Declaration (1999) and the Council of Europe Committee of Ministers' Recommendation on University Freedom and Academic Autonomy (2006).

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[3]   The EU targets have been attained by eight European countries, see Euractiv (2013) 'EU targets hit 2020 education goal early', 12 April, URL: http://www.euractiv.com/priorities/eu-countries-hit-2020-education-news-519080.

[4]   Age group not specified. For more information, see: http://www.luminafoundation.org/goal_2025.html.

[5]   See higher education in Portugal where private education has been widespread or the introduction of for profit universities in the UK for example.

[6]   Inbound student mobility is used as a proxy for the mobility of first time entrants.

Some admissions systems are becoming increasingly 'smart' as a result of the expansionary pressures: for example, Educational Testing Service is developing customised K-12 assessments for more than twenty states in the US[7], and Pearson Edexcel, one of several providers of exams and qualifications in the UK and the US, runs no fewer than five different types of qualifications.[8] Other systems have remained relatively static over the past fifty years: for example, the French admission system has hardly changed in several decades despite a large overhaul of its higher education landscape with the law on the freedom and responsibility of universities in 2008.[9]

1.2. Policy context

The policy context reflected in research studies is shaped by a political dynamic that has given higher education an unprecedented place in European Union economic and social policy.

In response to globalisation and the increasing internationalisation of higher education systems since the 1990s, EU institutions have increasingly seen universities as a solution to European economic and social problems, providing skilled manpower, high-level research, and innovation capacity. They are part of a 'knowledge triangle' between education, research and innovation. One aim explicit in recent years in the policies of the core EU institutions is to make European universities more competitive ('more attractive') worldwide. Europe's political leaders remain concerned that the capacity of Europe's universities in terms of education, research and innovation should be exploited for the benefit of Europe's knowledge economy. One instrument of this strategy is the Bologna Process, launched as an intergovernmental process in 1999 to create a European Higher Education Area (EHEA, its existence was formalised in 2010). The Bologna Process concentrates on higher education. In working to increase the compatibility and comparability of the systems of 47 European countries that participate, the Bologna Process is also concerned with stimulating cooperation and shared values.

The EU's main concerns, in addition to supporting the Bologna Process, are exemplified by its modernisation strategy focussed on the quality, governance and funding of higher education institutions, its drive for greater university-business cooperation and its long and successful commitment to programmatic activities through aspects of an integrated Lifelong Programme of activities. It is in this general context that the Bologna Process and the EU Modernisation Agenda[10] are committed to raising the proportion of the educational population that has experienced some form of cross border education or training experience to 20 per cent by 2020. One major step was to develop a qualifications framework for the EHEA, which can be traced back to intergovernmental initiatives attempting to specify levels of higher education through expected attributes that a student should have following the completion of a cycle. These initiatives were progressively incorporated; for example, a qualifications framework called the 'Dublin descriptors of 18 October 2004', an early attempt to define characteristics of different levels of higher education, was built into the Bologna qualifications framework, and later (2005) incorporated in the qualifications framework for EHEA. In harmony with the

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[7] For more information, see: http://www.ets.org/k12/programs/custom_assessments.
[8] For more information, see http://www.edexcel.com/quals/Pages/default.aspx.
[9] Loi relative aux libertes et responsabilites des universites no. 2007-1199 of 10 August 2007 (law regarding the freedom and responsibilities of universities).
[10] For more information, see European Commission (2013), European higher education in the world, Communication COM (2013) 499 final, Brussels, 11.7.2013, Available at: http://ec.europa.eu/education/higher-education/doc/com499_en.pdf.

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Bologna Process, the European Commission has supported and extended such initiatives in the domain of the European Community by adopting the European Qualifications Framework, a complement to its long-established support for the NARIC networks (National Academic Recognition Information Centres).

Among the underexplored constraints potentially hindering mobility is the issue that the European Parliament has identified with this study: what are entry requirements to higher education in Europe? Previous work has been done by the OECD and World Bank to understand admissions systems internationally; this study extends their work with the aim that this international comparison requested by the European Parliament will help to develop understanding of how different countries use admission systems to address these challenges. This review also illuminates the relevance of this European Parliament study for the 2012 European Commission communication 'Rethinking education: investing in skills for better socio-economic outcomes'. This communication sets out the thinking behind the creation of the European Area of Skills and Qualifications in order to 'achieve transparency and recognition of academic qualifications across borders (European Commission, 2012).

Our study falls in line with the increasing interest of the European Parliament in higher education, recently exemplified by the 'Report on the contribution of the European institutions to the consolidation and progress of the Bologna process' and the European Parliament resolution on the contribution of European institutions to the consolidation and progress of the Bologna process of 13 March 2012.

1.3. The history of EU intervention in higher education

A key starting point to the involvement of international organisations in the field of admissions came in the 1990s. The Council of Europe and UNESCO, both with a long history of creating codes on recognition, produced a joint Convention in 1992. The outcome was the Convention on the Recognition of Qualifications concerning Higher Education in the European Region, widely known as the Lisbon Convention of 1997, which came into operation in 1999. The Convention is significant for present discussions as it represented an important development in bridging the different admission requirements of European higher education systems. Its general principles of fair recognition and non-discrimination led to a substantial growth in reciprocal arrangements, although some experts have criticised the Convention for its generality (Teichler et al., 2011).

Admissions systems are a sensitive issue. An attempt to find common ground between the different systems operating in Europe was a precipitating factor in an institutional crisis in the Community between 1978 and 1982. Two years earlier the education ministers had agreed on a Resolution for a package of measures for action in education,[11] some of which were acceptable as being in line with the Treaty of establishing the European Economic Community (EEC) of 1957 (and therefore taken as the Council) and others of which were intergovernmental cooperation issues in higher education (and as such, political decisions taken as a matter for Ministers of Education meeting within the Council). The rationale for this 'bundling' was that it would enable the Commission to draw on some EEC funding. The intergovernmental measures included one that experts had identified as a major constraint on mobility: that of the different admission systems operating in the nine Member States and for which the Action

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[11] OJ C 38. 19.2.1976.

Programme proposed a 'discussion' on deriving 'common policy' for diverse systems.[12] The experts proposed, and the Commission took up, the idea in a communication of 1978[13], stating that there should be a discussion with representatives of the higher education policy sector to see what 'common policy' ideas might be produced. But the Council refused to receive the Commission communication on the grounds that it, like three others, went beyond Community competence as defined in the EEC Treaty (Corbett, 2005:103). Behind the scenes the Education Committee, composed of national officials and national experts, worked with the Commission to keep the proposal in being,[14] and the European Parliament (long before the days of co-legislation) could only offer informal support. The Education Council's refusal to meet until 1982 means that there was a breakdown in EU education policy making at a crucial early stage just as the Commission was also developing the joint study programmes which eventually would lead to the Erasmus programme (Corbett, 2005).

The historical controversy explains, at least in part, why the issue of entrance qualifications and admissions has long been left aside in EC and EU higher education strategy documents. However issues of access have been a recurrent theme[15] going back to Article 26 (1) of the Universal Declaration of Human Rights, which states that higher education shall be equally accessible to all on the basis of merit, and reaffirmed by the World Conference on Higher Education convened by UNESCO in 1998 (Eggins, 2010). This has helped provide a wider appreciation within Europe of how admissions systems are embedded in the complex dynamics of education systems as a whole, stretching back to the opportunities and constraints of education on offer in the schooling cycle and stretching forward to eventual graduation from higher education.

The assessment of admission systems needs to acknowledge the limitations of an analysis exclusively centred on a single element of higher education.

Studies of admissions are also rare because of the difficulty of obtaining comparable cross-country data. Interpretations of common features of higher education are varied. As Keiser and O'Heron (2005:15) have shown, there is no common understanding of how the participation rate was calculated across European countries. In addition, comparative input and throughput statistics tend to be for tertiary education as a whole (including further technical and vocational education) rather than for higher education alone.

Within these limitations, this study can nevertheless present findings that have potential implications for the direction of future European and Member States' higher education policy, based on the evidence that the higher education systems of European countries have internationally distinct characteristics in comparison to international countries.

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[12] OJ C 38. 19.2. 1976 point 14(a).
[13] COM(78) 468.
[14] For more information, Education Committee (1980), General Report (agreed in substance by the Council and the Ministers of Education meeting within the Council ay their session of 17 June 1980).
[15] For example the Bologna London communiqué, 2007, reasserted that the principles of non- discrimination and equitable access should be respected and promoted throughout the EHEA (pt1.5). See http://www.ehea.info/Uploads/Declarations/London_Communique18May2007.pdf.

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These are as follows:

- European countries in the study have seen a larger increase in inbound mobile students[16] from 2005 to 2011 compared to Australia, Japan and the USA. They also have one of the highest outbound mobility percentages at 2.49% in 2011.

- However, European countries have some weaknesses in relation to international competitors. In 2010, the European countries covered in this study had an average entry rate to tertiary education of 59.36% of the relevant age group. This average is below Australia, New Zealand, Korea and the US but above Japan. In 2010, these countries also had a lower average graduation rate (36%) compared to Australia, Canada, New Zealand, and the USA (37.13%). Among European countries, the UK had the highest graduation rate (OECD, 2012).

- European countries, other than the UK, were likely to have open admission systems. They have traditionally relied on secondary qualifications as the main entry criterion, although differences exist between institutions and disciplines and some countries, such as Sweden, have increasingly adopted aptitude and admission tests.

- In many countries, admission tests are available nation-wide and systematically (as in Sweden, Germany or France); however, admission tests can also be administered in an ad hoc fashion with little consistency across the sector, as is seen in the UK and Australia.

1.4. Key questions

The main research question of the study addresses how admission systems face the challenges mentioned above. These questions apply only to entry to the first level of higher education.

In general, this study addresses the following questions:

- How do the different types of entry requirements contribute to equitable access to higher education and facilitate the mobility of students in Europe while matching quality standards?

- Which characteristics can be informative to strengthen the cooperation of Member States across the European Union?

In order to reply to these questions, the initial research design consisted of a descriptive overview of entry requirements and an evaluative element which was strengthened after the project inception by including the three analytical dimensions of equity, quality and mobility. Figure 1 describes the three stages of the study and their purposes.

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[16] Inbound mobility is defined as the number of students from abroad studying in a given country, expressed as a percentage of total tertiary enrolment in that country, UNESCO glossary, URL: http://www.uis.unesco.org/Pages/Glossary.aspx?SPSLanguage=EN.

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Figure 1:   Three stages of the study
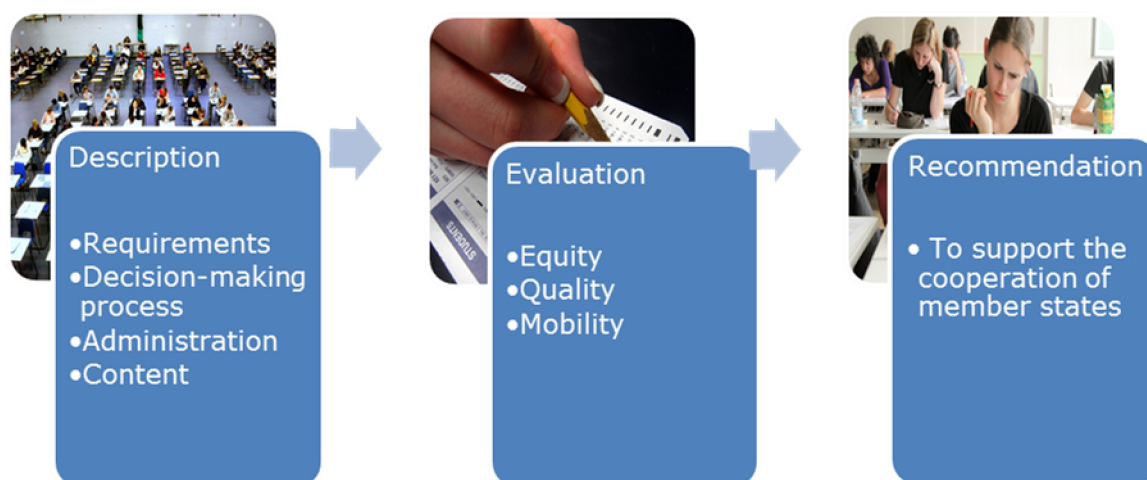
1.5. Descriptive questions

The descriptive questions follow those set in the terms of reference of the study.

- What are the current requirements to enter higher education in Europe?

- Who decides on their concrete form in the respective countries, and are there any possible variations within a given country?

- What are the (compulsory) subjects that students are required to pass for their school leaving diploma?

- What are the specific examinations and/or other entrance qualifications that are foreseen in cases where the school leaving diploma does not give full access to higher education, and for which fields of study do they apply?

These questions are intended to generate information regarding each admission system and set the scene for a more in-depth evaluation.

1.6. Evaluative questions

The evaluative questions are organised around the three dimensions of the study: equity, quality and mobility. These three dimensions echo the strategic objectives underlined by the Council of the European Union in the 'Conclusions on a strategic framework for European cooperation in education and training 2010-2020', 9845/09.

These strategic objectives include:

- Making lifelong learning and mobility a reality;

- Improving the quality and efficiency of education and training;

- Promoting equity, social cohesion and active citizenship (a fourth strategic objective was to enhance creativity and innovation, including entrepreneurship, at all levels of education and training).

Being able to pursue a higher education degree requires the completion of two stages. At the level of secondary education, applicants need to have completed their course of study (which typically precedes an examination and results in the award of a certificate or diploma). Admission to higher education may also be based on the recognition of non-formal and informal learning, including work experience for example, as represented by the category 'other'. In addition, at the level of higher education, applicants may have to fulfil certain additional admission requirements, which could be standardised or not (i.e. vary across the Member State). Additional admission requirements may include tests and examinations, application forms, interviews, or the submission of additional documents.

Equity is mostly concerned with access to higher education. Quality is an overarching dimension concerned with the reliability and validity of the secondary education and higher education qualifications and entry criteria. It should be noted that the boundary between equity and quality is often blurred and as such the policy recommendations put forward in this study may not always fall neatly within one or the other category.[17] Mobility is concerned with the extent to which applicants enrol in higher education in another country.

This study assesses these three dimensions in light of the admissions system, actors and procedures, as well as the admissions' tests.

Equity

Equity refers to the ability of an admission system to deliver equitable outcomes as far as admissions of particular demographic, ethnic or social groups are concerned (including students from poorer backgrounds, ethnic minorities, disabled students and adult learners).

The concept of equity in admissions is complex and debated. For the purpose of this study, equity in admissions covers two levels, derived from the OECD (Field et al., 2007). The first level has to do with ensuring that all applicants are treated 'fairly', and that the admission system represents a student's performance and potential accurately, without generating differential treatment by itself. This issue relates strongly to how valid and reliable an admission system is. The second level assumes that the admission system should take on corrective properties and reduce prior inequalities, for example based on parents' educational background, income, gender or age group.

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[17] To exemplify this point, it can be considered the predictive power of admission systems. The ability of an admission system to match applicants with the degree that they are more likely to succeed in is arguably a quality aim of admission systems, insofar the overall graduation rate increases. However, such consideration is also important on equity grounds, since students from disadvantaged background are those who are more likely not to complete their degrees, thus an admission system which matches applicants with the most appropriate degree is likely to bear significant advantages to disadvantaged backgrounds, thus achieving an equity aim as well.

The research questions corresponding to equity are the following:

- What are the differences in access to higher education based on parents' educational background or income?
- To what extent do systems treat each applicant 'fairly'?
- How do entry requirements influence the differences in opportunities to access and graduate from higher education?

Quality

Quality is a multifaceted concept. It includes considerations based on the admissions process (e.g. application procedures), as well as admissions outputs (e.g. students admitted to higher education) and outcomes (for example graduation rates).

The notion of quality incorporates notions based on the admission requirements themselves, and whether an admission system refers to is reliable and valid insofar as predicting the outcome of a student's future performance is concerned (Matross-Helms, 1998). Quality also covers the entire admissions' system, and whether this system is efficient. An efficient system has low transaction costs for students, administrators and universities. A part of these transaction costs includes the amount of time spent on filling in or processing applications. Efficient admission systems also allow applicants to be matched to courses in which they will successfully graduate, or, in other words, is valid in the sense that it can predict students' future academic success (Tuijnam, 1990:455).

The research question corresponding to quality is the following:

- How do the different types of entry requirements contribute to academic standards, and quality of service as decided by each national entity?

Mobility

A mobile student is a student who moved for the purpose of study.[18] It is a term applied to both EU and internationally mobile students, and covers inbound and outbound flows.

Mobility for EU students is understood as falling within the rules of the Treaty on the Functioning of the European Union (TFEU) on citizenship: all EU citizens have the right to apply to any university within the EU and associated countries and be treated equally. International applicants do not benefit from a principle of equal treatment laid out in the Treaty for EU citizens. Mobility has become a politically sensitive concept as it has become associated with immigration and visa control.

It is widely agreed by the EU institutions that if mobility across systems is to be facilitated, qualifications and entry criteria need to be comparable, portable, i.e. applicants can bring their qualifications to other countries, and transferable, meaning that the host country can recognise these qualifications.

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[18] Definition based on UNESCO glossary (UNESCO, 2012). The definition of international mobile students is close to the one of foreign students. Foreign students are persons admitted by a country other than their own, usually under special permits or visas, for the specific purpose of following a particular course of study in an accredited institution of the receiving country, according to the OECD (OECD, 2003).

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In addition, admission systems need to have procedures in place in relation to vertical mobility: that is, where students move from one institution to another within the same higher education system, typically from an institution perceived as of lower quality to an institution perceived as of higher quality. They also need to cater for horizontal inter-state mobility, where students move across states in which they enjoy same status as a domestic student, and horizontal international mobility, in which students move across states as foreign or international student, not enjoying the same status as domestic students. Transaction costs have become of concern for some states given that mobility is not unipolar but multipolar. In other words, students may apply to institutions in various Member States, which may increase their transaction costs, as well as the transaction costs of the institutions receiving the applications.

Questions concerning mobility include the following:

- How valid are secondary examinations or qualifications acquired in the country of origin in the country of destination?

- What provisions are made in admission systems for non-national applicants (EU and international students)?

- How is interstate mobility facilitated in federal systems?

- How could mobility be facilitated in the European Union at the level of entry to higher education?

- To what extent would best practices in entry qualifications be applicable, if at all, to other national contexts?

These questions do not only cover data on how each country deals with student mobility, but also draw on the experience of various federal systems, such as the USA, Australia or Germany, to understand how these systems handle inter-state mobility. Covering this assessment led the research team to concentrate on two particular problems in order to formulate policy recommendations:

- How can greater cooperation and an exchange of best practices regarding admissions be encouraged in order to promote quality, equity and mobility?

- What are the issues and solutions related to the mobility of applicants, especially when applicants apply to institutions across several Member States?

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2.   METHOD

This study relied on a comparison of ten admission systems using three tools: a review of the literature, a comparative case study analysis and a comparison of basic indicators. Using comparative cases allowed the research team to underline the specificities of European countries and to provide enough variation to be able to assess the relative pros and cons of systems, following the method of difference (Mill, 1843). This approach also follows Yin's (1984) replication logic, according to which case studies using similar procedures on a research question will enhance our understanding. National admissions system may be the object of different views across different subsets of stakeholders, and the case studies hence rely on stakeholder interviews in addition to an overview of the academic and policy literature in order to reflect this variety of perspective (Becker and Bryman, 2004: 254-56). This approach means that certain issues may emerge more prominently, or conversely, not be mentioned in some country cases. This difference may be more dependent on the stakeholders' perspective than on the actual prominence, or conversely relative absence of the particular issue. This point is particularly relevant when considering the strengths and weaknesses of each system (Chapters 4, 5 and 6). These strengths and weaknesses have been reported based on interviewees' experiences of their own national admission systems, rather than based on generalizable and comparable benchmarks. In addition, because it relies on gathering relatively unstructured data, this case study approach also implies that researchers are cautious regarding the generalisability of the claims.

2.1. Statistical overview

The study uses international statistical data, in order to have comparable measures across countries. This data is further presented and discussed in the relevant substantive chapters. There is a considerable lack of data targeted at applicants across Europe in higher education; hence, the study presents various data sources in order to be as comprehensive as possible. However, each of the sources used have limitations that need to be acknowledged at the outset, in particular as far as equity measures are concerned. These statistics provide a descriptive overview of relevant factors related to admission in each country.

We present below of these descriptive statistics around equity, quality and transferability summarising the main methodological problems connected with them.

Measuring equity. The issue of how to measure equity is multi-layered. Firstly, there is not a single definition of equity, thus a preliminary issue arises as to *what* the indicator should capture. Notwithstanding this definitional difficulty, it seems plausible to employ two operationalisations of equity, namely equity in access and equity in attainment based on socio-economic background of students, since both are relevant with respect to admission systems (please refer to section 1.6 and the introduction of Chapter 4 for a discussion on different notions of equity). Having established these two notions, a second issue arises, i.e. *how* to measure (either notions of) equity. In this respect, there seems to be an inevitable trade-off between the appropriateness of indicators and their reliability. In order to capture equity in access and attainments in higher education systems, we may employ hard data (such as entry and graduation rates), survey data (such as the Eurostudent), or composite indexes (such as the Inequality index in Koucky et al. (2010)). All these approaches have weaknesses: hard data are generally more

reliable than survey data or composite indicators, but they may be less appropriate in capturing the notion of equity.[19] On the other hand, the Eurostudent survey or the Inequality Index are explicit measures of inequality in higher education thus more appropriate for our purposes, but with some potential limitations in terms of reliability (e.g. see OECD (2008) on the potential weaknesses of composite indicators, and issues around 'social desirability bias' and representativeness of survey respondents in van de Mortel (2008) and Johnson, Buttolph and Reynolds (2005)).

Strictly speaking, a reliable and appropriate measure of the relationship between equity in access to higher education *and type of admission system* would be based on a comparison between the socio-economic composition of applicants to higher education and the socio-economic composition of admitted students.[20] However, this kind of data is not available across all the countries of the case study. Thus, bearing in mind the potential limitations (either in terms of appropriateness or in terms of reliability) of the measures mentioned above, we provide a statistical overview across the selected countries using existing data related to equity. For the reasons discussed, the various indicators presented do not allow us to claim causalities, but rather to provide descriptive associations between indicators related to equity and type of admission systems, triangulated where possible with qualitative methods, such as stakeholder interviews.

To provide information on equity in access, we therefore present: (i) the percentage of entrants into tertiary type-A degrees (which are mostly research intensive) as a proportion of the population in the corresponding age group, including international students[21] from the OECD (2012:348); and (ii) data from Eurostudent (2011b: 61) that group countries into four categories (inclusive, exclusive, and two transitional categories) according to university students' fathers by highest educational attainment as a share of the corresponding age group in the general population.

To provide information on equity in attainments, we present: (i) graduation rate as the percentage of graduates to the population at the typical age of graduation and extracted from the OECD (OECD, 2012:67);[22] and (ii) the Inequality Index, as calculated by Koucky et al. (2010), which measures the probability of graduation accounting for parental background, the higher the index, the more inequitable systems are, in other words the more parental background accounts for graduation.

Measuring quality. Graduation and entry rates also provide a measure of the quality of a system. A high percentage of first entrants but a low graduation rate could indicate

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[19] See for instance Busemeyer (2012: 28) on entry rates being a 'very imperfect measure of educational inequality'.

[20] We are thankful to an anonymous reviewer for this comment.

[21] According to the OECD (2012: 348), Entry rates estimate the proportion of people who are expected to enter a specific type of tertiary education programme during their lifetimes. OECD statistics adds the following definition for new entrants: 'New entrants to a level of education are students who are entering any programme leading to a recognised qualification at this level of education for the first time, irrespective of whether the students enter the programme at the beginning or at an advanced stage of the programme. Individuals who are returning to study at a level following a period of absence from studying at that same level are not considered to be new entrants. Foreign students who are enrolling for the first time in the country for which the data are reported are counted as new entrants, regardless of their previous education in other countries, calculated as the year in which the end of the school year falls', from OECD metadata, 2014, URL: http://stats.oecd.org/BrandedView.aspx?oecd_bv_id=edu-data-en&doi=data-00208-en.

[22] The OECD (2012: 61) report adds that graduation rates represent the estimated percentage of an age cohort that is expected to graduate over their lifetimes. This estimate is based on the number of graduates in 2010 and the age distribution of this group.

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that many students fail to progress from one year to the next. This could be because the admission system did not match them to the required course of study or failed to underline gaps in their skills in order to be successful in the given course of study.

Measuring transferability. Data on inbound (incoming) and outbound (outgoing) student mobility provides an indication of the extent to which each system favours or hinders student mobility. This data is extracted from the UNESCO data centre.[23] The data is presented over time (2005 - 2011) in order to be able to understand trends. Different concepts of mobility are relevant in admissions, including inbound and outbound mobility at international, European, inter-state and inter-regional levels. This study concentrates on inbound and outbound mobility between countries. Missing data occurred in a minority of cases and was not imputed in order to avoid consistency issues.

This data aims to provide a rough overview of mobility patterns. Other factors may also play a role on mobility in addition to admission systems. These factors include the sheer size of world language territories, historical bounds and the attractiveness of the educational programs. And further analysis would be needed regarding the flows and application patterns in order to make further inferences from mobility.

This study is particularly concerned with horizontal EU inter-state mobility, in compliance with the fundamental EU principle of citizenship and the freedom to move and reside freely across Member States according to article 21 of the TFEU.

2.2. Case study comparison

This study includes an international comparison of the ten countries selected as case studies. Six of these countries are part of the European Union, one is a candidate country and three countries are international. Figure 2 below provides an overview of the countries selected in this study.

Figure 2:   International overview
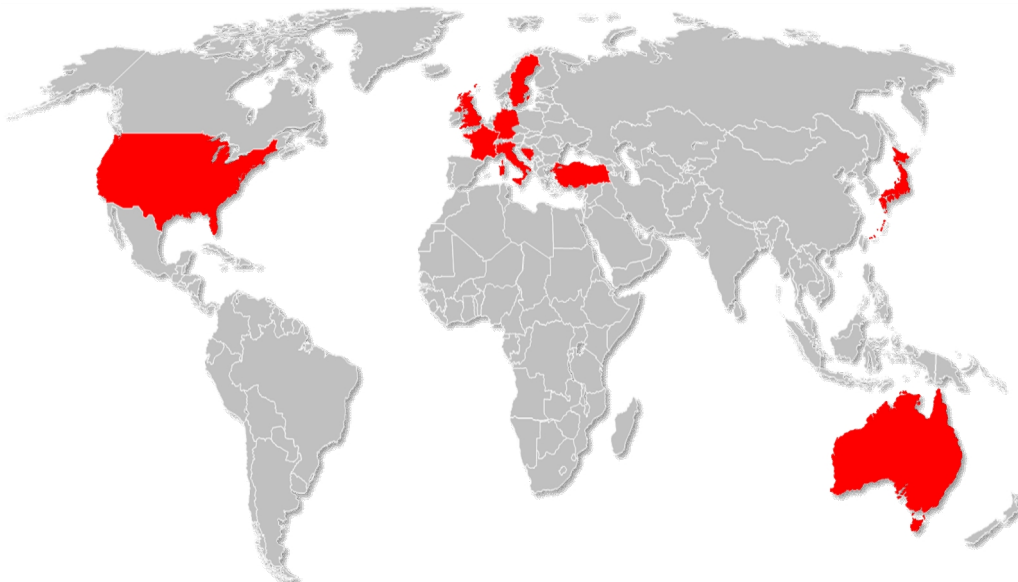
Source: Authors

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[23] For   more   information   on   the   UNESCO   data   centre,   please   visit: http://stats.uis.unesco.org/unesco/tableviewer/document.aspx?ReportId=143.

The EU countries included were France, Germany, Italy, Slovenia, Sweden and UK (with a particular stress on England), Turkey was the candidate country and Australia, Japan and the USA served as international comparisons.

2.3. Benchmarking of countries

The following table situates the selected case studies within a broader context of twenty countries for which comparable data on higher education systems was available (Sargeant et al., 2012).

Internationally, the majority of countries apply some selection at entry to universities. Fourteen systems are selective and six have an open entry scheme. All the countries with an open admission system were based in Europe.

Entry rates do not appear to be necessarily reflective of the type of selection at the entry of universities. Higher education systems with high entry rates include: Slovenia, Australia, Korea, Netherlands, New Zealand and Sweden; which include selective as well as open admission systems (Slovenia and the Netherlands are open admission systems).

Countries with open admission systems have comparatively low graduation rates (of 32% on average in comparison to the international average of 37.13%), and inequality levels are, on average, the same in open admission systems as in selective systems. In addition, most countries require a secondary leaving diploma obtained through an examination (with the option of additional tests per course). Some countries, such as Japan, Korea, Singapore or the US, have additional standardised tests, a practice which is less widespread in Europe. Finally, some countries have additional standards, such as a two-stage secondary examination (as in the UK and Singapore), application forms and interviews.

Finally, countries have different mobility patterns. Certain countries have a comparatively high percentage of inbound to outbound mobile students, including Australia, France, Germany, Ireland, Italy, Japan, the Netherlands, New Zealand, Singapore, Sweden, Switzerland and the UK. Other countries have a high proportion of outbound to inbound mobile students, including Korea, Slovenia and Turkey.

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Table 1:   International comparison

Country	Geography	Entry requirement	Selection [1]	Inequality index	Entry rates	Graduation rates	Inbound mobility	Outbound mobility
Australia	Other third country	Secondary Leaving diploma and rank	Select	n/a	96.50%	50.00%	19.83	0.82
Canada	Other third country	Secondary school diploma	Select	n/a	n/a	36.00%	n/a	n/a
France	Western EU	Secondary Leaving diploma	Open	48	n/a	n/a	11.87	2.6
Germany	Western EU	Secondary Leaving diploma	Open	50	42.50%	30.00%	7.52	4.1
Hungary	CEE EU	Secondary school grade and maturity exams.	Select	68	54.00%	31.00%	4	2.11
Ireland	Western EU	Secondary leaving certificate	Select	35	55.90%	47.00%	10.7	10.44
Italy	Southern EU	Secondary Leaving diploma	Open	n/a	49.10%	32.00%	3.74	2.4
Japan	Other third country	Multiple exams *and* university entrance *exams*	Select	n/a	50.70%	40.00%	3.9	0.93
Korea	Other third country	Secondary school diploma standardised test	Select	n/a	71.10%	n/a	2	3.81
Netherlands	Western EU	Secondary leaving diploma	Open	45	65.50%	42.00%	5	1.7
New Zealand	Other third country	Completion of specific subjects and levels. Portfolios and interviews	Select	n/a	79.60%	47.00%	15.57	1.98
Singapore	Other third country	Secondary school grades issued at two stages	Select	n/a	n/a	n/a	20.22	8.89

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Slovenia	CEE EU	Secondary Leaving diploma	Open *[24]	43	76.70%	29.00%	1.84	2.39
South Africa	Other third country	Secondary school certificate and 'matriculation' endorsement	Select	n/a	n/a	n/a	n/a	n/a
Spain	Southern EU	School leaving certificate	Select	51	51.50%	30.00%	3.2	1.32
Sweden	Nordic EU	Standardised aptitude test and high school performance	Select	42	75.90%	37.00%	7.88	3.51
Switzerland	Neighbouring country	Secondary school diploma	Open	55	n/a	31.00%	16.22	4.58
Turkey	EU Candidate country	Entrance examination	Select*	n/a	40.10%	23.00%	0.82	1.33
UK (England)	Western EU	Secondary Leaving grades issued at two stages. Interview	Select	47	63.10%	51.00%	16.85	1.08
USA	Other third country	Standardised aptitude test and application form	Select	n/a	74.30%	38.00%	3.38	n/a
Average Europe	-	-	-	48.40	59.36%	36.00%	8.07	3.29
Average total	-	-	-	-	63.10%	37.13%	8.59	3.18

Source: Sargeant et al., 2012; OECD 2012: 67 and 348; Koucky et al., 2010: 31; UNESCO data centre

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[24] The asterisk indicates authors' own assessment, as the country does not feature in Sargeant et al. (2012).

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The set of countries selected as case studies fulfil five fundamental requirements.

Firstly, they represent a *geographical balance*, covering Western EU Member States, a Nordic EU country, a Southern EU country, a Central and Eastern European EU country, and a candidate country. Third countries include the USA, Australia and Japan. The geographical dimension of the study has a substantial meaning, because the performance of the higher education system as a whole and the policies influencing this performance have been shown to be clustered geographically (Universitas21, 2012).

Secondly, the case studies include *various types of entry requirements*. A majority of countries require secondary qualifications. But entrance exams are common in Turkey and France. Multiple exams take place in Japan and standardized aptitude tests are common in the US (with competitive examinations for *Grandes Ecoles* in France). Swedish applicants are selected based on minimal grade requirements and a standardized aptitude test. Australia uses a particular calculation, called the Australian Tertiary Admission Rank (ATAR), in order to compare student performance in the last year of secondary education.[25]

Thirdly, the different types of entry requirements are combined with *differences in degree of selectivity* of entry to higher education and the school structure. Two thirds of the selected European Union countries have an open system of admissions, where fulfilling a minimal criterion guarantees access, while overall the majority of the case studies have some form of selection related to admissions to higher education. The categorisation of a system's selectivity does not necessarily reflect entry rates. For example, Germany has a nominally open system but a mere 42.5% of a given age group entering tertiary education; while the US has a nominally selective system with 74.3% of a given age group entering tertiary education in 2007 according to the OECD. In other words, a system can be selective but cater to a larger proportion of the population than open systems, which may have a lower number of total places available, and different requirements and paths to higher education.

Fourthly, the systems of the selected countries also vary depending on their *upper secondary school structure/differentiation*, or in other words the way in which they accommodate students according to their aptitude level. Australia, the US and Sweden have a unitary system in upper secondary education which accommodates students regardless of their aptitude levels. Germany, France, Italy and Japan have different school types for students of different aptitudes, typically separated between an academic and a vocational track. England has a mixed system where students can choose to specialize in academic or vocational routes.

Fifthly, these higher education systems are embedded into *political systems of various types*, with different levels of control, as summarised in Table 2.

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[25] The system is not used by Queensland.

Table 2: **Overview of regulatory schemes in country case studies**

COUNTRY	REGULATION
France	Ministry defines national policies, guidelines and curricula. Devolved responsibility (via *académies*) to regions for upper secondary education.
Germany	States set guidelines. Standing Conference of Ministers of Education & Cultural Affairs of the 16 states *Länder* is main instrument of cooperation at national level.
Italy	Centralised. Increasing formal delegation of administrative powers from central government via regions, provinces and municipalities /communes to schools.
Slovenia	Decided by higher education institutions themselves. Ministerial statutes regulate admissions of foreigners at 10%.
Sweden	Municipalities decide how schools are run, following national Ministry guidelines. Universities decide on admissions, but Government decides on ceiling through funding requirements and goals by discipline.
UK (England)	Education is a devolved competency across the UK. Ministries define some of the regulations.
Australia	State and territory responsibilities. The commonwealth (federal) Government promotes national consistency and coherence. Collaboration takes place through the Standing Council on School Education and Early Childhood (SCSEEC).
Japan	Ministry oversees; prefectures operationally responsible for upper secondary, municipalities for compulsory education. Universities and junior colleges set their own admission procedures.
Turkey	Governmental and school/higher education institutions' responsibility.
USA	Individual states provide policy guidelines; local districts operate schools within these guidelines. Some national (federal) initiatives influence state policy guidelines. Course providers decide their own admission criteria.

Source: Sargeant et al., 2012

As shown in Table 2, federal systems (Germany, Australia and the US), the British devolved system, as well as the more centralized French and Italian systems are represented. Devolved, decentralized and federal systems may lead to greater national and regional differences but they do not exclude some form of federal coordination. For example, in Australia, the Commonwealth (federal) Government promotes national consistency and coherence. Collaboration takes place through the Standing Council on School Education and Early Childhood (SCSEEC) in Australia and the Standing Conference of Ministers of Education & Cultural Affairs of the 16 Länder acts as cooperation body in Germany.

Having decentralized or federal governments also do not exclude centralized information system for admissions. British students apply through the University and Colleges Admissions Service (UCAS), which contains information from universities across Northern Ireland, Wales, England and Scotland. The *Stiftung fur Hochschulzulassung* provides centralised information in Germany, and websites provide information regarding applications in Australia.[26] Moreover, these systems reflect differences in the

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[26] See MySchool: http://www.myschool.edu.au and MyUniversity: http://www.myuniversity.gov.au.

involvement of various levels of government, including institutions, cantons, states, municipalities and regions, as well as Ministries and influence the administration of admissions and quality controls.

2.4. Stakeholders' interviews

Each case study was substantiated by stakeholders' interviews. Interviews asked respondents to describe their admission systems as well as to comment on the performance of admission systems regarding its ability to promote equity, quality and mobility. These interviews were conducted by phone in October and November 2013. These interviews took place with stakeholders, which aimed to represent different levels of the decision-making and management of admission systems. Interviews included ministries and regulatory bodies, agencies responsible for the management of admissions and bodies responsible for the facilitation of mobility (ENIC-NARIC).

Interviewees had the option of replying to the questions anonymously, and are mentioned by name only if they gave the research team permission to do so. Full list of interviewees is provided in Annex 1.

2.5. Review of policy and national sources

In addition, an extensive overview of the academic and policy literature formed the basis for this study.

Academic review

The aim of the academic literature review was to understand the critical issues in terms of admissions both at the international level and national levels. The research team conducted this search using the International Association of Universities' Database on Higher Education Systems and the International Bibliographic Database of Higher Education, as well as the resources of the LSE library, the largest library in social sciences in the world.

The literature review covers 45 publications, which were selected on the basis of their thematic relevance.[27] The review illustrates a broad academic concern with equity in admission systems (31 publications covered equity as a theme), whereas three articles only looked at quality in admissions, two focussed on transferability and nine articles concentrated on other findings. In addition, relevant historical evidence was also used to frame the topic into its broader, long-term policy context, through Corbett (2005), which presents an analysis of European institutions' involvement in the field of higher education between 1955 and 2005.

Comparative research on admissions appears to be a relatively recent area of research, despite the fact that admissions are a key component of university practices. Academic

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[27] The search for articles used the following three combinations of key words: (i) higher education + [qualifications/exams/admissions/standardised tests/cognitive/non-cognitive assessment] + [equity/fairness/equality/opportunity]; (ii) higher education + [qualifications/exams/admissions/standardised tests/cognitive/non-cognitive assessment] +[quality/transparency/accountability/evaluation]; (iii) higher education + [qualifications/exams/admissions/standardised tests/cognitive/non-cognitive assessment] + [comparability/portability/transfer/credit/frameworks/qualifications frameworks/harmonisation]. Further, the research team used a snowball approach. The references of relevant articles have also been scrutinized to identify potential further publications of interest.

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research conducted on the topic provides a useful international overview of higher education admissions.

Policy review

The research team also conducted a review of existing policy sources. The policy literature aimed to understand the state of European public policies in higher education, in order to frame the analysis in light of recent policy developments. A key objective was to identify which policies could be of relevance to admissions in European public policy. The literature showed how little was devoted to the intervention of European institutions. The aims of the national review of the literature were to describe and evaluate national public policies and to identify differences in modes of regulation, levels of governance and policy interest in the topic of admissions. The case study researchers were asked to identify the relevant national stakeholders in the higher education sector and to analyse their policy publications.

The policy literature covers publications since 1999: the year the Bologna Process was launched, leading to important European initiatives in higher education. The policy literature was identified through the relevant international organisations and European institutions involved in the field of higher education or admissions, namely the European Parliament (Committee on Culture and Education), the European Commission, the Council of the European Union, the Council of Europe, the OECD, the Joint Quality Initiative Informal Group, the Bologna Working Group of qualifications framework, the United Nations Educational, Scientific and Cultural Organisation (UNESCO), and the European Access Network. Policy literature was deemed relevant if it related to equity, quality or mobility in admissions how European institutions supported cooperation between Member States, and the mobility of students. Most of the publications concentrated on facilitating comparability regarding qualifications in higher education, including for example the Framework for Qualifications of the European Higher Education Area. There was very little on the topic of admissions or secondary qualifications.

The academic and policy literature was combined with the aforementioned telephone interviews, and an overview of statistical indicators, enabling the research team to obtain comprehensive material to assess admission systems.

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3. VARIETY OF ADMISSION SYSTEMS: AN OVERVIEW

This chapter provides a descriptive comparison of the higher education systems in the 10 countries that were selected as case studies for the project: Australia, the United Kingdom (England), France, Germany, Italy, Japan, Slovenia, Sweden, Turkey and the USA. The chapter touches on several characteristics of national admission systems to higher education, focussing in particular on the following aspects:

- The entry requirements to higher education in the various countries analysed;

- The main subjects required to pass the school leaving diploma;

- The variation existing within countries in terms of admission system, both along territorial or institutional lines;

- The main actors that operate in the field of admission to higher education;

- The typical and average age of entry to higher education;

- The types of timeframe for application existing across countries;

- The cost of enrolment to higher education.

This chapter is complemented by annexes 2, 3 and 4 that provide technical and more extensive details on specific descriptive aspects of the various admission systems that have been analysed, respectively focussing on: recapitulating the compulsory subjects and other qualifications that students need to have in order to be eligible for enrolment to higher education; presenting the actors that in different countries have a role in the admission system; setting the fees charged in various countries for the admission process in the broader context of tuition fees charged across countries.

3.1. Entry Requirements

Entry into higher education is organized through admission systems that aim to ensure students have the necessary level of education, knowledge and skills to succeed in their chosen course.

3.1.1. Summary of entry requirements

Several types of admissions instruments exist to help universities admit students, including secondary leaving examinations, entrance examinations, and standardized aptitude tests. In some cases students may be admitted to higher education without undertaking a formal examination, but they may be required to present records of their past performance, or to meet a combination of requirements attesting to their suitability for entry. Table 3 presents the most common and widespread entry requirements for the countries covered by the 10 case studies.

Table 3:   Summary of entry requirements

COUNTRY	ENTRY REQUIREMENTS
France	Secondary leaving exam (*Baccalauréat*); Competitive entrance exams and interviews may be required for some for some higher education institutions and for the *grandes écoles.*
Germany	Secondary school leaving exam (*Abitur*) leading to a general higher education entrance qualification (*allgemeine Hochschulreife)*; Institutions may require additional exams, for example standardised aptitude tests for medical degrees.
Italy	Secondary school leaving exam (*esame di stato di II ciclo*); Institution or subject-specific exams may be required for certain degrees.
Slovenia	Secondary school leaving exam (*Matura*); Institutions may require additional exams.
Sweden	Secondary school diploma and high school performance (*slutbetyg från gymnasieskolan*); Standardised aptitude test (SweSAT); Institutions may require additional exams.
UK (England)	Secondary school leaving exams (*General Certificate of Education Advanced Level (GCE A-level; A-levels); GCSEs*); Institutions may require additional exams.
Australia	Secondary leaving exams (*Certificate of Education; Higher School Certificate*) leading to Australian Tertiary Admission Rank (ATAR). Standardised test called Special Tertiary Admissions Test (STAT) in some cases; institution or subject-specific exams may be required for certain degrees; and increasingly some Australian universities ask for Personal Qualities Assessment (PQA).
Japan	Secondary school diploma; standardized testing (*National Centre Test for University Admissions (NCT))*; University-specific entrance exams.
Turkey	Secondary school diploma (*Lise Diplomaci*); Higher education Exam and Undergraduate Placement Examination.
USA	High School Diploma; Standardised aptitude test (SAT).

Source: Case study data collection reports[28]

Secondary leaving examinations typically lead to the acquisition of a high school diploma or certificate. Admission systems in each of the case study countries require students to hold a secondary school diploma and/or refer to specific secondary school leaving exams. Most commonly, these requirements refer to specific grades or levels of attainment to be achieved by the applicant. Secondary school achievement may be translated into a figure that is comparable across students.

Entry requirements to higher education may be based on the scores acquired during secondary school leaving exams and/or entrance examinations, but can also provide other information such as a grade point average, interviews, portfolios, application essays, referee reports and evidence of extra-curricular activities.

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[28]   Case study data collection reports are available upon request.

Standardized aptitude tests measuring broader cognitive abilities allow higher education institutions to compare the applicant's potential to successfully complete their chosen course. Standardized testing is conducted in Japan (the National Centre Test for University Admissions (NCT)), Turkey (the Higher Education Exam and Undergraduate Placement Examination) and in the USA, (the Standardised Admission Test, SAT). They are less common in Europe, only used in Sweden (the SweSAT).

The extent to which these tests are used varies. The Swedish SweSAT can be taken by applicants to higher education, although it was originally designed to facilitate access from those coming from vocational training. The test is only given in Swedish and hence mostly taken by national applicants, while foreign students are able to apply to English-taught programmes without a SweSAT score. Similarly, the higher education exam (*Yükseköğretime Geçiş Sınavı* YGS) in Turkey is required for all Turkish applicants, but is circumvented by foreign students, who apply directly with the university according to its institutional rules. In contrast, the American SAT is required for all applicants to higher education, including foreign/international students. The Japanese National Centre Test for University Admissions is required for all national and public universities in the country, but private institutions can chose whether or not to include the test score in entry requirements. In some higher education systems, standardised testing may be required for students who do not have the most widely recognised foreign qualifications, such as in Australia where students without an ATAR rank are expected to take the Special Tertiary Admissions Test (STAT).

Higher education institutions may also choose to measure students' abilities through entrance examinations in certain subjects in addition to other entry requirements. Given that in many countries universities can set additional requirements, it is common for higher education institutions to require additional subject or cognitive tests for entry into their institution and/or specific degree programmes.

Medical sciences institutions are more likely to set additional tests, such as the standardized Undergraduate Medical Admissions Test (UMAT) in Australia, the TMS (Test für Medizinische Studiengänge) in Germany, or the Bio-Medical Admissions Test (BMAT), Health Professions Admission Test (HPAt), or UK Clinical Aptitude Test (UKCAT) in the UK.

Although a majority of higher education institutions use some form of examination in the admission process, they may also choose not to require any additional examination. The existence of additional entrance requirements is a way to regulate access to a particular profession, and hence liaise with professional associations.

3.1.2. Entry requirements by country

This section summarises national university entry requirements in the ten countries selected as case studies.

There are two types of admissions in **Australia**, the most common being 'Year 12 applicants' (the final year of high school) while the other type are 'mature applicants'. If they are eligible for tertiary education, students also receive a 'Tertiary Entrance Statement', which is a summary of their grades containing information used to calculate the Australian Tertiary Admissions Rank (ATAR). The ATAR score provides an indication of how the student compares to the student body in that year in a given state or territory, and is calculated in terms of percentile bands. An ATAR score is derived by

calculating the average of the raw examination mark and the moderated school assessment mark for each of student's course results. 'Mature applicants' have their applications assessed on whatever information is available, which might include complete/incomplete university courses, university preparation courses, technical qualifications, and ability tests (Australia Education International, 2014).

GCE A-levels in **England** are subject-specific exams sat by students in their final year of secondary school usually at age 18. Students apply with their GCE A-levels results (or UK/foreign equivalent) to universities, most with predicted grades (which will often result in a conditional offer, where the student must obtain or exceed their predicted grades), or, where possible, with achieved grades. Higher education institutions may also require specific grades and/or specific subjects for the General Certificate of Secondary Education usually completed at age 16. In addition to this, over 60 colleges and universities provide their own admission tests.[29] There are other less common school leaving diplomas also available, including the 14-19 Diplomas through a vocational route and the English *Baccalaureate*. The English higher education system also recognizes qualifications from other countries in the United Kingdom, such as the Welsh Baccalaureate and the Scottish Higher diploma.

In **France** applicants must have a secondary education diploma (*Baccalaureate*), a certified equivalent from the vocational stream, or the national diploma (*Diplôme d'accès aux études universitaires* – DAEU). European citizens must possess the qualification allowing them to enter higher education in their home country. Different requirements apply to different types of institutions. Students may register for non-selective universities or a variety of other higher education institutions, including the vocational University Institute of Technology (IUT), section of senior technicians (STS), Diploma in Accounting and Management (DCG) or the prestigious *Grandes écoles* pathway, which usually requires two years of preparatory study.[30]

Students in **Germany** who attend the upper secondary school – usually grades 10 to 12 – attend a *Gymnasium* to do a secondary leaving examination, which provides them with a general higher education entrance qualification called the *Abitur*. The *Abitur* qualification allows them to study all subjects at all types of higher education institutions. Attending the Gymnasium is not the only way to be eligible for university in Germany. Applicants can also access higher education after adult training, (in a *Kolleg*) which leads to the completion of an *Abitur*. Applicants may also enter university after vocational training or if they have worked for three years and passed an entrance exam called *Eingangsprufung* (Kultusministerkonferenz, 2010).

The only requirement to be fulfilled in order to access a degree in **Italy** with free access is to have successfully completed secondary school and obtain a secondary school leaving certificate. In some instances universities may run non-selective entry tests. Admission to the following degrees is regulated at the national level through a standardized entry test: medicine and surgery, veterinary medicine, dentistry, nursery, and architecture. In some specific instances, universities have the authority to set ceilings on the number of students that they admit and to design their own admissions tests. This is the case for degree programmes requiring intensive use of laboratories, IT equipment and, more broadly, a personalized approach to teaching and learning.

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[29] Full list available at: http://www.ucas.com/how-it-all-works/explore-your-options/entry-requirements/providers-own-tests.

[30] See ServicePublic.fr http://vosdroits.service-public.fr/particuliers/F2861.xhtml#N10073.

All universities in **Japan** must follow the implementation guidance for entrance selection of university applicants (*Daigaku nyusisha senbatsu jissi yoko*) announced by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) around the end of May every year. Within the framework of the implementation guidance, national, public and private universities have the independence and responsibility to choose particular entrance examinations, admission procedures and requirements of applicants. With respect to the admission systems of universities in Japan, applicants with upper secondary school leaving diplomas must be admitted through the general entrance examinations, a recommendation from principals, or the admission office entrance examinations (or a combination of these). Students with no upper secondary school diploma (e.g. high school drop outs) who wish to take entrance examinations for universities, will in most cases need to pass the Certificate for Students Achieving the Proficiency Level of Upper Secondary School Graduates, a multiple choice exam.

In order to be able to enrol in a higher education institution in **Slovenia**, applicants have to pass a secondary school leaving examination (the matura exam), have adequate knowledge of Slovenian language, and submit results for the last two years of secondary school; for admission to some university courses, applicants may also be asked to pass an art skills or mental and physical preparedness test (MHEST, 2013). Additionally, since 1994/1995 national applicants completing secondary education before 1995 are required to provide proof of a recognised national exit exam equivalent to the matura. Similarly, international applicants are required to provide a recognised national secondary school leaving certificate.

Entry requirements in **Sweden** are based on school-leaving grades for most undergraduate programmes. Applicants are also admitted on the basis of the independent Swedish Scholastic Aptitude Test (abbreviation SweSAT; Högskoleprovet) and previous validated experience (Amft, 2012). Additional entry requirements are often demanded by universities for particular subjects, for instance in health, law, and fine, applied and performing arts.

Higher education applicants in **Turkey** must successfully complete high school, marked by the obtainment of a valid high school diploma, and achieve a sufficient score on the Student Selection and Placement Examinations. Student Selection and Placement Examinations consist of the Higher Education Exam (YGS, Yükseköğretime Geçiş Sınavı) and the Undergraduate Placement Examination (LYS, Lisans Yerleştirme Sınavı). Before entering the examination process, most applicants conduct a one-year non-compulsory preparation course at schools (dershane).[31]

The common entry requirements for college or university are fairly consistent across the **USA**. For entry to many universities, potential applicants start in 11th grade (junior year), around 16–17 years of age, when they take practice standardised tests either through the Preliminary Standardised Assessment Test (PSAT) or the Preliminary American College Testing test (PLAN). These are sat in October and results released in December. Subsequently, the students take either the American College Testing (ACTs)[32] or Scholastic Aptitude Tests (SATs)[33] the following year, the results of which will

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[31] Further information is available on the website of the Student Selection and Placement Centre, http://osym.gov.tr, last accessed 19th December 2013.
[32] See http://www.act.org.
[33] See http://sat.collegeboard.org/home.

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contribute to their college application. These tests are not compulsory or a requirement for all universities, but they are a popular mechanism for admissions assessment.

3.2. Content of secondary school exams

A detailed overview of the compulsory subjects that students are required to take in order to complete secondary school is provided in Annex 2. Overall, the content of secondary school education varies across the countries, but generally imparts similar skills and knowledge for all secondary school graduates.

Students have some choice in secondary leaving qualifications in most countries. They choose certain disciplines to concentrate on, although each of these countries does have several compulsory subjects to be completed as part of a secondary school education, such as the national language, a foreign language (e.g. English) and mathematics.

This choice occurs with regionally or nationally awarded secondary school leaving exams used in Slovenia, France, Germany and England. In the French *Baccalaureate*, required courses vary according to the stream chosen by the student: literature, science or social sciences. Similarly, the Italian II cycle national exam is composed of different subjects in different secondary schools, with main distinctions occurring between gymnasia, technical schools, or professional schools.

Some qualifications are nation-wide while others are state-wide. For example, the procedure and content of the German *Abitur* varies across states (Länder), though students are required to take one course in language/literature, one in social sciences, and one in science/mathematics, similarly to the broader French *baccalaureate* streams. On the other hand, the Slovenian *matura* is a nationally administered secondary school leaving exam which has three compulsory subjects and space for two elective courses. Some nation-wide examinations provide a broader spectrum of choice as is the case in England.

Box 1:   Secondary school leaving certificates with varying degree of choice: England and Slovenia

As it has been noted above, school leaving certificates differ in the degree of choice left to students in terms of subjects to pass in order to be eligible for enrolment in university. England and Slovenia stand out in this respect as a system with large and limited choice respectively.

School-leaving exams in **England** are most commonly GCSEs (General Certificate of Secondary Education) and GCE AS/A-levels. GCSEs are subject specific exams for Key Stage 4 in England (most commonly taken by 14-16 year olds) available in over 40 subjects. Compulsory subjects include English, Mathematics and Science; schools may have additional required subjects for students at GCSE level. Students who complete five or more GCSEs with grades higher than a C are eligible for and may choose to study GCE A-levels. GCE A-levels are a two-year qualification, which involves the study of the theory of a subject, with some investigative work. The first year of study is a qualification in its own right, called AS levels. A-levels are the principle tool for university selection in England, though there are other pre-university exams available (vocational qualifications, International Baccalaureate etc.). The average student will take 3 or 4 A-level exams at around age 18, choosing from over 45 available subjects. There is no set of compulsory GCE A-level subjects or exams – students are able to choose their own set, though they are encouraged to consider their career aims or interest in specific fields, as many courses at universities or colleges will require A-levels in certain subjects.

The Matura test in **Slovenia** is composed by five subjects, three of which are mandatory: (i) Mathematics; (ii) Slovenian Language (in ethnically mixed areas candidates are to take Italian or Hungarian language tests); (iii) Knowledge of a foreign language (options include German, French, English, Italian, Russian or Spanish). In addition, candidates are required to choose two optional subjects from two of the following five groups: (i) philosophy, psychology, sociology; (ii) any modern foreign language, a second language in ethnically mixed areas, ancient Greek, Latin; (iii) contemporary dance, music, theory and history of Drama and the theatre; (iv) art history, history; and (v) biotechnology, computer science, economics, electrical engineering, engineering mechanics, information technology, materials.

Source: Case study data collection reports

In addition, nation-wide standardised tests exist as entry requirements in various other countries. The content of a standardized test can be subject/knowledge specific, as is the case in the Japanese National Centre Test for University Admission (NCTUA) and the Turkish Higher education and Undergraduate Placement exams. These tests can also test cognitive abilities, as is the case with the American Scholastic Aptitude test (SAT) and Swedish SweSAT.

Box 2:   **Standardised tests in addition to school leaving certificate**

Our country case studies highlight two different types of standardised tests that need to be successfully completed by students in order to enrol in higher education, subject-specific and cognitive tests, as exemplified by the examples of Turkey and the US.

Admission to higher education in **Turkey** depends on students' secondary school achievement scores, which is the outcome of a composite calculation of secondary school grade point average and the performance on a two-staged standardised national test, the YGS and the LYS. The YGS includes the subjects of Turkish, Basic Mathematics, Social and Natural Science. The LYS includes the subjects of Mathematics, Natural Science, Literature and Geography, Social Science and Foreign Language.

In the **USA**, the Scholastic Assessment Test (SAT) and the American College Testing (ACT) are standardised aptitude tests that bear significant importance in the possibility of students being admitted to higher education (NACAC, 2011a). The general SAT covers skills in critical reading, writing and mathematics, and is usually taken in the penultimate or ultimate year of high school (11th grade (junior year) or 12th grade (senior year)). The general SAT is often a requirement for admission into undergraduate programmes in the US. In addition, applicants can also choose from twenty subject specific tests, articulated around five areas: (i) English literature; (ii) Languages (choice of nine languages ranging from Spanish, French and German, to Korean and Hebrew); (iii) History and Social Studies: US and World history; (iv) Mathematics; and (v) Science: biology, chemistry and physics. An applicant may choose to take subject tests based on additional course specific or institutional requirements, but may also choose to do so outside of any obligations to differentiate themselves and convey their interest in a specific subject. The SAT Subject Tests are run 6 times a year, and each last an hour, with students being able to take up to three tests in one sitting. The ACT is divided in a multiple choice and an optional writing part. The ACT includes four subject tests plus the optional writing part. These subject tests are the following: (i) English; (ii) Mathematics; (iii) Reading; (iv) Sciences. Each subject test lasts between 30 and 60 minutes and includes up to 75 questions (1 for the written part).[34]

Source: case study data collection reports

3.3. Variation within national systems

There are established differences within national systems on how admission to higher education operates. Four main lines of variations can be identified and are teased out further in the reminder of this section. Firstly, variation may occur along territorial lines, a common feature in federal states, despite a growing trend towards a nation-wide management of admissions. Secondly, there may be variation across types of institutions, for instance between public and private universities. A third variation is identified across disciplines, medical sciences being a notable example in this respect. Fourthly, variation may occur according to the profile of the applicant, such as in the case of international applicants or mature learners.

Variation in admission along territorial lines is well exemplified by two federal states included in the set of cases studies, Germany and Australia, where German states

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[34] http://www.actstudent.org/testprep/descriptions.

(*Länder*) and Australian states and territories have decision-making power over education policy.

In **Germany**, the management of higher education and admissions involves limited federal competencies. Legislators at *Länder* (state) level are responsible for decisions on educational systems. The Standing Conference of the Ministers of Education and Cultural Affairs of the *Länder* in the Federal Republic of Germany(KMK)[35] is the main self-coordination mechanism for the ministers and senators of the states that are responsible for education, higher education and research, as well as cultural affairs. The KMK makes decisions, recommendations, agreements or state contracts on education policy, higher education and research and cultural policy concerning matters which are of national importance, in order to form a common opinion and a policy direction on these matters, as well as representing common interests towards the federal government. The decisions of the KMK are not legally binding and have to be implemented by the *Länder* through state legislation. In 2009 the KMK decided on (legally non-binding) measures to harmonise the very heterogeneous legal and entrance requirements in the 16 German states to study without a higher education entrance qualification obtained through a school leaving certificate.

Since then most states have tried to improve the legal situation for people accessing higher education without a higher education entrance qualification obtained through a secondary school leaving certificate.[36] However entrance requirements and procedures are not standardised across *Länder*, leaving applicants to deal with an abundance of specific regional regulations which represents a significant barrier for prospective students in the application process (Nickel and Duong, 2012). The KMK published a synoptic presentation of options and regulations for access higher education based on applicants' vocational training and working experience, which shows the abundance and variation of regulation and entrance requirements across all 16 German states (Kultusministerkonferenz, 2013d).

Australia operates a federal system in which education policy, including university admissions, is devolved to the states and territories, where Tertiary Admissions Centres (TACs) manage the ranking and communications processes for universities. All Australian states and territories use some form of ranking to select applicants for university admissions, and many of them adopted a standardised score – ATAR – which is comparable across students. The ATAR system was implemented in 2009/2010 to replace state-specific rankings, and was adopted everywhere by 2012, except in Queensland (which has retained its original system, the Overall Position, although conversion tables to ATAR exist).[37] Before the introduction of the ATAR, the following systems were in place in the various states: ENTER in Victoria; Universities Admission Index (UAI) in New South Wales and Australian Capital Territory; Tertiary Entrance Rank (TER) in South Australia, Northern Territory, Tasmania and Western Australia; and the Overall Position (OP) in Queensland, which is still being used today.

Higher education institutions decide on the selection process for applications by setting an ATAR score for each course they offer, while independent TACs at state-level serve to

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[35] Kultusministerkonferenz, *KMK.*
[36] *Schulische Hochschulzugangsberechtigung, HZB.*
[37] The 'Overall Position' (OP) serves the same purpose as the ATAR but is calculated slightly differently from ATAR. Instead of receiving a percentile, students are placed in bands ranging from OP1 (best) to OP25 (lowest). For more information on OP, see: http://www.qsa.qld.edu.au/630.html.

allocate positions for tertiary institutions by collecting applications, forwarding them to the universities the student applies to, and communicate results to the applicant.

Variation across institutions is common in many countries. In France, a number of selective institutions, *Grande écoles*, require an additional test to the Baccalauréat. Admission to each *Grande école* is strictly limited each year by the Board of each institution, which set a ceiling to the maximum number of students in accordance with the Ministry of Education. Students wishing to study at a *Grande école* normally need to undertake a two year preparatory course, and a competitive nationwide exam. The preparatory course is called Preparatory classes for the postsecondary education institutions (*Classes Préparatoires aux Grandes écoles*, CPGE). Upon completion of the preparatory courses, applicants take the competitive examinations for *Grandes écoles*. The standard of the CPGE is equivalent to the first two years of university, thus those that go on and decide not to pursue their studies at a *Grande école* can obtain exemption from the first two years of undergraduate study at university. Similarly those who have completed two years of undergraduate study at university are eligible to transfer to a CPGE course.

Recent reforms in Italy[38] introduced more variation across individual institutions (Gubbiotti 2011: 83). Universities have the authority to set ceilings for the number of students and to autonomously design admission tests to degrees that foresee intensive use of labs, IT equipment and, more broadly, a personalized approach to teaching and learning which would not benefit from a large number of students. In these instances, universities seek authorization from the Ministry to set a ceiling for a given degree and, if the Ministry grants authorization, they are then responsible for designing and running the entry tests. The number of universities setting ceilings for specific degrees has grown considerably over time; in 2001, 242 degrees had access regulated at the local level through admission tests run by universities, while in 2006 the number of courses reached 1,060, representing an increase of 330% (Gubbiotti 2011: 82). Further, Italian non-state universities are usually more selective than state universities and the run entry examinations across all of their degrees, since they build their reputation on, among others, a teaching offer where the students / teachers ratio is lower.

Variation also occurs across disciplines. Medical sciences represent the prime example in this respect across several countries, where aptitude tests couple secondary school leaving certificates to gain access to medical degrees. In England, students wishing to enrol in medical degrees are required to take aptitude tests, such as the Bio-Medical Admissions Test (BMAT); the Health Professions Admission Test (HPAt); or the UK Clinical Aptitude Test (UKCAT). In Italy, medicine and surgery, veterinary medicine and dentistry are among the degrees with access regulated at the national level through a standardized test entailing a questionnaire with multiple-choice answers focusing on general knowledge (e.g. logical reasoning, history) and specific knowledge relevant to the degree that the student is applying for (e.g. biology, chemistry, physics and mathematics). In Germany, standardised aptitude tests for medical degrees are in place to corroborate applicants' understanding of scientific and medical problems. In Australia, the Undergraduate Medical Admissions Test (UMAT) is required for undergraduate admission to many Australian dental and medical schools.

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[38]   Law 264/1999, part of the 1999 reform.

A fourth line of variation is to be found across applicants' profiles. In this respect, different admission procedures may be in place for non-traditional and foreign applicant's vis-à-vis home applicants with a secondary school leaving certificate. Typical provisions include the use of aptitude tests for mature learners (e.g. in Australia and Sweden, among others) as well as additional requirements or higher fees for foreign applicants (e.g. in Germany and the UK respectively). Chapters 4 and 6 respectively provide further details on admission systems for non-traditional learners as well as foreign applicants, since these issues are heavily inter-linked with equity and mobility issues.

3.4. Actors

All the higher education systems in the case studies are distinctive in terms of the roles that the different actors, including national and state governments, admission agencies and universities play. This section covers the role and independence of the university in admissions, the existence of central management bodies and, lastly, any other actors engaging with the higher education system.

3.4.1. The role of higher education institutions

The different levels of the management of admission systems mask differences in the decision-making ability of higher education institutions. This distinction is particularly important given that several European countries have implemented measures to increase the autonomy of universities since the late 1990s.[39]

In order to clarify the function of higher education institutions, Table 4 below concentrates on one dimension of autonomy, that relating to the freedom of universities to select students, set selection criteria and manage applications. Table 4 codes as 'yes' cases when higher education institutions had a role to play (in either the selection of students, setting criteria or managing applications), 'no' when higher education institutions had no role to play, and 'partially' when the responsibility is shared between higher education institutions and another entity.

Table 4: Role of higher education institutions in the selection of students, selection criteria and management of applications

COUNTRY	SELECT STUDENTS	SELECT CRITERIA	MANAGE APPLICATIONS
France	Partially	No	No
Germany	Partially	Partially	Partially
Italy	Partially	Partially	Partially
Slovenia	No	No	Partially
Sweden	Partially	Partially	No
UK (England)	Yes	Yes/Partially	No
Australia	Yes	Yes	No
Japan	Yes	Partially	Yes
Turkey	No	No	No
USA	Yes	Yes	Yes

Source: Case study data collection reports

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[39] The notion of autonomy is multidimensional and has different interpretations across countries.

Table 4 shows that European higher education institutions tend to be more constrained than their international counterparts. The UK is the only country among the European cases of this study where higher education institutions can select students, although a partial selection occurs in several countries, including Germany and Sweden. In Germany, the selection process is divided between the central clearinghouse and higher education institutions. In Sweden, universities decide on applications based on quotas set by the Swedish Council for Higher Education and can set additional criteria on approval of the Swedish Council.

Setting admissions' criteria is at most only partial in Europe. Swedish universities can set additional criteria for admissions, but these need to be approved by the Swedish Council. These centrally regulated practices are different from the ones in place in Australia and USA, where higher education institutions set their own criteria and select their own students, while in Japan the process is regulated largely by the relevant Japanese Ministry.

The management of admissions often takes place through a centralised agency in Europe. In Slovenia, the management is partially shared, because the Ministry for Higher Education determines the procedures and deadlines for applications and higher education institutions must obtain an approval from the Government for the content and call for application. Similarly, in Italy the management of applications is shared insofar the Ministry of Education, University and Research manages part of the admission process into degrees with restricted access regulated at the national level, while universities are charged with the authority to manage the admission for the degrees with access regulated at the local level.

On the other hand, countries outside the EU, such the USA and Australia, allow higher education institutions to set selection criteria.

3.4.2. Management of admissions

In each of the countries analysed, higher education institutions retain, in theory, some decisional authority over student admissions. This feature is grounded in the historical tradition of some countries (especially the Anglo-Saxon countries), while it has become a relatively recent trend in others (e.g. the Southern European countries). The process for collecting and managing applications for higher education in each country varies as indicated in Table 5.

Table 5:   Bodies managing admissions

COUNTRY	BODIES
France	Centralised through the *Admissions Post-Bac* portal, which allows prospective candidates to learn more about higher education courses and opportunities. To apply to a course and institution, a student will need to complete the portal's online application.
Germany	Applications to degrees with a national admission restriction are centrally administered through a clearing house (*Stiftung für Hochschulzulassung*). Applications to degrees with local admission restriction maybe managed directly by the university or via the central clearing house. For non-regulated courses, applications are managed by universities.
Italy	Application method differs per university and/or degree. Admissions can either be unregulated, where a secondary school diploma allows for free access, regulated by the university itself, or regulated at a national level.
Slovenia	The Higher Education Application and Information Service at the university of Ljubljana manages the applications for most of the universities in the country, with some degree of differentiation in specific disciplines.
Sweden	Centralised through the Antagning.se platform, where applicants can apply for courses and programmes at all Swedish universities and colleges with the same application through this platform.
UK (England)	Centralised through UCAS, which manages undergraduate applications.
Australia	Centralised through regional tertiary admissions centres.[40]
Japan	Application method differs per type of university (national, public or private) and/or per individual university.
Turkey	Centralised through the Student Selection and Placement Centre (ÖSYM).
USA	Application differs per university, though students can use the Common Application or the Universal College Application forms.

Source: Case study data collection reports

Table 5 illustrates the spectrum for application management ranging from significant institutional independence and responsibility, to a centralized system for applications. It can be seen that six countries (seven including efforts in the USA) use a centralised admissions system.

Centralisation occurs nationwide in the UK (UCAS), France (Admissions Post-Bac), Sweden (Antagning.se) and Turkey (ÖSYM), where specially designated centres exist to facilitate communication between the applicant and the university.

Regional management exists in some countries. In Australia, regional tertiary admissions centres act as central for where students can review entry requirements, submit applications and receive their results.

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[40] These centres are organised per territory: Universities Admissions Centres in New South Wales and the Australian Capital Territory; the South Australian Tertiary Admissions Centre (SATAC) in South Australia and the Northern Territory; the Victorian Tertiary Admissions Centre (VTAC) in Victoria, and the Tertiary Institutions Service Centre (TISC) in Western Australia).

Other countries operate a dual process. Germany has a mixed-system of direct applications to a university in some cases and a centralised clearing house in other cases. Italy also has a mixed system, where applications to some degrees are run through the university itself, and others are regulated at a national level. Higher education institutions can choose to use the Common Application or the Universal College Application in the US. These application frameworks allow students to submit the same form to multiple colleges and universities, negating the need to fill out various, slightly different forms covering the same information.

3.4.3. Interaction among actors

Every higher education system covered by the case studies has a designated governmental actor for policy, direction and regulation of higher education. Three arrangements exist among the systems covered; a single national actor, decentralized governments, or dual competencies.

The most common pattern is for **the national Ministry to regulate admissions.** This is seen in France (Ministry for Higher Education and Research), Italy (Ministero dell'Istruzione, dell'Università e della Ricerca, MIUR), Japan (Ministry of Education, Culture, Sports, Science and Technology MEXT), Sweden (Swedish Parliament/Government), and Turkey (the Council for Higher Education).

Federal states often see a decentralization of higher education competences, as is apparent in Australia, Germany, and the US, where each territory or state has its own department (though may be supported by a federal department, like the US Department for Education in the United States).

Governmental responsibilities may be shared across two departments, e.g. in England, education is covered by the Department for Education (primary and secondary education) and the Department for Business Innovation and Skills (higher education). In Slovenia the Ministry for Higher Education, Science and Technology is responsible for higher education and the Ministry of Education and Sport is responsible for vocational education.

Many countries have membership organizations which liaise with the governing department to provide specialized knowledge and feedback on issues relating to higher education. EU countries also have a dedicated body for the recognition of international and foreign diplomas, such as the ENIC-NARIC offices across the world.[41]

The more decentralised the system, the more varied the number of actors. The UK retains a culture of independent agencies. The higher education landscape has such agencies for both secondary and higher education. These include Ofqual, which covers secondary school qualifications and the Quality Assurance Agency which ensures quality in higher education. England has an independent watchdog for equity, the Office of Fair Access (OFFA), which works with higher education institutions to ensure fair access. OFFA was established in 2004 to maintain equitable access in an inflationary climate regarding student fees. Supporting Professionalism in Admissions (SPA), aims to ensure that admissions officials act in a fair and just manner. A similar organization is ANVUR[42] in Italy. However, as Table 6 illustrates, independent bodies are not common. Often the

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[41] See http://www.enic-naric.net/.
[42] Agenzia Nazionale di Valutazione del Sistema Universitario e della Ricerca.

task of upholding quality remains with the governmental departments. The main actors playing a role in the admission processes in the country analysed – and their various functions – are summarised in annex 3.

Box 3:   Centralised   and   dual   admissions   systems: case   study   country examples

Continental European admissions' systems tend to be more centrally regulated than some of their international comparators, yet Germany and France offer contrasting examples of centralised and dual admissions systems.

In **France**, admissions to higher education are traditionally the realm of the Ministry of Higher Education and Research.[43] The Ministry manages the centralised admission process *Admissions Post-Bac*, created in 2009, and decides on the higher education institutions eligible to take part in the centralised admission process. The Ministry also sets the student capacity of universities through the budget it renegotiates every four years, as well as the entry requirement. The content of the secondary examination qualification is fixed by the Ministry for National education.

Germany   has   a   dual   system.   A   central   clearing   house   (*Stiftung   für Hochschulzulassung*) manages the applications of nationally regulated admissions restriction, as well as of some locally regulated courses (upon the university's request). Universities manage the applications of some of the locally regulated courses. In theory, university admissions and academic qualifications are a federal competency. But the federal legislator has not made use of this competence so far. If demand for study places exceeds the local capacity of universities, the legislator at the state level can, by law, restrict the maximum number of incoming students via quotas per university. Degree courses without admission restrictions (open admission courses) are administered by the universities themselves.

In the **USA**, admissions are conversely of the realm of universities, which sets student numbers, admissions' criteria and selection requirements. State or federal ministries do not have responsibility in matters of admissions, although some variation admittedly exists. Independent organisations manage admissions and tests US-wide. For example, the College Board develops and administers standardised tests including the Scholastic Aptitude Test in addition to providing some policy advice. SATs are scored by Educational Testing Service. Associations of universities and colleges provide a space for exchange across the territory. These associations include the National Association for College Admission Counselling (NACAC) and the Council for Higher Education Accreditation (CHEA) for example.

Source: Case study data collection reports

Different arrangements in terms management of admission processes are analysed further in Chapter 5, section 5.2.

3.5. The age of entry into higher education

Age of entry into higher education can be usefully divided into typical age and average age, as suggested by the OECD (2013b). Typical age refers to the age of entry into higher education, assuming that a student has progressed from one education level to the next with no repetition of school years with full-time attendance, and continues on to

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[43]   This is the case for universities. Other higher education institutions may not fall under this category.

higher education immediately after graduation from secondary school. Conversely, the average age provides a data that encompasses all students, including those that for instance do not enrol in university immediately after completion of secondary school. The following table provides an overview of average and typical ages of entry across the 10 country case studies.

Table 6: Average and typical age of entry to higher education

COUNTRY	AVERAGE AGE	TYPICAL AGE
France	20	N.A.
Germany	22	19-21
Italy	20	19
Slovenia	21	19
Sweden	25	19
UK (England)	22	18
Australia	23	18
Japan	18	18
Turkey	21	18-19
USA	23	18

Source: OECD (2013b: 299, 413), average age refers to new entrants into tertiary A programmes in 2011; typical age refers to entry into ISCED 5A programmes in 2011

It is interesting to note that the discrepancy between average and typical age differs across countries. While the typical age of entry is similar across countries, around 18/19 years, the average age is more varied, ranging from 18 in Japan to 25 years in Sweden. With reference to the European countries examined in the study, Italy is the country with the smallest discrepancy, with average and typical age being almost overlapping. At the opposite end, Sweden and United Kingdom respectively have six and five years difference between the average and typical age. The varying degree of discrepancy between average and typical age may be seen as an interesting proxy to understand wider features of admission systems across countries. Notably, the difference between typical and average age may be driven up by a large number of mature learners in the system, which may be seen in turn as a proxy for an admission system that makes entry through non-traditional routes relatively easy. Conversely, where average and typical ages are closer, we may expect relatively few mature learners in the system, which may be seen as an indication of an admission system that makes entry through non-traditional routes relatively difficult. Admission systems vary in the degree to which they offer alternative routes to higher education, as discussed in further detail in Chapter 4. The Italian system, for instance, does not provide any alternative routes to higher education besides the achievement of a secondary school leaving certificate, whereas other countries, including Sweden and the UK, have systems in place to favour entry into the higher education system through multiple routes. Accordingly, research by Eurostudent (2011b:31) shows how Sweden and the UK[44] are the two countries with the highest share of students entering higher education through a non-regular route, while 100% of Italian students enter higher education through a regular route, i.e. achievement of the secondary school leaving certificate.

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[44] Please note that the Eurostudent survey is carried out in England and Wales only.

3.6. Timeframe of application

The timeframe for application to higher education differs across the various countries analysed. However, three broad patterns can be detected.

3.6.1. Early application and completion

The first pattern is characterised by early launch and relatively early completion of the application process, although with opportunities for late applications exist. This is the case in the UK and Australia for instance, when applicants start their application process well in advance of the start of the academic year and receive the results of their application several months before the start of the year.

In the UK, the actual start date of an undergraduate course can vary, but typically the academic year will start in September or October. The UCAS main scheme operates with the following deadlines which refer to the prior academic year (UCAS):

- September: Applications begin;
- October: Application deadline for Oxford, Cambridge or any course in medicine, dentistry and veterinary medicine/science;
- January: Application deadline for the majority of courses;
- 24th of March: Application deadline for some art and design courses;
- May: applicants receive the outcome of their applications
- June: Late application deadline (after this date, candidates are entered into clearing).

Thus, as the timeline above shows, the application process can start as early as 12 months before the beginning of the academic year, and in most instances, the applicant knows the outcome of his/her application up to four months before the start of the academic year.

3.6.2. Early application and later completion

A second trend sees early launch of the application and completion of the process close to the beginning of the academic year, as is the case in Slovenia.

In Slovenia, there are three application waves throughout the year available to students. The first wave is in late January, when higher education institutions make a call for enrolment (so called pre-enrolment). The deadline for applications under the first wave is in March, and universities must inform all candidates of the results by the end of June. If additional tests are required (e.g. art skills tests or mental and physical preparedness test), these are run in May and June. Each higher education institution opens the second wave separately, usually in August, with an application deadline varying between the middle to the end of August. The third wave is opened by the end of September with deadline at the beginning of October. The second and third waves provide an opportunity to candidates that in the first wave did not apply or that have not been admitted to their preferred programme to apply for any programmes with available places. The first enrolment period is therefore the one with full choice, while in the second and third waves choice is constrained and limited to the available places left unassigned after the first wave. Thus, in Slovenia the application process begins some ten months before the

beginning of the academic year and may be completed at the same time as the beginning of the academic year.

3.6.3. Application months prior beginning of academic year

Finally, a third pattern is characterised by the majority of the process occurring in the months prior to the beginning of the academic year, as in Italy and Germany.

In Italy, the basic timeframe for enrolment in university is as follows:

- July / November: students can enrol to degree with open access;

- September: where applicable, entry tests are run, and students are notified of their outcome in two to four weeks;

- September / November: students can enrol to degrees with regulated access, if they passed the entry examination;

- October: start of the academic year, however it is common practice that enrolment remains open for a few weeks after the academic year starts, and that students can join a degree at a later stage.

Thus, in Italy a more compressed timeframe of application that largely occurs just before the beginning of the academic year is noted, although universities and secondary schools run pre-orientation activities to prepare students for their degree choice during the preceding year.

3.7. The cost of application to higher education

While there is an established and large body of literature on the costs incurred by students attending university in different countries,[45] there is less information on the application fees. Application fees refer to how much (if at all) students have to pay to have their application processed, to take the necessary tests or obtain specific certifications. This cost is often negligible compared to the cost of attending university in those countries that charge tuition fees, yet an application fee is charged in nearly all countries that have been researched. The amount usually differs across countries and across universities within countries. Table 7 provides an overview of the cost that students face in applying and enrolling in university, making a distinction between administrative / application fees, which refers to the one-off cost incurred by students to enrol to university prior to start, and other fees, which refer to the cost of taking standardised admission tests. More information is provided in Annex 4, where administrative and application fees are set against the broader context of tuition fees in the various countries and the additional or different costs (if any) that foreign applicants have to incur.

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[45] See Johnstone and Marcucci (2007) for a review of international trends in cost-sharing in higher education.

Table 7: **Application, administrative, and other fees**

COUNTRY	ADMINISTRATIVE /APPLICATION FEE	OTHER FEES (E.G. TESTS)
France	183 EUR	
Germany	Approximately 50 EUR	
Italy	Approximately 200 EUR	
Slovenia	30 EUR (admission fee for the first year of study)	
Sweden		SWESAT 350 SEK (approx. 40 EUR)
UK (England)	12 GBP (15 EUR) for one application; 23 GBP (30 EUR) for multiple courses and applications	
Australia	30-40 AUD (26 EUR) in addition to processing fees of 100 AUD (65 EUR)	
Japan	17,000 yen (131 EUR) for public universities and 30,000 yen (230 EUR) for private universities (average fee for recommendations from principals and admission office examinations)	Between 12,000 and 18,800 yen (93-145 EUR) fee for the National Centre Test for University Admissions, depending on how many subjects are taken
Turkey		Approximately 200 TL, including YGS and all exams of LYS (70 EUR)
US	*50-150 USD (37-110 EUR)*	36-52 USD (26–38 EUR) for the ACT; SAT 51 USD (37 EUR) for the SAT

Sources: OECD (2013b); Eurydice (2013); Case study data collection reports

Table 7 shows that France and Italy have the highest application fees in Europe, while Japan has the most expensive application fees across the case studies. Setting application fees in the broader context of the costs of higher education is an instructive example of the importance of situating admission systems in the broader context of the whole higher education system, a topic that is discussed further in section 4.2.

3.8. Summary

This chapter provided a descriptive overview of admission systems across the ten case studies, providing details both on its general management and governance structure and actors involved, as well as the type of tests, their contents and various additional defining features, e.g. age and cost of admissions. Several of these defining features will be referred to in the following chapters, which aim to assess admission systems in terms of equity, quality and mobility.

4. THE EQUITY OF ADMISSIONS SYSTEMS

This chapter assesses the extent to which admission systems are equitable, by identifying whether they provide equal opportunities for applicants to be considered for admission to university. Two significant caveats should be made clear at the outset: the first caveat refers to the definition of equity, a concept that takes different meanings in different countries, while the second caveat relates to how equity is measured, irrespective of the definition of equity.[46]

In most European countries, except the UK, the notion of equal right of access implies that admissions are blind to a student's personal characteristics. In others, including the US and Australia, equity-enhancing policies are explicitly targeted at different groups (such as ethnic groups). The literature is critical of the capacity of admission systems to correct for inequalities of access to higher education. Chesters and Watson (2013) show that inequities remain despite the growth in the 'massification' of higher education leading to vastly increased numbers of students the economic crisis may accentuate these inequities and or even reverse the massification higher education trend (Leach, 2013).

However the literature also underlines the international shift towards a commitment to equity in access, for example through affirmative action for particular underrepresented groups (Clancy and Goastellec, 2007) together with affirmation of role of higher education in achieving a more meritocratic society (Liu, 2011).

In order to capture various approaches to equity in higher education, a distinction is made between equity in access and equity in attainment. These two issues are treated in section 4.2, with specific reference to socio-economic background of students and graduates. Section 4.3 focuses on the role of admission systems in ensuring the inclusion of particular groups of learners, namely non-traditional students and students with disabilities.

4.1. Strengths and weaknesses of each system in terms of equity

Table 8 below summarises the strengths and weaknesses reported during interviews in each system.[47]

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[46] Please refer also to section 2.4 for further reflections on the difficulties of capturing equity in higher education through reliable and appropriate statistics.
[47] This implies that the list of strengths and weaknesses is not exhaustive and dependent on the interviewee's perception.

Table 8:   Strengths and weaknesses of each system in terms of equity

COUNTRY	STRENGTHS	WEAKNESSES
France	Admission, in theory, is a very egalitarian, centralised process. No distinction between categories of students.	Influence of socioeconomic background, particularly regarding admission to the most prestigious institutions (and preparatory classes). Lifelong learning remains small.
Germany	Recognition of applicants with disabilities (through quotas).[48]	Needs of lifelong learner not adequately addressed.
Italy	Application fees waived for applicants from poorer backgrounds. Access of non-traditional students, in particular mature students, encouraged through recognition of professional experience translated into university credits. Ease of access to students with disabilities.	No specific measures taken at the point of entry to favour the inclusion of non-traditional applicants (i.e. a school leaving certificate as minimum requirement is needed anyway).
Slovenia	Lifelong learners and foreigners targeted (quotas). Emphasis on guaranteeing appropriate conditions for the student with special needs.	Enrolment system significantly less accessible for students with vocational secondary school qualifications.
Sweden	Efforts to include all parts of the population, through various routes to enter higher education, centralised process.	Multitude of possible entry requirements (final grades, SweSAT or prior experience) having unintended consequences.
UK (England)	Regulation of access through independent agencies: All institutions of higher education charging above the basic fee required to set up an access agreement with OFFA.	Though unusual, institutions charging the basic fee not required to have an access agreement with OFFA. Social mobility, low acceptance rates of less fortunate students into highly selective institutions, and the restrictive nature of the current student cap on student acceptance rates mentioned as relevant issues.

[48] The use of quota is a debated measure, which can be seen as recognition of particular group at the same time as a potential limitation to access (if demand is superior to the supply set up in the quotas). In the particular instance of disabled population, the use of quotas is perceived as strength because it acts as a signal that disabled populations are recognised. In chapter 7 (on mobility), the use of quotas is actually perceived as a weakness, because it is a potential infringement on the equal treatment of EU citizens across Member States and a potential limitation on the freedom of movement.

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Australia	Increased demand for admission to higher education 'non Year 12' (mature) applicants supported by alterative admissions pathways to traditional 'Year 12' applications, as result of removal of the cap on students. Communication and shared practices on relevant aspects across states and territories.	Students from lower socio-economic status groups at a disadvantage because of a lack of resources and aspirations.
Japan	Guidelines for applicants with disabilities relatively well developed.	Lifelong learning underdeveloped and influence of socio-economic background remains.
Turkey	Tradition of equal access through centralized admission procedures.	Except for the case of disabled students, no special treatment of subgroups that may need further assistance.
USA	Diversity catering for all populations.	Differences in access to certain institutions across groups.

Source: Case study data collection reports

The following sections develop the strengths and weaknesses observed in Table 8 more extensively. Some preliminary main points of analysis include the following points:

- Several interviewees have reported that inequities in access based on socio-economic background remain despite the formal commitment to equal access.

- There appears to be a difference between formal commitment and actual practice in terms of lifelong learning and non-traditional learners. For example, although the inclusion of non-traditional applicants is encouraged in Italy, a school leaving certificate is still required.

- Guidelines and measures for disabled students are not in place across all countries (e.g. France does not distinguish students at the stage of applications).

4.2. Admission systems and socio-economic inequalities

This section discusses the relationships between admission systems and equity in higher education. It first focusses on input elements, i.e. the socio-economic composition of the student population at the point of entry to higher education, and then moves on to discuss the role of admission systems with respect to output considerations, such as graduation and dropout rates.

Table 9 below matches a typology of types of admission systems, in addition how selective admission systems and school structures are (in light of Table 1), to general equity indicators. These indicators include entry and graduation rates, a composite index aiming to measure inequality in attainment to tertiary education, and the classification of countries according to Eurostudent's typologies of inclusiveness of higher education systems.

Table 9: **Comparison between system characteristics and indicators related to access and attainment**

Country	Admission requirements	Selection	School structure	Access indicators		Attainment indicators	
				Entry rates	System typology	Graduation rates	Inequality index
France	Secondary Leaving exam	Open	Select	n/a	Exclusive	n/a	48
Germany	Secondary Leaving exam	Open	Select	42.50%	Exclusive	30.00%	50
Italy	Secondary Leaving exam	Open	Select	49.10%	Transition II	32.00%	n/a
Slovenia	Secondary Leaving exam	Open*	Select*	76.70%	Transition II	29.00%	43
Sweden	Standardised aptitude test (SweSAT) and high school performance	Select	Comp	75.90%	n/a	37.00%	42
UK (England)	Secondary leaving exam & application form	Select	Mixed	63.10%	n/a	51.00%	47
Turkey	Entrance exams	Select*	Select*	40.10%	Exclusive	23.00%	n/a
Australia	Secondary leaving exams	Select	Comp	96.50%	n/a	50.00%	n/a
Japan	Multiple exams	Select	Select	50.70%	n/a	40.00%	n/a
USA	Standardised aptitude test (SAT) and application form	Select	Comp	74.30%	n/a	38.00%	n/a

Sources: Sargeant et al., 2012; OECD 2012: 67 and 348; Koucky et al., 2010: 31; Eurostudent, 2011a Entry and graduation rates for latest available values, namely 2010[49]

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[49] Entry and graduation rates defined p. 31. Graduation rate is measured as the percentage of graduates to the population at the typical age of graduation and extracted from the OECD (OECD, 2012:67). Entry rates are defined as entrants into tertiary type-A degrees (which are mostly research intensive), as a percentage of the population in the corresponding age group', including international students (2012:348). Inequality index only available for European countries. Data on entry and graduation rates missing for France. Eurostudent 2011a divides countries into four typologies: exclusive systems. Based on Eurostudent (2011a:1), there are four typologies of higher education systems based on students' parents' educational status: (i) exclusive system, with low education group underrepresented and high education with relatively high overrepresentation; (ii) transition system I, with low education group well represented, but high education with relatively high overrepresentation; (iii) transition system II, with low education group underrepresented, but high education with relatively low overrepresentation; and (iv) inclusive system, with low education group well represented, and high education with relatively low overrepresentation.

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4.2.1.   Admission systems and access indicators

Table 9 highlights the heavy data limitations that any analysis of the relationship between equity indicators and admission systems bear. It has already been noted in section 2.4 that the potential issues around appropriateness and reliability of existing data. Table 9 calls for a further note of caution in relation to the availability of data. The discussion that follows provides an analytical commentary of the descriptive statistics presented above, supported by existing literature and evidence from the case studies, while acknowledging such limitations. It does not attempt to draw hard causal inferences.

Table 9 does not provide evidence for a clear relationship between type of admission system and equity outcomes. It is however interesting to note that there is no evidence that countries with open access have a lower inequality level than countries with selective access in any dimension, displaying a similar – or in some cases worse[50] – performance than competitive systems across the various general indicators of equity. For instance, this paradox can be seen in France and Italy, where it has been underlined by an extensive literature (e.g. Caroleo and Pastore 2012; Galland and Oberti 2000) and by interviews with stakeholders recognising that systems in France and Italy do not necessarily support participation of students from disadvantaged backgrounds, despite being open. Among other factors, it has been noted how the financial support available for students from disadvantaged backgrounds in Italy only cover 60% of the requests[51] and that the French system does not have any mechanisms in place to take the effects of a student's social background into account.[52]

Conversely, selective systems, such as the ones present in Australia, the UK and the US, perform fairly well in terms of entry rates, although this remark is to be taken with caution since it has been highlighted that the recently introduced higher fees in the UK require corrective mechanisms not to deter those from lower socio-economic status from applying to higher education (Adnett et al., 2011; Boliver, 2013). According to Pechar and Andres (2011), some systems with level of selection at university (such as the UK) are typically more inclusive (even if they have greater income inequality) because education serves as a way to help individuals succeed in the labour market (Pechar and Andres, 2011).

The US system is instructive in this respect, as it has different types of institutions to respond to different socio-demographic needs. Community colleges typically have an open access policy for their two-year qualifications, and state universities are less selective than research intensive institutions. In addition, the private for-profit sector meets a perceived unmet need as budgets are cut for public institutions, whilst demand for studies increases. This for-profit sector also provides a flexible degree offer which can appeal to non-traditional (over 24 years old) learners (Douglass, 2012). Ivy league schools also have a tradition of needs-blind admissions, meaning that institutions such as Princeton or Harvard admit students regardless of their ability to pay. Upon admissions, the university would recommend a financial aid package, including a scholarship in some institutions or a mixture of loan and scholarship in others. In other institutions, students may combine a government subsidised federal (or commercial) student loan and/or work-study schemes. In addition, some of the most prestigious US

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[50]   For instance in terms of graduation rates.
[51]   Interview with Donatella Marsiglia, of the Italian Ministry for Education, University and Research.
[52]   Interview with Jean-Pierre Finance, of the French Conference of University Presidents.

institutions are comparatively much less selective than their continental equivalent. Princeton typically admits 7.4% of applicants, compared to 3% in the French *Ecole Centrale.*[53]

On the contrary, as noted at the beginning of this section, systems marked by open access are not immune from socio-economic inequalities, expressed as low entry and graduation rates as well as unbalanced socio-economic status of the student population. The Italian admission system is a case in point. The admission system is open to applicants with a secondary school leaving certificate (from any type of high school with any grade), the crucial requirement to access most degrees in the country. Further, the admission system has specific provisions to ensure some degree of protection for students from disadvantaged socio-economic backgrounds (such as waiving application fees). Yet, from an analysis of the socio-economic status make-up of the Italian student population, it emerges that students from poorer families are heavily underrepresented (i.e. a transition system II[54] in Eurostudent, 2011a:1). It is clear from this observation that admission systems *alone* do not have the capacity to correct for socio-economic inequalities. The issue of equity in access to higher education must be approached in a more holistic way, broadening the analysis to the processes, policies and incentives that unfold *before* admission, and those that are in place *after* admission.

Caroleo and Pastore (2012), using Italy as an example, show how access to higher education in an open system is heavily shaped by choices made by (or indeed for) students earlier on in their education career, namely choice of high school type. Nearly every student who attends a gymnasium goes to university, while enrolment in university programmes drops dramatically among students from technical and professional schools. They also demonstrate that the most important determinant of high school choice is socio-economic status, thus showing how a choice made by pupils and parents or the school at the age of 14 (influenced by socio-economic status) will, by and large, determine whether the young person attends university. The lack of a financial support system for students from disadvantaged socio-economic status at the point of entry is a further obstacle to widening participation to students from poorer backgrounds.[55]

In this respect, it appears important to move away from a discrete focus on single aspects of the higher education system (e.g. admission procedures, tuition fees), but instead to look at the whole education system as a continuum (from early childhood education and care through to higher education). If this approach is taken, it emerges that admission systems can contribute to widening access to higher education (e.g. in several case studies fees for the application process are waived to applicants from disadvantaged background), however they will tend to be successful only if other interventions are made before and after admission[56] (e.g. see Chowdry et al. 2010 on the importance of interventions earlier on in the education system, and Barr 2012b on the importance of student loans and grants to relax liquidity constraints and to widen access). Similarly, evidence from the US suggests that the essential groundwork for improving equity in access to higher education must take place in secondary schooling or

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[53] Data compiled from institutional websites. See Princeton university admissions' page: http://www.princeton.edu/admission/applyingforadmission/admission_statistics/ and Ecole central admissions' page: http://www.ecp.fr/home/Centrale-Paris/A_french_Grande_Ecole.

[54] See footnote 48 for a description of the Eurostudent typologies.

[56] In this respect, it was noted in section 3.5 that the cost of application is often negligible compared to the cost of tuition, suggesting that concentrating on a single element of the higher education system (e.g. the admission system) to understand broader features of the system (e.g. its equity) may be misleading.

earlier interventions which improve test scores, than at the point of admission to higher education. In the US, escalating secondary school academic standards have been claimed to reproduce inequalities for example (see Posselt et al., 2012), and it has been argued that affirmative action programmes should focus more on improving academic quality to increase incentives for underrepresented groups (Pastine and Pastine, 2012).

4.2.2. Admission systems and attainment indicators: why output data is also important to understand socio-economic inequalities in higher education

Gaining admission to higher education does not necessarily mean completing higher education, receiving a degree and progressing to further learning or employment. Admission systems are also important in their ability to predict a student's future academic success, thus providing a mechanism for matching applicants with the most appropriate degree programme that maximises their chances of graduation. The ability to predict academic success thus becomes a crucial element of a high quality admission system. This issue is discussed in section 5.3, which focuses on quality concerns in admission systems. However, some specific elements to the predictive ability of admission systems are crucially linked to equity, and these are therefore briefly discussed in this chapter.

The probability of receiving a degree is significantly linked to family socio-economic status in Europe. According to Koucky et al. (2010: 25), the probability of getting a degree for a student coming from the richest 25% of the population is around 75% (which goes up to approximately 90% for the richest 10% of the population), against 20% for students from the poorest 25% of the population.

The lower probability of graduation for students from disadvantaged backgrounds is the outcome of input and throughput processes. The former refers to the skewed socio-economic distribution of the student population at the point of entry; the latter refers to the fact that students from worse-off backgrounds are not only less likely to enrol in university, but are also more likely to drop-out during the course of their degrees (Quinn, 2013). Increasing graduation rates therefore is a central concern in achieving a high quality *and* equitable education system, which applies across countries. This concern appears even greater in those countries where dropout rates are higher and graduation rates lower, namely in open systems (typically, but not only, in Southern Europe).

The small number of case studies and the lack of fully comparable data at national level (Quinn, 2013: 56) call for caution when drawing overarching conclusions. However, the data presented above strongly suggest that open admission systems are often characterised by lower graduation rates. Three out of the four countries at the bottom end of the graduation comparison in our set of case studies (Slovenia, Germany and Italy) have open admission systems.

Oppedisano (2009) explains the higher dropout rates in open admission systems focussing on the role of information and developing a model of educational choice with uncertainty. Drawing on examples from Austria, Italy and France as open systems, and Finland, Ireland and the UK as selective systems, her framework shows open systems lead students to take university enrolment as the optimal choice because the system does not provide them with accurate information on their likelihood of success. In competitive systems, in contrast, this information is provided by means of secondary

school leaving grades and/or admission tests that are conducive to university admission. Thus, the crucial element – which has been traditionally missing in many open admission schemes – would seem to be the provision of accurate *ex-ante* information[57] to students that help them assess their own suitability for a specific degree and, hence, their likelihood of successful completion and graduation.

The case studies from the open system countries of our sample (e.g. France and Italy) show that recent reforms of admission systems have gone in the direction of providing more ex-ante information to students. This does not necessarily mean increasing the selectivity of entry to university, but rather giving students the self-assessment tools on the basis that they need to make better-informed decisions and choose degrees programmes in which they are likely to succeed. Providing more information to perspective students has taken the form of strengthened cooperation between high schools and universities towards pre-university orientation (in both France and Italy) as well as non-selective entry tests to provide students with an ex-ante assessment of their preparation for a specific course (in Italy).[58] These measures have been introduced or strengthened as part of the 2001 reform, which contributed to reducing dropout rates (Gitto et al., 2011; MIUR, 2011). Thus, the provision of ex-ante information to students before they enrol in university is a crucial element for an admission system to tackle dropout. This, in turn, is a central objective in terms of quality, since it is expected to increase the entry-to-graduation ratio, and equity, since non-graduation is a phenomenon that disproportionately affects students from disadvantaged backgrounds.[59]

4.3. Admission systems and specific groups of learners

In addition to addressing socio-economic considerations, admission systems may also play a role in favouring the inclusion of specific groups of learners. The remainder of this section discusses findings from the 10 case studies on how admission systems deal with the inclusion of non-traditional learners and students with disabilities in the higher education system.

4.3.1. Non-traditional applicants

Applicants who do not comply with the traditional path of entry to higher education (secondary education qualification) are more prone to concerns regarding 'fair' treatment within national admissions systems than traditional students.

Some non-traditional applicants may benefit from recognition of prior learning (RPL) to validate their skills and knowledge acquired through non-formal and informal learning and experience. Applicants may gain admission to, or even credits towards completion of, higher education programmes based on RPL. Over the past decade, the number of European countries introducing RPL for access to higher education has grown, so that today most have national RPL frameworks while at the same time allowing institutional autonomy in admissions decision-making. Higher education institutions in most countries

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[57] Ex-ante information refers to any potential information that an admission system is able to provide to a perspective applicant to inform his / her choice *prior* to application or enrolment.

[58] This issue is discussed further in section 5.1. For a summary of recent debates on how admission system may help reducing dropout in France, see Times Higher education, 2006.

[59] It should also be noted that individuals from disadvantaged backgrounds are less likely to have access to the same amount and quality of information that individuals from better-off background have. Thus, a crucial role for governments in higher education is precisely that of providing information, which is of particular relevance as far as admission systems are concerned. For a complete discussion on the grounds for government intervention in higher education in terms of provision of information, please refer to Barr 2012b: 305, 322-323.

have sufficient autonomy to recognise prior learning either for entry or advanced standing towards university awards (Eurydice, 2011: 24-26), but the approaches to recognising RPL for this purpose are neither universal nor uniform.

In Italy, RPL is used to give non-traditional students advanced standing with university credits towards their degrees (so-called 'laureare l'esperienza' programme, roughly translated to 'graduate work experience'). This allows non-traditional students to take fewer courses (and, hence, exams) than traditional students in order to complete a degree. However RPL does not form part of university admissions in Italy, as a school leaving certificate is still required.

Portfolio assessment is a frequently used method for recognising prior learning. Differences across assessors are similarly noted in the case of portfolio assessment, although assessors consider portfolio assessment as an accurate predictor of future performance (Brinke et al. 2009).

In Turkey, the Yükseköğretime Geçiş Sınavı score is sufficient for entering any two-year Associate Degree programme and for some bachelor degree programs. Since 2001, Turkish students who have graduated from vocational and technical secondary education schools can join Associate Degree programs related to their fields without examinations. They must apply at the Student Selection and Placement Centre (ÖSYM) in order to skip the examinations and then enter a program related to their field of secondary education.

Standardised tests have been used as a way to provide students with non-traditional paths into higher education. For example, in Sweden applicants who do not come from a traditional route can take the Swedish standardised test, SweSAT, to comply with entry requirements to higher education. This practice has however led to unintended consequences in the form of an inflation of qualifications, since students from traditional routes are also taking the SweSAT (Eurostudent, 2011b). A study of admission decisions based on RPL in Sweden recommends further improvements in order to become a more accurate predictor of future performance. The study shows significant differences between the admission decisions made by higher education institutions and those that experts in vocational education would have made (Stenlund, 2011).

Others with incomplete formal secondary education (often adults) may benefit from different pathways into higher education designed to widen participation and strengthen higher-level vocational skills for employment. In England and Wales, for example, the Access to Higher Education Diploma is equivalent to traditional secondary education qualifications (GCE A-levels). Delivered by further education colleges, access courses prepare people without traditional entry qualifications for study at university. The scheme is managed by the Quality Assurance Agency for Higher Education and local courses are validated through Access Validating Agencies, which protect the standard for the Diploma and secure public funding for courses across England and Wales. A study comparing the predictive power of the Access to Higher Education Diploma with other university entrance qualifications in Scotland found only marginal differences in the degree classifications awarded to students entering university with the Access Diploma and other non-traditional qualifications (Osborne et al., 1997).

In Germany there are several options beyond the secondary leaving examination (Abitur) for non-traditional students wishing to enrol in higher education. The *Abendgymnasium* is an evening school at which a general higher education entrance qualification can be obtained. Adult learners can also attend a Kolleg providing a three-

year programme leading to a general higher education entrance qualification. The *Schulische Hochschulzugangsberechtigung* (HZB) award can be obtained at vocational/professional schools that allow vocational education students to obtain general or a subject-related higher education entrance qualification (fachgebundene Hochschulreife), a subject-related higher education entrance qualification that allows students to study at university a particular subject or set of subjects only.

Associate degrees, covering the first two years of a three-year undergraduate degree programme, provide a third pathway into higher education for non-traditional students. Based on Associate Degrees offered by American Community Colleges, Foundation degrees in the UK are vocational qualifications delivered by universities often in partnership with further education colleges. Students who complete their Foundation Degree can progress into employment or onto the final year of a full Bachelor's degree, where they will graduate alongside others who entered university with traditional qualifications.

The creation and take-up of the plethora of alternative pathways into higher education plays an essential part in the 'massification' of university education and widening the participation of underrepresented groups. The maturity of these alternative pathways varies between Member States. Yet, all operate with restrictions set by national credit and qualifications systems (regarding equivalences between traditional and alternative pathways) or university admissions policies (regarding access to particular degree programmes via alternative routes, and how much credit that can be gained through RPL), or both. However, it is clear that non-traditional students across Europe have more opportunities to gain admission to university through these pathways than at the close of the last century. The challenge for higher education systems today is to ensure the growing number of non-traditional students who have been admitted progress to graduation and employment with the same certainty as those entering through more traditional routes.

4.3.2. Students with disabilities

The inclusion of students with disabilities within mainstream education, including higher education, is a relatively recent development for many EU Member States and internationally (OECD, 2003).

Driven by equal opportunities and non-discrimination legislation, and the move away from separate provision in special schools, higher education admission systems have responded by opening access and providing assistance to higher education students with disabilities, within the constraints of autonomous institutional admissions policies.

The case studies offer examples of such provisions, which entail measures strictly related to admissions as well as more general measures to assist the participation of disabled students in higher education. Such provisions are summarised in Table 10 and show the attention of universities and other actors in the higher education sector towards disabled students has been variable across countries.

Table 10: An overview of measures adopted towards disabled students across the 10 case studies

COUNTRY	MAIN MEASURES ADOPTED FOR DISABLED STUDENTS
France	Disabled students are not distinguished at the stage of admissions. Education assistants are provided to students and help students integrate into university.
Germany	Disadvantages in the admission procedure in the case of proven disability/illness can be compensated with adjusted time, or admission requirements can be waved.
Italy	Students with disabilities are entitled to exemption from the application fee and tuition fees and access to more extensive financial support. Each university has to appoint a delegate with the specific task to make the system more inclusive for disabled students. Universities created the National University Conference of the Disability Delegates in 2001 which brings together all the disability delegates to share information and best practices among universities.
Sweden	No specific measures at admission stage. After admissions, all universities are required to provide a defined minimum of facilities for disabled students.
Slovenia	Test papers for candidates with special needs are subject to the necessary adaptations. Faculties design action plans for improving the inclusion of disabled students and student tutors are appointed to take care of the students with special needs.
UK (England)	No specific measures at admission stage, though disabled students can contact specific course providers to assess whether the course meets their specific needs. Universities may implement various measures to accommodate disabled students, such as appropriate materials and alternative study arrangements. Students enrolled in higher education in England can apply to receive a Disabled Students' Allowance (DSA) through Student Finance England, to help with costs incurred through the disability.
Australia	Universities have a variety of schemes to address educational disadvantage, including that which derives from a disability, as part of the admissions process. Institutions have support services in place for students with disabilities.
Japan	Universities provide paper tests with braille and enlarged characters. Special venues and sheets are arranged for the entry tests, timing for examinations is extended and support staff are present throughout the examination.
Turkey	Disabled students have extended time for admission tests and different subgroups (e.g. deaf or blind students) get their own testing procedures including specific questions they have to answer in a different time frame
USA	Disabled students are protected by the Office for Civil Rights (OCR) of the Department of Education. The objective of the OCR is to eliminate discrimination on the basis of disability.

Source: Case study data collection reports

Although there is no strictly comparable data across countries for the specific groups of students discussed in this section, it does appear from the case studies that admission systems – albeit in different forms – have all shown a degree of attention towards

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opening up the higher education system to non-traditional learners and applicants with disability. For example, various European countries have set up measures to facilitate the access of non-traditional learners through the recognition of prior learning, or using standardised tests and several countries have measures in place for disabled students. Yet, several countries still only have small percentages of students entering higher education through an alternative route, with no student entering through alternative routes in Italy, and 2% in France (Eurostudent, 2011b: 32). In addition, some admission systems have a strong tradition of not differentiating between applicants, which prevents them from being able to compensate for disabilities, as is the case in France.

4.4. Summary

The analysis in this chapter points towards the lack of a clear correlation between equity in higher education and type of admission system. However it appears that an open system does not necessarily translate into an equitable system. Rather, it is suggested to move beyond a dichotomy 'open vs. selective admission systems' and to focus on the broader design of national education systems to understand why and how inequalities develop. It has been discussed that admission systems should also be concerned with output measures and that, in this respect, it seems crucial to design admission systems that provide students with accurate information prior to enrolment as a central policy measure to increase quality and equity of higher education systems. Further, the chapter also analysed measures in place to ease access to higher education for lifelong learning and non-traditional learners, as well as students with disabilities, highlighting how, despite significant measures in some countries, more could be done.

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5.   THE QUALITY OF ADMISSIONS SYSTEMS

This chapter focusses on how admission systems may contribute to quality in higher education.

Three areas in particular are touched on: first, the chapter discusses the findings from the case studies in terms of best practices in the management and administration of admission systems, with a particular focus on different types of cooperation between national actors and universities. Second, the chapter reviews an issue crucially linked to equity aspects, namely the ability of an admission system to predict students' future academic success. Third, the chapter turns to the timing of the application process and how that may contribute to the quality of admission outcomes and, more broadly, of the higher education system.

5.1. Strengths and weaknesses of each system in terms of quality

Table 11 below summarises the strengths and weaknesses of admission systems in terms of quality reported by case study researchers based on interviews and documentary analysis.

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Table 11: Strengths and weaknesses of admission systems in terms of quality

COUNTRY	STRENGTHS	WEAKNESSES
France	Independent agencies exist to evaluate the quality of higher education institutions as a whole.	Evaluation by independent agencies targeted at higher education degree rather than admission itself. High non-graduation rates.
Germany	Prognostic validity of system acknowledged by higher education community. Appeal procedure and due process in place.	Very early age differentiation, impeding on the ability to make reliable judgements on individual capability to study. Professional performance after graduation not predicted by the secondary school leaving certificate. Increase in multiple parallel applications and resulting transaction costs due to an inability to make predictive assumptions on application outcomes. High processing time: empty places sometimes only reallocated when the semester already started (a system-wide problem having increased over the last years).
Italy	National entry tests valid and reliable, although a potential self-selection bias to be taken into account. Improvement in quality of admission systems for free access degrees through non-selective entry tests and strengthened orientation from secondary school to university.	School leaving certificate may not predicting academic success (contingent on socioeconomic background). Late timing: Tests run very close to the beginning of the academic year. Little time left to students for 're-orientation' in case of failure.
Slovenia	Centralised design and administration of the secondary qualification *matura* increases objectivity. Appeal process in place. Fast enrolment process, students notified of the outcome within 2 months from application.	Prediction of academic success difficult because of lack of student personalisation during the enrolment process. High non-graduation rates.
Sweden	Appeal procedures in place. Reliance on high school grade as valid predictor of applicants' higher education success. Two rounds of the application process per year allow for a relatively quick turnaround and candidates selection, possible considerations of late applications. Online application system reduces candidates' workload and at the same time allows all universities to access the same documents.	Opportunities for higher education institutions to admit applicants outside the application process limited.

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UK (England)	All publicly funded institutions in the UK subject to review by the Quality Assurance Agency.	Voluntary participation of private institutions. Student complaints referred to the institution in question, and not managed by independent bodies.
Australia	Broad regulation of secondary school results and tertiary admissions rankings (ATAR) to ensure standards. Secondary school curriculum increasingly uniform.	ATAR score not necessarily indicative of success. Quality of overseas secondary education rose as a concern by one of the interviewees raising issues as to whether there should be a different approach to the admission of overseas students. Assessment schedules varying slightly from state to state.
Japan	Examinations are checked through a multi-layered process of quality assurance. The process is given substantial transparency through the media, with public disclosure of questions and answers after the test. The admission process is governed by national law to which universities must abide.	The recommendations system does not always and necessarily represent a measure of academic achievement, but may be influenced by other factors.
Turkey	Objectivity and equal opportunity provided by centralized admission system Procedures for the question bank constantly controlled and improved by ÖSYM.	Standardized multiple choice tests not sufficiently reflective of the performance of students. Universities not having direct influence on the admission process.
USA	Institutions have the possibility to personalise the admission requirements to maximise the likelihood of a good match between applicant and degree, based on the skills that will be needed to complete a given degree.	Institution-specific processes. Control mechanisms not mandated. In addition, application requirements time consuming to students because specific by institutions. Additional issues identified with regard to online courses, recruitment agents for international students, and the link between quality and affordability.

Source: Case study data collection reports

Table 11 underlines the following main features in terms of quality.

- A centralised management of admissions is perceived as a way to maintain a uniform nation-wide standard in countries where such a system is in place (despite the high administrative costs incurred by such systems).[60] Conversely, the need for control mechanisms has been noted in systems with a more decentralised admissions process, such as in the USA.

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[60] The management of applications is different from who makes the decisions regarding applications or set admissions criteria.

- In addition, several countries have measures in place to ensure the reliability and validity of admission decisions, through appeal procedures or independent agencies in charge of monitoring the overall quality of higher education systems.

- The difficulties of predicting the performance of students have been underlined in several countries.

- Timing and processing time appears to be an issue in some countries, with late admission processes implying difficulties in reallocating students.

The remainder of this chapter develops each of these three main features further.

5.2. The relationship between management of admissions and quality

The case studies point towards diverse arrangement across countries in relation to two crucial aspects of the admission process, both highly relevant to the quality of admission systems. The first aspect refers to the decision-making regarding admission procedures and requirements. The second aspect relates to the organisation and administration of the process. What inferences can we draw about the relationship between degree of centralisation and a high-quality admission system?

Several countries, such as Italy, France and Germany have opted for a progressive increase in the autonomy of universities over the last decade. This has been informed by the idea that universities can improve the quality of the admission system by devising admission criteria based on the likely factors needed to succeed in a specific university and for a particular degree, a judgement founded on the assumption that universities 'know best' which skills are most important to succeed in their own degrees. This judgement, although promoted in continental Europe, does not go without debate. The US congressional inquiry into admissions in 2010 suggests that some part of the higher education sector had to provide more accountability regarding their practices (United States Senate, 2012). In addition, centralised admission systems remain in several countries. In the UK, the UCAS system provides more homogeneity to a system where universities decide on admission procedures, criteria and applications.

Conversely, the Slovenian case highlights the problems related to an overly centralised and rigid admission system. Admission into Slovenian higher education is characterized by a lack of personalisation, due to the fact that the main admissions requirement, the matura, covers very general subjects, and there are no supplementary entry exams according to interviewees on the Slovenian case study. These limitations do not allow the admissions procedure to assess in other skills or abilities, causing students who underperform in their matura subjects to have a smaller chance of admission into their desired programme. The rigidity of the admissions system in recognising applicant abilities may result in mismatches between students and degree programmes and, as a potential consequence, high non-completion rates, as reported in Slovenia.

To solve such problems, several European countries have opted for the application of a basic principle of subsidiarity between central (e.g. Ministries of Education) and local actors (e.g. universities). In this scenario, governments are seen as best placed to set the framework conditions that guarantee a level playing field and to set the policy objectives that admission systems should pursue, while universities are seen as best placed to tailor the central framework and policy to ensure admission

guarantees as much as possible a good matching between the applicant and degree programme offered at their institution.

In terms of organisation and administration of the process, the evidence runs in a rather different direction. The admission system may be administered centrally (e.g. United Kingdom) or by single institutions (e.g. Italy). A centralised system may have fewer aggregate transaction costs to students. The British system provides an example through its centralised management system, UCAS, which is an online application tool that almost all universities have joined[61] that manages all undergraduate applications. According to the UCAS user satisfaction survey, UCAS has not encountered significant problems experienced by the applicants (UCAS, 2013). On the other hand, decentralised management has been accompanied in some instances by administrative failures and an inconsistent application of procedures in Italy.[62] In addition, certain systems have a dual application procedure, through centralised agencies and higher education institutions (e.g. Germany, France). This dual process may increase the transaction costs for students, who need to obtain information on the appropriate application procedure, and may introduce a duplicate administrative burden for higher education institutions themselves.

The development of a high quality application system may be achieved through independent quality assurance agencies, and by investing in the professional skills of the administrative personnel in charge of processing the applications and organising the admission process within the universities. The creation of independent agencies is growing in Europe, inspired by the establishment of the Bologna Process and the agreement of Bologna ministers to establish the European Quality Assurance Register.[63] The French created an agency for the evaluation for research and higher education, the High Council for the Evaluation of Research and Higher Education, in 2013.[64] The UK has a government regulatory agency (Ofqual, and its predecessors, as well as the QAA). The UK also has a body to promote good practice in admissions called Supporting Professionalism in Admissions (SPA).[65] SPA was established as a result of one of the recommendations of an independent review of the admission system to higher education in the United Kingdom carried out in 2004 (Admissions to Higher Education Steering Group, 2004). SPA is a capacity building body, which provides a variety of services to enhance the quality of the UK admission system. Southern European countries are also following the path towards increased accountability by means of external monitoring and evaluation. In Italy, an independent agency (ANVUR) was created in 2006 to ensure the quality of the university system, including its admission systems. In the US, independent organisations bring together institutions and professionals from the education sector (e.g. NACAC, founded in 1937).

Additional measures to ensure the quality of admissions include independent reviews of questions, as is the case in Japan and Turkey, in addition to appeal procedures in place in several countries, such as Germany, Slovenia, and Sweden.

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[61] It should be noted that joining UCAS is not mandatory.
[62] Examining the latest round of entry 'tests in September 2012, several press releases highlight how the implementation of entry tests has encountered technical problems across several universities, as flagged for instance by the National Students Union: http://www.unionedegliuniversitari.it/tante-irregolarita-durante-i-test-in-tutta-italia-unica-via-e-superamento-definitivo-numero-chiuso-al-via-con-i-ricorsi/.
[63] European Quality Assurance Register for Higher education, URL: http://www.eqar.eu/about/background.html.
[64] The agency evaluates higher education but does not cover admissions per say.
[65] http://www.spa.ac.uk/.

5.3. Admission systems as reliable predictors of students' achievements

A significant strand of the literature underlines the relative advantages and disadvantages of various modes of assessment in secondary education in their capacity to act as accurate predictors of applicants' potential and performance in higher education. Chapter 4 provided a discussion on how the predictive power of an admission system has important equity implications. Here the quality aspects of this issue are discussed, focussing on what the literature and the case studies show regarding the relationship between type of admission scheme and power to predict students' future academic success.

5.3.1. High school test and high school grade point average

High school tests appear as the least reliable predictor of students' performance (Geiser and Santelices, 2007), notably when these are general tests, not linked with the degree that the student intends to apply for. Some variations between the match in disciplines studied for tests and intended fields of study exist across Europe. For example, the Slovenian high school examination *matura* includes a range of general subjects leading to virtually any degree. This 'one-size-fits-all' approach casts doubts on the predictive power of the matura. The British A-levels include a level of choice based on what the course the candidate intends to apply to after secondary education, and hence is more tailored. But this greater flexibility in secondary qualifications does not necessarily means less demanding higher education admission systems, given that HEIs look for particular subjects instead.

A further issue connected to secondary school tests stems from their potential lack of comparability. This is particularly evident in federal states where regional governments regulate education (e.g. Germany, Australia and the US). The German case reveals how differences across regions raise issues of the comparability of secondary school leaving certificates. It is noted in this respect that regional provenance is effectively a determinant of success of admission to higher education because of the differences in grading at the state level (Braun and Dwenger, 2008).

High school *grade point averages*, conversely, are considered a better measure, in fact the best predictor of performance across four-year college outcomes in the US (Geiser and Santelices, 2007), more reliable than the sheer quantity of courses taken (credit accumulation) (Shulruf et al., 2009), and particularly effective for students who are socio-economically disadvantaged (Hoffman and Lowitzki, 2005). On the other hand, reliance on school performance over a number of years raises issues of comparability and objectivity in relation to such factors as a system's reputational issues, as well as the psycho-developmental issues as to how a young person copes with adolescence. The Italian case shows how an attempt made by the Ministry to include students' high school performance into the admission system to some degrees was not successful – and dismissed even before it was first actually implemented – because of comparability issues. So while there is agreement that grade point averages are more accurate predictors than tests, this prompts another set of problems, such as ensuring accurate and comparable information between students completing different high schools in different regions or areas of a country. Thus, policy measures to ensure that the factors behind 'similar' grade point averages in different high schools across a country also correspond to 'similar' levels of actual knowledge do need to be considered in conjunction with the introduction of grade point average into an admission system to higher education.

5.3.2.   Aptitude tests

Evidence with respect to the ability of aptitude tests to promote quality and equity in access to higher education is mixed. On one hand, Tiffin (2012) found that the use of aptitude tests could result in higher numbers of some, but not all, relatively disadvantaged students entering the UK medical profession, using the example of the use of the UK Clinical Aptitude Test (UKCAT) in medicine in the UK. In a similar vein, Konecy et al. (2011) find in a study on the Czech Republic that an admission system based on an aptitude test is more likely to deliver more equitable admission patterns as the role of students' family background would become relatively smaller.[66] On the other hand, evidence from Sweden shows that option requirements, such as the Swedish Scholastic Assessment Test, has increased class bias in higher education (Berggren 2007). Stringer (2008: 57) claims that '[t]here is no evidence to suggest that aptitude tests alone provide any more predictive power than curriculum-based tests alone', in a criticism of standardised tests.

5.3.3.   Single and multiple criteria admissions

Evidence as to the single 'best' admission system to university in terms of quality is mixed. The literature does however agree that a broad range of criteria to cover aptitude and preparedness may be a more accurate predictor of an applicant's eventual performance in higher education (Palmer et al., 2011). The portfolio approach, whereby a variety of means, such as secondary leaving exam, entry tests and aptitude tests mutually reinforce each other, also finds support from the case studies. As noted earlier, general secondary school leaving exams standardised at national level may not be accurate predictors of students' performance (e.g. Slovenia), resulting in high drop-out rates. A similar problem of high drop-out rates has been tackled in Italy by introducing more criteria for admission. This does not mean making the system necessarily less open or more competitive.[67] Rather, by introducing more criteria, the high school leaving certificate (which was the only component of the admission system[68]) has been accompanied by indicative entry tests. In other words, applicants take entry tests at university that, which even if they fail, do not prevent them from enrolling. However, a fail or a low score represents a warning that the applicant may not be suited for that specific degree. Thus, multiple criteria admissions tend to make the admission process better informed overall, ensuring higher predictive capacity. As discussed, this can be achieved without altering the national traditions of access to higher education, i.e., by providing more information to prospective students. It is not a comment on whether the system concerned is competitive or open. A similar trend, focussed on pre-entry orientation is also observed in France, with the aim of improving the availability of information and triggering better informed choices of applicants. The issue of strengthened pre-entry orientation and indicative entry tests link back to the importance of providing students with accurate ex-ante information to maximise the match between

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[66] The study compares the potential effects of a university admission exam model based on programme-specific knowledge and an alternative model relying on general study aptitude (GSA) in the context of a strongly stratified educational system with considerable excess of demand over supply of university education. Using results of the Sonda Maturant 1998 survey, it is shown that in the specific context of the Czech Republic, an admission exam model based on general study aptitude tests may improve the access of talented individuals with lower socioeconomic status to university education. The simulations show that with the GSA model (provided the model assumptions are met), the relative chances of an applicant with a university educated father would be only by one-fourth higher than the relative chances of a student with a less educated father, as compared to the more than a one-third difference in case of the model emphasizing programme-specific knowledge.

[67] Although it shall be noted that Alexandre et al. (2009) have advocated selective admissions in order to lower unemployment in Portugal.

[68] Excluding the degrees whose access is regulated at national level.

applicant and degree. This issue has been also discussed in section 4.2, because of its equity implications insofar students from disadvantaged backgrounds have generally access to less and worse quality information than better off students. However, there are also clear quality implications insofar the provision of more ex-ante information may play a role in improving the overall graduation rate.[69]

5.4. Timing of applications

A final issue concerns the timing of application, an issue closely related to the quality of an admission system. The cases demonstrate that there is a wide variety of practice in terms of the basic timeframe for application relative to the beginning of the academic year. In some countries, applications are mostly made shortly before the beginning of the academic year (e.g. Italy, Germany). In other countries, the process is multi-staged, entailing different steps across the year prior to start of the university (e.g. Slovenia, Turkey, US). In a third configuration, the system 'nudges' students to think about what degree to apply for well in advance of the actual enrolment to university (e.g., the UK). In this latter case, students in England select their A-level courses, which are the main route to university on average two years before their actual enrolment.

In both Italy and Germany, where the admission process occurs just before the start of the first undergraduate year, problems for both institutions and students have been documented. In the German case, students often submit multiple applications because of the uncertainty in the outcomes, thus leading, in case of multiple acceptances, to places being turned down. Such information is received by universities only at a late stage, resulting in vacant places either not being filled or filled only after the start of the academic year (Gewerkschaft für Erziehung und Wissenschaft, 2012). An analogous problem emerges in the Italian case, with respect to the admissions regulated by entry tests. Applicants take the tests and receive the results shortly before the start of the academic year and in case they fail the test, they only have short time to re-orient and decide what to apply for, resulting in likely sub-optimal choices.

Thus, as far as timing is concerned, countries experiencing problems that derive from late applications may consider moving the application processes to earlier on in the previous academic year. As long as applicants have the required maturity to emit preferences on their postsecondary education trajectory, and as long as there are pathways in order to favour a broad participation, this may be in the interest of both universities (in order to fill all available places) and students (translating into the incentive to think about their future degree earlier on, thus minimising the possibility of late, often sub-optimal, choice).

5.5. Summary

A dual admission system occurs in some European countries, with a centralised management of admissions, perceived as a way to maintain a uniform nation-wide standard, coexisting with a decentralised admissions' system where higher education institutions have more responsibilities.

If a system is more or less centralised, the analysis suggests that administrative capacity of the personnel handling the admission process should be an important and sustained

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[69] This discussion is informed by and reveals one of the arguments at the heart of the new economics of the welfare state (Barr, 2012b), where it is demonstrated how there may not necessarily be a trade-off between efficiency and equity, but rather these two policy aims may be simultaneously achieved.

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priority for a high-quality admission system, including the exchange of best practices through specialised agencies.

Regarding the ability to predict the performance of students, it emerges that multiple entry requirements, as long as they are not so numerous that they act as a deterrent, could provide a holistic approach to increase the predictive ability of admissions systems. It shall be noted that increasing entry requirements does not necessarily mean to increase the selectivity of a system, but it may include a number of other measures, such as non-selective entry tests that provide more and better information to perspective students.

Finally, timing has been underlined as a (growing) issue in some countries, including Germany and Italy, pointing towards the launch of admission processes well before the beginning of the academic year as a potential option to ease this problem.

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6. ENABLING MOBILITY THROUGH ADMISSIONS SYSTEMS

The issue of mobility has historically been of concern to the EU and its predecessors since the foundation of the European communities in 1958 (Corbett, 2005). The policy justifications have however changed from an early concern with mutual understanding in post-war Europe, to a concern largely driven by OECD in the 1970s and 1980s to contribute to economic growth and to the reduction inequalities of educational opportunity. The EU's interest at the time it launched the Erasmus programme was to prepare for the Single Market as well as strengthen cooperation and the European dimensions of higher education (Corbett, 2005; Teichler et al., 2011).

With globalisation, academic mobility has become a central feature of international competition (sometimes characterised as the 'Great Brain Race'[70]). The EU and the Bologna Process have both backed a target for much increased mobility both within Europe and internationally through the programme Erasmus + and Youth on the Move, part of the EU 2020 strategy for smart, sustainable and inclusive growth.

Despite the Erasmus programme, few of the EU initiatives target first entrants, even if case studies revealed anecdotal evidence of high levels of student mobility (particularly in some disciplines and some countries, such as the influx of medical science students from France to Belgium). Concern has also been expressed within Europe of unequal mobility flows between new and old Member States. Countries of origin risk losing future skilled labour, and some countries of destination worry about imbalances between the supply and demand for student places, and eventually labour market concerns.

But as the literature makes clear, mobility, including the mobility of first entrants, has benefits. These have been variously noted as increasing human capital, promoting growth and strengthening European identity and cohesiveness (Blumenthal et al., 1996; Teichler and Janson, 2007). Mobility is also likely to compensate for the demographic decline now evident in some European countries.

As much of the literature has noted, mobility facilitates the creation of networks and scientific diasporas, leading to an international 'brain bank'. A trend has been to argue that, student mobility is more about brain circulation than brain drain. Although little is known on mobility patterns, there is a high level of return migration (Cervantes and Guellec, 2002). In what can be seen as a virtuous circle, this return migration then contributes to the creation of international network, which add considerable economic value (Saxinian, 2007).

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[70] This term has been taken up in Wildavsky, B. (2010). The Great Brain Race: How Global Universities Are Reshaping the World. Princeton. Princeton University Press.

6.1. Strengths and weaknesses of each system in terms of mobility

Table 12 below summarises the strengths and weaknesses of each admission system with regard to mobility.[71]

Table 12: Strengths and weaknesses of admission systems regarding mobility

COUNTRY	STRENGTHS	WEAKNESSES
France	General frameworks and some bilateral agreements in place.	Uneven ability to recognise qualifications, difficulties with some EU countries.
Germany	Agreements and infrastructure for recognition of foreign qualifications in place. Reciprocal recognition of higher education entrance qualifications across German states.	Different application requirements for foreign students per degree course. Quotas for non-EU applicants Inbound mobility low compared to other large EU economies (e.g. France or UK). *Abitur* grades not compared across of Bundesländer. Administrative costs of multiple applications.
Italy	Full equivalence of any foreign secondary school leaving certificate, provided that the institution that releases the diploma is officially recognised in the issuing country for inward mobility. High school diploma certification released in foreign languages to ease the enrolment into foreign higher education systems for outward mobility.	Inward mobility: Entry tests are sometimes based to a considerable extent on notions that are specific to the Italian context (e.g. Italian literature) and acquired mostly in Italian high schools that foreign students are unlikely to know
Slovenia	Clarity of requirements.	Lack of information about possibilities for outward mobility. Additional application requirements for foreign students are a possible disincentive for foreign students. Vertical mobility difficult given *matura* as requirement for higher education.

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[71] See p. 31 for a definition of mobility and its different dimensions.

Sweden	Outbound mobility facilitated by English as secondary school requirement.	SweSAT available only in Swedish (apart from the section testing English language skills). Decrease in international applicants over the past year due to imposition of fees. Lengthy process of assessing international qualifications.
UK (England)	High inbound mobility.	Cap on student numbers applicable to EU students (as well as all students).
Australia	Highest percentage of inbound mobile students among case studies. International students' entrance assessed on individual basis. State-wide policy on out-of-state applicants. (Standardised state' selection ranks, a decision made by Australian universities and Tertiary Admissions Centres in concert with the Federal Government, except Queensland).	Low levels of interstate student mobility. No national policies concerning the admission of international students.
Japan	Promotion of the globalization of higher education by the Government.	Additional test: applicants' academic abilities and language skills tested through Japanese University Admission through International students (in addition to having obtained the required qualifications).
Turkey	Application of all relevant EU frameworks for recognition. Intra-state mobility aided by common requirement of centralised test.	Quotas for foreign students potentially hindering inward mobility.
USA	Vertical mobility common and standards for such transfers annually reviewed by some universities.	Horizontal mobility difficult because of recognition across institutions (but this is more of a problem for transfers when a student is already in a degree rather than for first entrants). Declining international mobility.

Source: Case study data collection reports

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Table 12 shows that frameworks are in place to facilitate the recognition of qualifications. The ease of recognition may vary and technical difficulties remain between some countries. In addition, implicit or explicit barriers to the mobility of international first entrants have been set up in various European countries. The examples in Table 12 concentrate on international mobility but barriers may also target EU applicants. European institutions may be informed by how interstate mobility takes place across federal systems, such as Germany, Australia and the USA, which have to handle student mobility across states.

6.2. Trends in inbound and outbound mobility

Student mobility is an increasingly common phenomenon within higher education globally (OECD, 2013). Tables 13 and 14 provide a general overview of mobility trends, in particular a comparison of inbound and outbound students since 2005. This data on inbound and outbound student mobility (measured as percentage of the student population, including all international students) is used as a proxy to understand applicants' mobility. In other words, the study assumes that the higher the percentage of mobile students, the higher the percentage of mobile applicants. The objective of this approximation is to provide an insight into mobility patterns, rather than to draw inferences (which would require further and more tailored data).

Table 13:   Inbound mobility

YEAR	2005	2006	2007	2008	2009	2010	2011	%CHANGE
France	10.81	11.24	11.32	11.25	11.47	11.58	11.87	9.78
Germany	n/a	.n/a	n/a	n/a	n/a	n/a	7.52	
Italy	2.23	2.42	2.82	3.39	3.27	3.53	3.74	67.76
Slovenia	0.97	0.95	1.03	1.18	1.78	1.68	1.84	90.25
Sweden	4.68	5.04	5.35	5.57	6.40	6.93	7.88	68.40
Turkey	0.86	0.81	0.78	0.80	0.75	0.73	0.82	-5.47
UK	13.92	14.13	14.88	14.67	15.28	15.73	16.85	21.06
Average	**5.58**	**5.77**	**6.03**	**6.14**	**6.49**	**6.70**	**7.22**	**29.37**
Australia	17.28	17.76	19.52	20.63	21.47	21.25	19.83	14.77
Japan	3.12	3.19	3.12	3.21	3.40	3.69	3.90	25.18
US	3.42	3.34	3.36	3.42	3.46	3.35	3.38	-1.19

Source: UNESCO data centre

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Table 14:   Outbound mobility ratio[72]

YEAR	2005	2006	2007	2008	2009	2010	2011	% CHANGE
France	2.24	2.42	2.50	2.12	2.43	2.54	2.60	16.15
Germany	n/a	n/a	n/a	n/a	n/a	n/a	4.10	n/a
Italy	1.90	1.67	1.73	1.77	1.98	2.23	2.40	26.26
Slovenia	2.42	2.06	1.98	2.04	2.18	2.17	2.39	-1.16
Sweden	3.12	3.16	3.33	3.40	3.49	3.41	3.51	12.63
Turkey	2.48	1.49	1.52	1.65	1.63	1.41	1.33	-46.31
UK	0.99	0.98	1.05	0.92	0.96	0.98	1.08	8.83
Average Europe	**2.19**	**1.96**	**2.02**	**1.98**	**2.11**	**2.12**	**2.49**	**13.48**
Australia	0.92	0.94	0.95	0.87	0.85	0.83	0.82	-11.17
Japan	1.59	1.45	1.37	1.29	1.17	1.05	0.93	-41.80
USA	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Source: UNESCO data centre

Table 13 indicates that European countries in the study have had a larger increase in inbound mobile students from 2005 to 2011 than Australia, Japan and the USA. They also have one of the highest outbound mobility percentages at 2.49% in 2011, and a positive increase in outbound mobility, conversely to Japan and Australia, which could illustrate intra-European mobility flows.

However new uncertainties have arisen with global competition and unexpected rigidities connected with the Bologna Process (De Wit 2012; Teichler 2007). There are also uncertainties as to the state of the law on mobility and non-discrimination, resulting from European Court of Justice rulings in response to pleas from governments, which have seen an influx of would-be medical students to a point which has overwhelmed their systems. As a result, Belgium can limit by decree the number of foreign students to 30% in light of the high influx of students from neighbouring countries.

This influx is particularly relevant in certain disciplines such as medicine, where students aim to benefit from more favourable graduation conditions in Belgium (Garben, 2012).[73] In a move as yet untested in the Courts, Scotland is discriminating against English students, even if applicants from England classify as European Union students (Marsden, 2013).

The Dutch Ministry for Education attempted to restrict the access to financial aid of German students last year, but was overruled by a ruling by the European Court of Justice (in Case C-542/09; European Court of Justice, 2012). These add to the European Commission's long established concern with such obstacles to mobility as quotas.[74]

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[72] Inbound mobility is defined as the number of students from abroad studying in a given country, expressed as a percentage of total tertiary enrolment in that country, UNESCO glossary, URL: http://www.uis.unesco.org/Pages/Glossary.aspx?SPSLanguage=EN.

[73] A series of ministerial decrees over the past years has extended the 'non-residents' decree of June 2006 to various health sciences included medicine and dentistry. For more information, see Marcourt, 2013.

[74] For a review of these rulings, see Myklebust, 2013.

6.3. Admissions as a regulating mechanism

In some cases, admission requirements are used as a way to regulate these mobility flows as students exploit the possibilities of the market to gain entry to systems which may rank high in reputation or conversely seem the least stringent. Barriers to the admission may be erected by either higher education institutions or by specialised agencies. Recognition may also depend on bilateral or multilateral agreements.

In Japan, the comparatively low percentage of inbound mobility may be due to various factors, for example the complexity of learning the Japanese language. But the rigorous steps related to university admissions imply that international students do not get their qualifications recognised without having to go through Japanese admission procedures. University admission requires three exams and five steps in Japan.[75]

Many European countries require three stages of applications for an international student, including an application form, the evidence of an equivalent diploma and an additional language test. For example, in Germany, entry requirements include a qualification such as the Test for Academic Studies, or an assessment test the SAT/ATC scores, in addition to language proficiency tests (Deutscher Akademsicher Austauschdienst, 2013).

Additional barriers may exist for EU students even within the EU. Apart from language requirements, university admission tests may include knowledge requirements, which are very nation-bound (e.g. for example Italian tests sometimes require notions of Italian literature and history that are highly tied to Italian secondary education) making it more difficult for foreign students, as opposed to domestic students, to gain admission.

6.3.1. Facilitating inter-state transferability in the EU: what comparisons teach us

Under EU law, the admissions procedures for European Union applicants are, as stated earlier, the same as those for national applicants. However EU applicants' grades typically need to be converted. For example, the German Central Office for Foreign Education (ZAB) issues recommendations for the evaluation of foreign university entrance qualifications.

Facilitating the mobility of applicants requires three properties:

- Qualifications acquired abroad have to be comparable to national diplomas;

- These qualifications have to be recognised and transferable;

- Students need to be able to carry these qualifications with them; i.e. they need to be portable.

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[75] Admission requirements in Japan include an integrated standard entrance examination (Gakuryoku Siken), recommendation letters from lower secondary school principals and the admission office examination, a result of the Examination for Japanese University Admission for International Students (EJU), an English language examination (TOEIC or TOEFL) and an interview.

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6.3.2.   The transaction costs of European applications

Applicants who wish to access information on admissions can find information through the European website *Study in Europe*,[76] in addition to national agencies, institutions themselves and information bodies, such as the Centre for Studies in France (CEF), agencies based in embassies which aim to diffuse information regarding studying in France.

But the applicant still needs to fill in several applications if he or she wishes to apply in different Member States. This can result in high transaction costs for the admissions system itself, an overload of the admissions system (especially when quotas are applied as is the case in many European countries) or potential information asymmetry resulting in imbalances. Indeed, if students apply and are admitted to several universities across Europe, the universities that the student does not go to may not be informed of his/her decision not to attend, and hence have empty places.

There is anecdotal evidence but no data available to understand the patterns related to multiple applications among international applicants. In general, the practice of filling in several applications appears relatively common in Europe and beyond. For example, applicants in France typically register for five or six institutions. College applicants in the US typically fill in at least seven applications in 2010 (National Admissions for College Admissions and Counselling, 2011).

In addition, there is also evidence that multiple applications may occur among mobile students. The creation of a service in the UK for British and Irish students, which supports up to eight applications abroad,[77] suggests that multiple applications may be a common trend in international applications. Multiple applications and subsequent admission of the same applicant to multiple universities/degree courses can create delays in the wider system and also lead to study places not being allocated as reported in the case of Germany.

6.4. The absence of European-wide coordination initiatives

In compliance with the Treaty on the Functioning of European Union, which states that higher education is a matter for subsidiarity and the principle of university autonomy, there are no Europe-wide initiatives based on admissions for mobile students. But there are European initiatives that relate to recognition; notably, the European Qualifications framework and the ENIC-NARIC network and the Lisbon Recognition Convention.

Neither the US nor Australia, comparable in scale, have centralised admissions schemes either. In the case of the US mobility is comparatively modest in relation to the total student population, but it is a large figure in absolute terms. In Australia, where inbound mobility is proportionately high, it is managed not by central government but by state level authorities, such as the Victorian Curriculum and Assessment Authority. This authority issues a converted Tertiary Education Rank.

Various Europe-wide initiatives exist at the level of higher education, in compliance with the principle of university autonomy and intergovernmental initiatives. Two of these initiatives include the European Qualifications framework and the ENIC-NARIC network.

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[76]   See http://www.studyineurope.eu/.
[77]   More information available at http://www.eunicas.com.

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6.4.1. The European Qualifications Framework

The European Qualifications Framework, adopted in 2008, promotes the transparency of procedures for the benefits of individuals and for employers.

The EQF has eight reference levels describing what a learner knows, understands and is able to do – 'learning outcomes'. Levels of national qualifications will be placed at one of the central reference levels, ranging from basic (Level 1) to advanced (Level 8). The Bucharest communique encourages the use of level 4 as the equivalent of school leaving qualifications (European Commission, 2008). The European Qualifications Framework is closely related to its Bologna process equivalent, the Qualifications Framework for the European Higher Education Area.

The European Qualifications framework and the Bologna Qualifications Framework for the EHEA provide a meta-structure for national qualifications' frameworks. The frameworks do not lead to an automatic recognition of qualifications, but in principle they facilitate the comparability of levels of qualifications. The practical difficulties are great, and the Bucharest communique attempt to tackle these. For example the French national qualifications' framework has five levels while the British qualifications framework has 12 levels.

6.4.2. The ENIC-NARIC Network (European Network of Information Centre and National Academic Recognition Information Centres)

The ENIC-NARIC Network[78] was created by the Council of Europe; UNESCO and the European Commission as a consequence of the Lisbon Recognition Convention of 1997and building on the NARIC networks established by the European Commission in 1984. Today the network is composed of 55 ENIC-NARIC centres. The networks aim to improve academic recognition of diplomas and periods of study in the Member States of the European Union, the European Economic Area (EEA) countries and Turkey. There is a NARIC centre in each member country, to assist students to be mobile and have their diplomas recognised. Most NARICs do not take a decision, but offer on request information and advice on foreign education systems and qualifications. For example, the French ENIC-NARIC centre issues 'comparability statements' at an applicant's request. These comparability statements can be considered as expert advice, though this document is not binding or necessary to pursue studies. The document facilitates transparency and can be shown to employers, authorities organising competitive examinations or education and training institutions. The French ENIC-NARIC, using evaluation criteria which comply with the Lisbon Recognition Convention and the ENIC-NARIC Charter, uses a grid of 10 criteria developed by a French ENIC-NARIC working group comprising major stakeholders in higher education according to Elizabeth Zamorano, executive assistant to the Director of ENIC-NARIC in France.

Some interviewees maintain that there is an insufficient level of coordination and communication at the Member State level between recognition agencies and higher education institutions. Admissions' agencies and units do not have any platforms to exchange best practices. Although they face similar challenges related to the 'massification' of higher education, they use different methods to control for equity and quality across Europe.

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[78] More information available at http://www.enic-naric.net.

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A project funded by the EU[79] on the awareness and use of qualification frameworks and other mobility tools by stakeholders such as employers, administrations and education and training institutions shows that in practice a lot of communication is still necessary among ENIC-NARIC centres, higher education institutions and providers, administrations and employers. The work of ENIC-NARIC centres and best practices on recognition are still unknown in most of the countries which participated in the study (Belgium, Croatia, France, Italia, Latvia, Lithuania, and the Netherlands), according to Elizabeth Zamorano.

6.4.3. Other schemes

Some Member States are also engaged in a pilot experiment on mutual recognition, following a proposal made by the European ministers of higher education in the Bucharest communiqué of the Bologna Process (Bucharest Communique, 2012).

There are also efforts to promote best practices among agencies. For example, the European registry for quality assurance agencies (EQAR), lists quality assurance agencies that higher education institutions can use for accreditation and quality assurance independently of their location.

Some interviewees mentioned the European Lifelong Guidance Policy Network (ELGPN), which aims to promote the cooperation regarding guidance services regarding lifelong learning.[80.]

6.5. International comparisons on the coordination of admissions

Coordination initiatives at the European level can have different purposes. These initiatives can have:

- A policy-base in order to promote the coordination of admission policies;

- A diffusion objective aiming to diffuse information;

- A technical objective aiming to facilitate the admissions procedure across Member States.

This section develops these different forms of coordination, by providing an analysis of the coordination mechanisms on mobility in Germany, Australia and the USA. These three systems represent three options regarding the regulation of inter-state mobility while broadly sharing some similar features to the European Union. That is, decisions on admission lie in principle mostly with autonomous higher education institutions, but the regulation of admissions falls under different regulatory regimes. While admissions are handled by universities themselves in the US and Australia, admissions fall under different regulatory regimes in Germany. Some degrees are regulated by the state under paragraph 27-35 of the federal law *Landeshochschulgesetz*. State legislation can also restrict the number of incoming students by quota.

The three federal entities facilitate mobility by having forms of coordination, at the policy or technical level (in order to facilitate coordination).

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[79] The results of this project will be presented to the European Commission in December 2013.
[80] http://www.elgpn.eu/about-us.

6.5.1. Policy coordination

These three systems have different degrees of policy coordination. The federal ministries do not have significant responsibility in admissions, and state ministries have varied competencies. In Germany, the Standing Conference of Ministers of Education and Cultural Affairs (KMK) coordinates Ministers at state level. The German Rectors' Conference (HRK) coordinates the position of rectors. And the Australian Vice-Chancellor's Committee (AVCC) provides a platform for heads of universities to adopt common positions. In the US, professional associations such as the NACAC (National Association for College Admission Counselling), which typically involve a pay for membership, assumes a coordination role. In the UK, the British agency Supporting Professionalism in Admissions (SPA) also provides a national platform to facilitate the exchange of best practices among admission professionals.

6.5.2. Technical coordination of applications

Different modes of coordination exist in order to manage student applications.

A decentralised model, admissions left to the responsibility of universities: the US case

The recognition of qualifications is the responsibility of universities in the US, where admissions are granted based on application forms and essays. This system of recognition requires a strong infrastructure. For example, 90% of all transfers at the University of California, the equivalent of 17,000 students, are from community colleges. University of California analysts cover all courses at 112 community colleges on an annual basis, with the guidance of campus faculty in order to facilitate transfers across most academic courses.

Only 10% of the undergraduate population is made up of non-residents students (potentially from other US states) in the US; and typically pay higher fees than national students. Finally, international students may have to undertake a standardised test (Standardised Admissions Tests (SAT) or American College Testing (ACT)) in addition to their application form and essay.

Regional management based on federal student ranking: the Australian case

In Australia, a nation-wide comparison of students is provided through a centralised admissions system called Australian Tertiary Admissions Rank (ATAR). The ATAR scores are the average of the raw examination and the moderated school assessment mark for each of the student's course. Each student is then ranked in percentile based on these scores. Although each state calculates his own ATAR score, there is a high level of commonality in the underlying principles but some difference in the way the ATAR calculation is performed, which facilitates comparability. The ATAR scores are issued and managed by regional university Admission Centres.

A multi-layered system based on centralised and decentralised admissions: the German case

Figure 3 summarises the application process in Germany.

Figure 3:   Admissions system in Germany
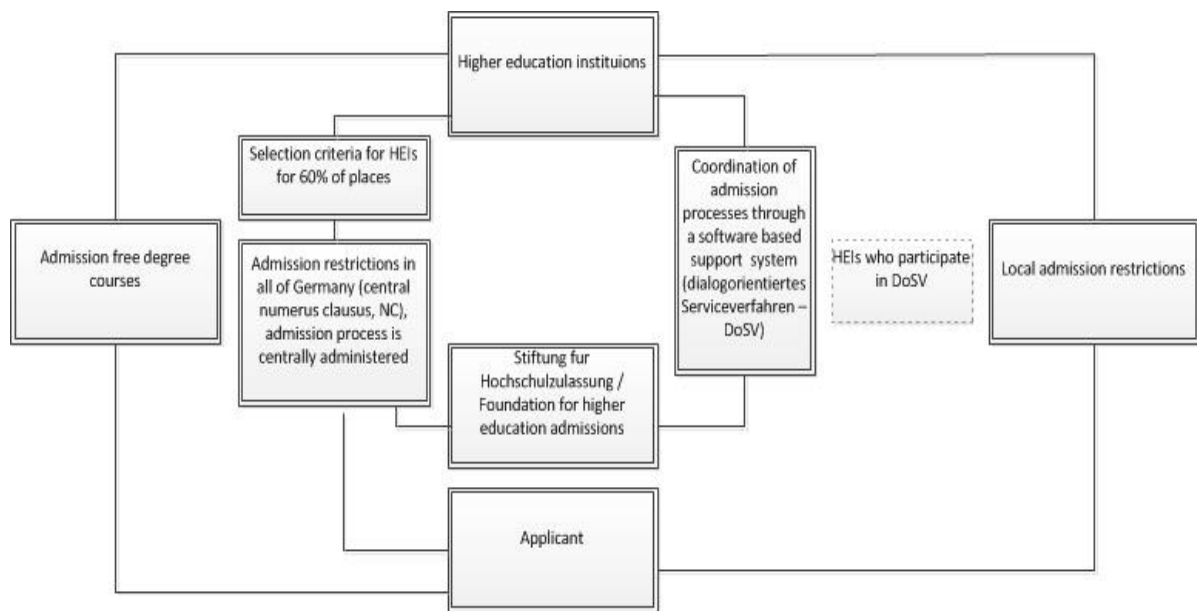
In Germany, applicants have the option to research a degree course and identify which of the optional admission process apply using for example the central database *Hochschulkompass.*[81] This central database helps applicants identify the courses he would like to apply to, the preferences that they have and the regime applicable to them. The clearing house (Foundation for Higher Education Admissions)[82] manages certain courses, namely those with a quota decided nationally or locally. Universities manage admissions for some courses (Kübler, 2011). Foreign (non-EU) applicants may apply directly to universities.

The central clearinghouse also allocates all available seats at public universities in medicine, dentistry, veterinary medicine and pharmacy; these disciplines having a *numerus clausus*.

6.5.3. Coordination of information

An information portal for applications in the European Union already exists in the form of Study in Europe. Information on degree courses and optional admission processes is available in Germany through *Hochschulkompass.* The French website *Admission Post-Bac* provides this information in France, and the British UCAS, is an information platform bundled with an application portal in England. This is similar to the role of the University Admissions Centre in Australia.

6.6. Summary

In this chapter, different models of coordination of admissions across states were analysed in order to further conceptualise potential EU-wide support structures to make mobility both more widespread and more efficient, given that there is significant mobility within European countries and increasing number of international students. Two problems at the admission stage potentially need to be addressed: one is the concern of the national barriers to mobility. The other is the transaction costs, which occur when students make multiple applications. It is notable that there is not an EU-wide support service, although there are some pioneering national examples.

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[81]   More information available at http://www.hochschulkompass.de.
[82]   In German, this Clearling house is called *Stiftung für Hochschulzulassung.*

7.   CONCLUSIONS AND RECOMMENDATIONS

7.1. Conclusions

This study has looked at the admission systems for entry to higher education in selected countries of the European Union, and a large candidate country (Turkey) and 3 international countries for comparison (Australia, Japan and the US).

The study shows that the distinguishing features of European admission systems include a reliance on secondary education qualifications as a main requirement for entry into higher education, a widespread tradition that access to higher education is a right, and the relative centralisation of the management of admissions and of decision-making. However, this centralisation is in the process of being modified with the increasing trend to give more autonomy to universities. This study has not sought to rank the admission systems of the countries since the output measures used for comparisons can be attributed to factors other than admissions, such as, for instance, the changes which occur during the course of the higher education experience. What the study has been able to do is to produce general findings related to equity and quality of admission systems, and the capacity of admission systems to encourage mobility, and as such, which characteristics point to further policy work.

In terms of the capacity of admission systems to promote equity, the study has pointed out the difference between equality of access and equality of opportunity, concepts which typically have been seen as synonymous in open access systems. It finds that although socio-economic differences are reflected in access and attainment rates in all systems, there is inconclusive evidence regarding the suggestion that open systems may be more equitable than the selective systems, as traditionally thought. Certain open systems have low graduation rates. Some of these open systems also make the recognition of prior learning difficult. A general problem, and particularly important for systems with low completion rates, is the lack of appropriate information for students prior to making their higher education choices. This has been shown to favour increased attainment rates in some studies, the key factor being that students may be helped to courses best related to their abilities.

In terms of the capacity of admission systems to promote quality, this study shows that many of the European countries included in the study are undergoing reform, another consequence of the move to more autonomy for universities. More countries now operate with a dual system in which universities have some control over admissions but within governmental guidelines relating to criteria for selection. The study finds that support services operating in systems where universities have traditionally had the responsibility for admissions offer some suggestions for better practice in the future. The systems in which higher education institutions historically have had more autonomy have seen the emergence of professional associations and platforms to exchange experience. The move toward multiple admissions' criteria has also been regarded as a success, as in Sweden, in facilitating a holistic approach and to ensure that admissions criteria represent a valid reflection of a student's performance.

In terms of the capacity of admission systems to promote mobility, the study shows that mobility is a significant issue for admission systems. The European countries of our study have higher rates of mobile students that higher education institution in the US, Japan and Australia, and rates have been increasing since 2005. The study also shows that

increased mobility has put such pressures on particular courses in particular countries, and that some barriers to student mobility have been put in place, in some cases with the support of European law. The study provides some evidence that mobility at the level of first entry can be hampered by the high transaction costs for students and institutions. While some countries have experimented with ways of reducing these transaction costs by creating special platforms, there are no European-wide support mechanisms at present. The European Union is however empowered to support cooperation between Member States in order to foster mobility and enhance the quality of admission systems.

7.2. Recommendations for European institutions

In light of the evidence of this study, the following recommendations are presented to the European Parliament.

Certain trends in higher education, including the development of courses in English around Europe and increasing student mobility, make it more urgent to see what can be done to streamline admissions throughout Europe.

Yet, aiming to create a unique EU-wide admissions system would currently be neither politically realistic nor legally possible within the existing state of EU law. To centralise present practice would imply a degree of harmonisation between Member States contrary to the subsidiarity provisions of the Treaty on the Functioning of the European Union (Article 165). Admission systems are deeply rooted within the respective higher education and legal context of each member state, and as such an expression of the culture of these countries (Teichler et al., 2011). The understandings of an admission systems range from the strong legal interpretation of the right to education, in Germany's case Article 12 (1) of the German Basic Law (Grundgesetz), and the equally strong interpretation in non-selective countries such as France and Italy of access to all who are qualified by virtue of success in secondary school examinations. The UK (including England Wales, Scotland, and Northern Ireland) in contrast follows a convention known as the Robbins principle open to interpretation by each university, based on its elite or non-elite status. This convention simply refers to access to higher education as available to all who are 'qualified by ability and attainment' (Committee on Higher Education, 1963).

However, based on the evidence presented here, there is a case for the European Union contributing positively to supporting the mobility of first entry students. Potentially there could be three courses of action open to the EU:

- Maintaining the baseline;

- Facilitating information regarding admissions through a European registry;

- Providing more support to national admission bodies in the recruitment of EU students through a European-wide service.

These actions would depend on the voluntary participation of Member States, their agencies and higher education institutions, and as such are compatible with the TFEU. The first course of action is cost neutral for European institutions. The following two possible courses of action imply some administrative set-up costs.

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7.2.1.   Option 1: the baseline

Under the present European system, cross-border applicants need to navigate very different admissions systems each with its particular deadlines and procedures, procuring information either through the individual institutions or through national agencies.

Implicit in the baseline are transaction costs of the application process which potentially diminish the attractiveness of European higher education for would-be mobile students. A student wishing to study in another state, or in several states, may be incentivised to reduce these transaction costs by seeking systems which are highly visible, thereby increasing asymmetries in mobility flow across Europe. Transaction costs also arise for the bodies responsible for admission systems. Students filling in multiple applications and receiving several admissions may burden the system.

Hence, national governments should be invited to evaluate how many applicants apply to several Member States and the transaction costs of these multiple applications.

European initiatives exist but remain limited. The ENIC-NARIC network performs a valuable function related to information about recognition practice, but has no competence related to admissions. There is no platform for national admissions agencies to communicate across Europe.

7.2.2.   Option 2: A European Registry of National Admissions Agencies and Units

It would be possible for the European Union to facilitate the exchange of admission information through a European registry of national admissions agencies with procedures designed for professionals. Examples of relevant agencies are admissions agencies and agencies responsible for the recognition of international qualifications.[83] The main purpose of the registry would be to exchange information and best practices on the admission of mobile students, in order to strengthen cooperation between Member States. The cross-country learning which would follow would also be relevant to future policy thinking relating to equity and quality in admissions. The objective of the registry would be to lead to a better understanding of qualifications in other countries and facilitate the exchange of practices on admissions, in order to promote equity and quality in admission processes, and issues around best practices in admissions in Europe.

Hence the setting up of a European registry for admissions agencies and relevant units would fit in with a European tradition of diffusing best practice. The list of relevant agencies is listed in Table 15 below.

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[83]   As mentioned earlier, information platforms for students already exist, in the form of Study in Europe. More information is available at http://www.studyineurope.eu/.

Table 15:   List of admission agencies

COUNTRY	ADMISSIONS AGENCY	MOBILITY/INTERNATIONAL AGENCY
France	Admission Post-Bac	Centre Education France (CEF); Centre international d'études pédagogiques (CIEP)
Germany	*Stiftung fur Hochschulzulassung.*	Central Office for Foreign Education (*Zentralstelle für ausländisches Bildungswesen - ZAB*)
Italy	MIUR (no specialised admission agency)	Information Centre on Mobility and Academic Recognition (CIMEA)
Slovenia	National examination centre	Centre of the Republic of Slovenia for Mobility and European Educational training programmes (CMEPIUS)
Sweden	National Agency for Services to Universities and University Colleges	University admissions
UK (England)	Universities and Colleges Admissions Service (UCAS); Supporting Professionalism in Admissions (SPA)	ECCTIS
Australia	Regional Tertiary Admissions centre	Australia Education International
Japan	National Center for University Entrance Examinations	Japan Student Services Organization (JASSO)
Turkey	Student Selection and Placement Centre. (ÖSYM)	Council of Higher Education (YOK)
USA	National Association for College Admission Counselling (NACAC)	Education USA

Source: Case study data collection reports

These agencies, in particular those from the EU, could take part in the registry along with similar agencies of other EU Member States.

This option would require national government to be open to encouraging collaboration among admission agencies and to encourage the diffusion of relevant information regarding admission agencies.

7.2.3.   Option 3: A European Clearinghouse for Admissions

A German expert interviewed for the study, Dr Ulf Bade from the Stiftung für Hochschulzulassung, has similarly suggested an effective cross-border technical support service, similar to the German optional central service for admission processes (dialogorientiertes Serviceverfahren - DoSV). In his experience such services only work effectively for particular cross-border issues and under particular conditions. Capacity planning would remain on the national level while the cross-border clearing house would allow for the coordination of multiple admissions' decisions across states for the same applicant. This would lead to a swifter and more efficient allocation of study places. The main value added of the support service would be to reduce the transaction costs of

several applications for students wishing to apply to several institutions across Europe. This support service would also reduce transaction costs for institutions, which would be informed in a timelier manner of the applicant's decision pending the returns on his other choices. A coordination of admissions might be a suitable solution, in particular for higher education institutions that have cross-border cooperation and offer common degree courses.

This European support service could be introduced and administered independently from national admission systems and without any need for the harmonisation of existing admissions systems. The use of the service by higher education institutions would be voluntary. An institution would decide whether or not to opt in to the proposed European clearinghouse. The support service would also be a valuable source of information relevant to admissions. If the function of the clearing house is to compare qualifications and find equivalence points (rather than provide a normalised assessment of applicants), the clearinghouse could provide equivalences to qualifications using the European Qualifications Framework. It could help to convert the diploma or academic performance in high school according to equivalent of country of destination. Several options exist for this conversion. For example, the clearing house could convert student performance based on grade distribution (as is the case for the European Credit Transfer System with general performance brackets). This practice already exists in Australia, where, as described in Chapter 6, the grades of foreign students are converted based on the applicant's position within the distribution of applicants' performance, using the Tertiary Entrance Rank corresponding to the course chosen). This support service could reduce the transaction costs related to applications.

Figure 4: A suggested information portal and support service for higher education admissions in Europe
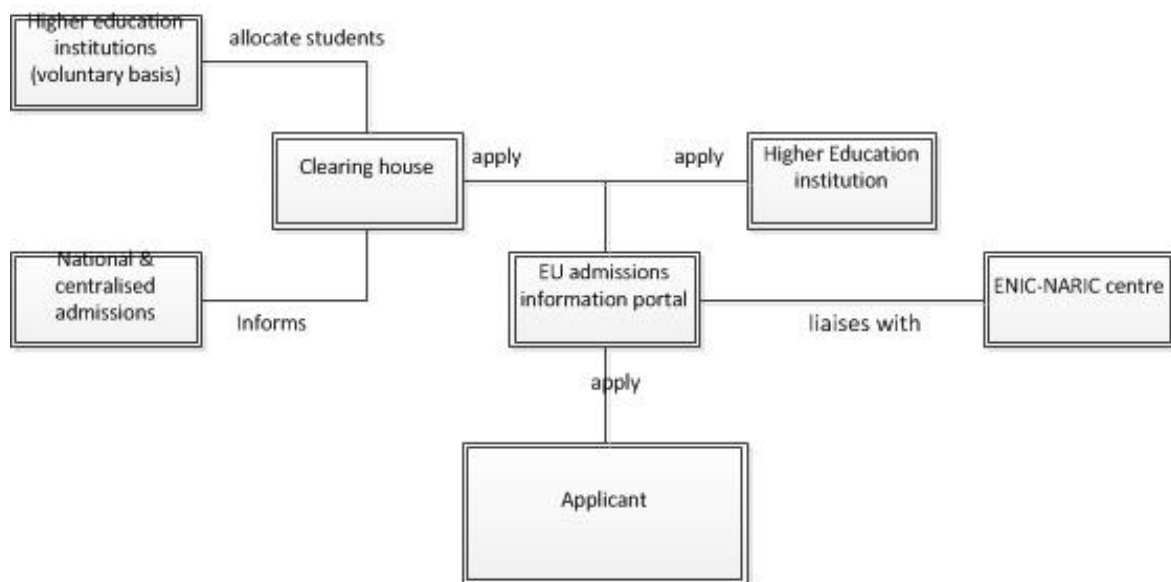
A further recommendation is that the feasibility of these possible courses of action should be tested.

The study recommends that national governments and national agencies support a stakeholders' workshop be conducted around the theme of admissions in the European

Union. This stakeholders' workshop would include agencies responsible for admissions as well as the recognition of qualifications across the European Union.

This workshop would also provide the opportunity to think of ways to gather further data regarding the application patterns of mobile European applicants, on which little is known. This data could include how many students fill in multiple applications, what the transaction costs of applying are etc.; as well as data regarding matching students to a course of studies - to which extent do students apply to universities in other countries to be accepted to their preferred course of studies.

7.3. Recommendations for Member States

Building on the main findings, the following recommendations are put forward. However, given the great diversity of national admission systems, it is pointed out that the recommendations should be read as a toolkit of sensible options that do not necessarily apply across Europe, but that need to be critically assessed against specific contextual features at the country-level.

In terms of equity, Member States are encouraged to:

- Think of their education systems in a holistic way, acknowledging that admission systems may contribute to increasing equity in access to higher education only if combined with policy measures to widen access before the point of entry to university, notably during secondary school;

- Design, in accordance with the respective national traditions, admission systems that provide as much information as possible to prospective applicants to increase graduation rate: a central objective on both quality and equity grounds;

- Capture through the admission systems also the ability of students to progress towards a successful completion of degrees rather than only the fulfilment of the criteria for entry;

- Evaluate their admission systems and compare the relevance of admission to other factors which may influence equity, such as the existence of hidden costs of higher education applications and their effects on admission;

- Assess their current practices with regards to admission of non-traditional learners, and consider measures such as introducing (or increasing) opportunities for recognition of prior learning beyond secondary school qualifications.

In terms of quality, Member States are encouraged to:

- Ensure that universities employ sufficient and high-skilled personnel to administer admissions, so that the process is homogenous across higher education institutions;

- Think critically of the timing of application, and consider – where applicable – to launch and finalise the application process in the academic year prior to the beginning of the degree;

- Strengthen cooperation between universities and secondary schools to ensure that students make well-informed choices, a recommendation that bear relevance on equity grounds as well, as pointed out above.

In terms of mobility, Member States are encouraged to:

- Commit to exchanging information on application and enrolment data by country of origin across EU Member States;

- Remove barriers to student mobility at any stage of higher education, including entry to the first year of university.

7.4. Issues for further research

This study also opened several issues for further research. For example, further research could compare more extensively the relationship between equity and quality, by analysing how different admission systems define and comply with the notion of 'fair' treatment. Comparing socio-economic status measurement before and after admissions could provide a starting point to analysing this notion.

In addition, the study concentrated on mobility across Member States, and stressed that applicants needed to master the language of the country of destination. Further research could investigate to which extent language also affects intra-state mobility, and what the role of public authorities is to remove such barriers. This question would be relevant for Member States which include regions with different languages, such as Belgium. In addition, a more detailed mapping of mobility at the level of first entrants to higher education, as well as of the application patterns of applicants, could strengthen the case for further European coordination.

Finally, further research could investigate how recent trends in higher education may impact admission requirements. The development of courses in English across Europe, of e-learning and new technology could both facilitate the development of innovative admission requirements; as well as call for a re-evaluation of the standards for admission in higher education. More precisely, the expansion of Massive Online Open Courses, by making courses accessible to students without geographical or matriculation boundaries for a given degree or university, call into questions not only the admission (and accreditation) procedures for these courses, but also lead to broader reassessment of the necessary skills and profile of admitted students.

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ANNEXES

Annex 1:   List of interviewee by country

COUNTRY	NAME	INSTITUTION	ROLE	DATE
France	Anonymous interviewee	Department for the Equality of Chances, Directorate General for Higher education, Ministry for higher education and research	Departmental chief	11 October 2013
	Jean-Pierre Finance	Conference of University presidents	Permanent delegate to Brussels	15 October 2013
	Elizabeth Zamorano	ENIC-NARIC	Assistant to the Director	15 October 2013
Germany	Ulf Bade	Foundation for Higher education Admission	Chief Executive Officer	08 October 2013
	Heidrun Schneider	Working Area: Research on students, German Centre for Research on Higher education and Science	Project Leader	11 October 2013 (provided written feedback)
	Christian Tauch	Education, German Rectors' Conference	Head	18 October 2013 (provided written feedback)
Italy	Marina Cavallini	Conference of the Rectors of the Italian Universities (CRUI)	Head of International Relations Office	09 October 2013
	Luca Lantero	Information Centre on Mobility and Academic Recognition (CIMEA)	Director	08 October 2013
	Donatella Marsiglia	Ministry of Education, University and Research (MIUR)	Director, General Directorate for University, Student, and access to Higher education	16 October 2013
Slovenia	Suzana Bitenc Peharc	The National Examinations Centre (RIC)	Higher education Coordinator	18 October 2013
	Rok Hrzic	University of Maribor	Coordinator for enrolment	15 October 2013

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	Misela Mavric	Higher education Directorate; Ministry of Education, Science and Sport	Acting Director-General	14 October 2013
Sweden	Tuula Kuosmanen	Swedish Council for Higher education, Department of Admissions and Guidance	Analyst	16 October 2013
	Ulf Hedbjörk	Eurydice Swedish National Unit	Director	Provided information in a written format on 25 and 28 October 2013 Validated case study narrative on 8 October 2013
	Gudrun Paulsdottir	Mälardalen University in Sweden International Executive	International strategist	18 October 2013
UK (England)	Anonymous interviewee	n/a	n/a	15 October 2013
	Mark Corver	UCAS	Head of Analysis and Research	15 October 2013
	Jayne Mitchell	Quality Assurance Agency	Director of Research, Development and Partnerships	09 October 2013
Australia	Elizabeth Campbell-Dorning	Educational and Professional Recognition Unit (AEI-NOOSR) of the Australian Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education	Manager	09 October 2013
	Anonymous interviewee	Australian Qualifications Framework Council	Director (Policy)	15 October 2013
	Anonymous interviewee	Universities Admissions Centre (NSW and ACT)	Managing Director	23 October 2013 (via email)
Japan	Koki Ikemura	Entrance Examination Office, Institute of National Colleges of Technology Japan	Unit Chief	08 October 2013

Motohisa Kaneko	Center for University Studies, University of Tsukuba, Member for the Central Council for Education	Professor	09 October 2013
Rie Mori	Research and Development Department, National Institution for Academic Degrees and University Evaluation	Associate Professor	09 October 2013
Tadashi Ito	Administration and Planning Office, National Center for University Entrance Examinations	Deputy Director	11 October 2013
Eisaku Nakamura	Office for University Entrance Examinations, University Promotion Division, Higher Education Bureau, Ministry of Education, Culture, Sports, Science and Technology Japan	Unit Head	18 October 2013
Akio Nakamura	University Promotion Division, Higher Education Bureau, Ministry of Education, Culture, Sports, Science and Technology Japan	Deputy Division Chief	18 October 2013
Koichi Fukumoto	Higher Education Planning Division, Higher Education Bureau, Ministry of Education, Culture, Sports, Science and Technology Japan	Deputy Division Chief,	18 October 2013
Sonoe Horinouchi	Office for Higher Education Policy, Higher Education Planning Division, Higher Education Bureau, Ministry of Education, Culture, Sports, Science and Technology Japan	n/a	18 October 2013

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	Tatsuya Hayashi	Office for International Students Communication, Students and International Students Division, Higher Education Bureau, Ministry of Education, Culture, Sports, Science and Technology Japan	n/a	18 October 2013
	Yuko Kosaka	Office for International Planning, Higher Education Planning Division, Higher Education Bureau, Ministry of Education, Culture, Sports, Science and Technology Japan	n/a	18 October 2013
Turkey	Ercan Öztemel	Student Selection and Placement Centre ÖSYM -	President Assistant	10 October 2013
	Durmuş Günay	Executive Board of Council of Higher education Council of Higher education –YÖK	Member Higher education	15 October 2013
USA	Steven Handel	University of California, Office of the President	Head of Admissions policy	17 October 2013
	Ernest Gibble	DeVry Inc	Head of Global Communications	16 October 2013
	Stephen Haworth	DeVry Inc	Manager, Reporting and Policy Research	16 October 2013
	Melissa Robbins	DeVry Inc	Director of International Relations	16 October 2013
	David Hawkins	National Association for College Admission Counselling (NACAC)	Director of Public Policy and Research	18 October 2013

Source: Case study data collection reports

Annex 2: **Overview of requirements to access higher education: leaving certificate, subjects and other qualifications**

COUNTRY	SCHOOL LEAVING CERTIFICATE	COMPULSORY SUBJECTS IN ORDER TO OBTAIN A SECONDARY SCHOOL LEAVING CERTIFICATE	ADDITIONAL QUALIFICATIONS OR TESTS
France	Baccalauréat (baccalaureate)	There are three types of Baccalauréat: general, technological and professional, each with different subjects as main focus (Eduscol, 2005). As an example, it is proposed here the list of compulsory subjects that students have to pass to achieve a general Baccalauréat in economic and social sciences. Early tests (taken a year before the final baccalauréat, épreuves anticipées) • French (written); • French (oral); • Sciences (written); • Supervised personal work (oral). Final tests (épreuves terminales): • History and geography (written); • Maths (written); • Economic and social sciences (written); • First foreign language (written and oral); • Second foreign language (written and oral); • Philosophy (written); • Physical and sports education (continuous exam); Specialisation test (selection of one of the disciplines below); • Advanced economics (économie approfondie) (written); • Mathematics (written); • Politics and social sciences (written); • Physical and sports education addition (continuous exam).	A number of selective institutions, Grande écoles, require an additional test to the Baccalauréat. Students wishing to study at a Grande école are required to undertake a two-year preparatory course, and a competitive nationwide exam. The preparatory course is called Preparatory classes for postsecondary education institutions (Classes Préparatoires aux Grandes écoles, CPGE). After two or three years of university level preparatory studies, applicants can take the competitive examinations for Grandes écoles. The standard of the CPGE is equivalent to the first two years of university, thus students who take a CPGE and then decide not to pursue their studies at a Grande école can obtain exemption from the first two years of undergraduate study at university. Similarly, those who have completed two years of undergraduate study at university are eligible to transfer to a CPGE course.

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Germany	Abitur (which is commonly used for university admission); Fachhochschulreife (which allows a student to study at a university for applied sciences)	The content and compulsory subjects of the Abitur are decided upon by the German states and differ across the 16 states; however, German, one foreign language and mathematics are compulsory subjects for all pupils (Eduscol, 2005). The KMK decided that from 2017 onwards the Abitur should become more comparable across states. However, this will not lead to a central examination.	The admission process is shifting towards more independence of universities, which leads to more autonomy in designing specific tests for admission in addition to the Abitur. These encompass standardised tests as well as entry tests and aptitude tests. A notable example is the aptitude test for medical degrees (Test für medizinische Studiengänge, TFM).
Italy	Esame di stato di II ciclo, commonly referred to as Maturità	The school-leaving exam is different according to the type of school. While the structure of the exam is the same nation-wide, the subjects vary across and within types of schools. The exam is structured in three written examinations, plus an oral one. The first examination is a long essay. The questions are established at national level and are the same across all schools in the whole country. Students are expected to write a long essay picking one out of seven questions / topics. The essay questions / topics focus on Italian literature, history, or current affairs. The second examination is also designed at national level, but the subject varies according to the type of school, as follows: • Gymnasiums : one among the following according to the type of gymnasium: (i) ancient Greek or Latin; (ii) math; (iii) foreign language; (iv) pedagogy; (v) social science; • Technical schools: one among the following according to the type of technical schools: (i) accountancy; (ii) general and managerial IT; (iii) foreign language; (iv) technology of constructions; (v) agronomy; (vi) chemical and industrial technology; (vii) construction design; (viii) electronic plant; (ix) design and industrial organization; (x) telecommunications; • Professional schools: one among the following according to the type of professional schools: (i) accountancy; (ii) English language; (iii)	There are two additional selection mechanisms that apply selectively (i.e. that are established either at the national level for specific degrees or at the institution level): • Entry examination at the local level: Individual institutions may limit the access to specific degrees. In such institutions, entry examinations are in place but they do not follow a standardized approach; • Standardized test at the national level: a standardized national test is in place to access specific degrees for medicine & surgery, veterinary medicine, dentistry, nursery, and architecture. The test entails a questionnaire with multiple-choice answers focusing on general knowledge (e.g. logical reasoning, history) and specific knowledge relevant to the degree that the student is applying for (e.g. biology, chemistry, physics and mathematics are included in a medicine entry test).

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		nutrition; (iv) economics of tourism; (v) production automation and organization; (vi) electronics and telecommunications; (vii) industrial machinery; (viii) general psychology; • Arts institutes: (i) design and planning. The third part of the exam is designed at school level and touches upon four to five subjects that were not included in the previous two examinations. The oral examination entails an hour-long (approx.) examination where students are asked various questions across all the subjects and topics touched upon in their last year of high school.	
Slovenia	Matura	The Matura is composed by five subjects, three compulsory and two optional. The three compulsory subjects are: • Mathematics; • Slovenian Language (in ethnically mixed areas candidates are to take Italian or Hungarian language tests); • A foreign language (options include German, French, English, Italian, Russian or Spanish). The two optional subjects must be selected from two of the following five groups of subjects: • Philosophy, psychology, sociology; • Any modern foreign language, a second language in ethnically mixed areas, ancient Greek, Latin; • Contemporary dance, music, theory and history of Drama and the theatre; • Art history, history; • Biotechnology, computer science, economics, electrical engineering, engineering mechanics, information technology, materials.	Some study programmes require applicants to take aptitude tests. According to the Higher Education Act 2008, programmes which require that candidates have passed special tests are the following: • The Academies: the Academy of Music, the Academy of Theatre, Radio, Film and Television; the Academy of Fine Arts; • The Biotechnical Faculty – the Landscape Architecture study programme; • The Faculty of Architecture; • The Faculty of Sports; • the Faculty of Arts – the Musicology study programme; • The Faculty of Natural Sciences and Engineering – the Forming Textile Fabrics and Clothing programme; • The Faculty of Education – the Art Pedagogy and the Preschool Education study programmes. The timing and typology of aptitude tests are specified in the Call for enrolment for each academic year and each institution designs a specific aptitude test.

| Sweden | Slutbetyg från gymnasieskolan | Requirements are divided according to the types of programmes pupils take (basic, preparatory or vocational). Graduation from the basic programme of secondary school requires a final pass grade on three compulsory subjects as well as a number of credits on additional subjects. Compulsory subjects include (Swedish A and B, or Swedish as a second language A and B; English A; and Mathematics A[84].

Students completing national college preparatory programmes , which are deemed to satisfy more of the specifications required for university, need to have 300 upper secondary school credits from courses in Swedish (or Swedish as a second language), 200 upper secondary school credits in English and 100 upper secondary school credits in Mathematics.

Students from vocational programmes need a total of 100 upper secondary school credits each in Swedish 1 (or Swedish as a second language), in English and Mathematics.

Other subjects required on the high school diploma include: history, social studies, religion and science (biology, physics and chemistry). There are no regulations about a total number of credits required from each of these subjects but it is usually a total of 50 or 100 points per subject. | Another route into higher education includes taking the Swedish Scholastic Aptitude Test (högskoleprovet, abbreviated in SweSAT). The test, since autumn 2011, consists of two equally extensive sections: verbal and quantitative. Each section contains 80 questions for a total of 160 multiple-choice questions. The quantitative section tests the ability to solve mathematical problems, the ability to make quantitative comparisons, the capacity to identify and interpret diagrams, tables and maps, and the capacity to cope with mathematical and logical problems. The verbal section focuses on testing the capacity to understand words and concepts, as well as reading comprehension in Swedish and English (Amft, 2012). |

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[84] Letters A and B refer to subject levels, with A being the lowest secondary school course level accepted as an entry requirement at the university application process.

UK(England)	A-levels; GCSEs	School-leaving exams are most commonly GCSEs (General Certificate of Secondary Education) and AS/A-levels (Advanced level), though other qualifications are available and recognized by admissions requirements and processes. GCSEs are subject specific exams for Key Stage 4 in England (most commonly taken by 14-16 year olds) available in over 40 subjects. Compulsory subjects include English, Mathematics and Science; schools may have additional required subjects for students at GCSE level. A student receives a separate grade for each GCSE exam taken; pass grades are, from highest to lowest, A*, A, B, C, D, E, F and G. A 'U' (ungraded/unclassified) is issued when the student has not achieved the minimum standard to achieve a pass grade. GCSE grades are part of the National Qualifications Framework: a GCSE exam awarded a grade between D and G is a Level 1 qualification, while a GSCE exam awarded a grade between A* and C is a Level 2 qualification. Students who complete five or more GCSEs with grades higher than a C are eligible for and may choose to study AS or A-levels (KS 5). A-levels are a two-year qualification which involves the study of the theory of a subject, with some investigative work. The first year of study is a qualification in its own right, called AS levels. A-levels are the principle tool for university selection in England, though there are other pre-university exams available (vocational qualifications, International Baccalaureate etc.). The average student will take 3 or 4 A-level exams at around age 18, choosing from over 45 available subjects. There is no set of compulsory A-level subjects or exams – students are able to choose their own set, though they are encouraged to consider their career aims or interest in specific fields, as many courses at universities or colleges will require A-levels in certain subjects.	Universities or colleges may choose to require students to complete additional examinations in specific subjects for certain courses. For example, admission tests may be required for certain subjects, including law (Cambridge Law Test; National Admission Test for Law (LNAT)), mathematics (Mathematics Aptitude Test (MAT); Sixth Term Examination Paper (STEP)) and medical courses (Bio-Medical Admissions Test (BMAT); Health Professions Admission Test (HPAt); UK Clinical Aptitude Test (UKCAT)) or specific skills, such as Thinking Skills Assessments (TSA), such as the TSA Cambridge, TSA Oxford and TSA UCL. In addition to this, over 60 colleges and universities provide their own admission tests and can constitute a written or oral test of aptitude, skills, or general suitability for the programme.

| Australia | Certificate of Education (called Higher School Certificate in New South Wales , or Year 12 Certificate in the Australian Capital Territory) leading to Australian Tertiary Admission Rank (ATAR) | Although there are some discrepancies between each state, there is also convergence. This is notable with regard to numeracy and literacy standards. It is worth noting that some TACs recognise that if a student from another state meets all tertiary entrance requirements for all institutions in their home state, they meet entrance requirements for all interstate institutions in Australia.[85]
As an example it is provided the list of compulsory subjects to be passed in New South Wales, one of the largest Australian states. Students must have completed courses which include the pattern of study approved by the Board of Studies New South Wales, as defined by the Education Act 1990 (NSW). Specifically, this involves completing a Preliminary pattern of study (of at least 12 units) and a HSC pattern of study (at least 10 units), both of which must include the types of courses listed below:[86]
Four subjects in total (at least);
• Six units of Board Developed Courses[87] (at least), which include courses such as biology, chemistry, English, mathematics, but also music, aboriginal studies, community and family studies and many others (about 50 in total);[88]
• At least two units of a Board Developed Course in English (although a pilot course called 'English Studies' is being developed, which will fulfil English requirements for the HSC, it will not meet the UAC requirements for two English Units which are taken into account to calculate the ATAR); and
• Three courses (at least) of either Board Developed or Board Endorsed Courses – topics include work | Certain courses require specific examinations:
• STAT (Special Tertiary Admissions Test): for applicants who do not hold an ATAR rank. Some universities require STAT F (a subtype of STAT) results for all applicants to specific programmes. Some universities require STAT results for applications to all courses;
• UMAT (Undergraduate Medical Admissions Test): for undergraduate admission to many Australian dental and medical schools;
• Increasingly, some Australian universities ask for PQA (Personal Qualities Assessment) results for health sciences and medicine. The PQA assessment is a standardised test and is administered by an independent organisation in Australia[89]. |

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[85] See: http://www.vtac.edu.au/pdf/publications/victer2016.pdf.
[86] See: http://www.boardofstudies.nsw.edu.au/yourhsc/hsc-rules-procedures-guide.html#eligibility-requirements.
[87] Board Developed Courses are courses for which the curricula have been developed by the Board of Studies New South Wales.
[88] For a list of Board Developed Courses for the New South Wales HSC diploma, see: http://www.hsc.csu.edu.au/ or http://www.boardofstudies.nsw.edu.au/syllabus_hsc/course-descriptions.
[89] http://pqa.net.au/files/description.html.

		studies, exploring early childhood or visual design, and other courses. Based on and the results obtained for the Certificate of Education, the Tertiary Admissions Centres calculates a nationally standardised ATAR score.	
Japan	Secondary school diploma	A minimum of 74 credits in total are needed to obtain the upper-secondary school-leaving certificate. In general, full-time upper secondary schools require approximately 100. The compulsory subject areas include: Japanese language, geography and history, civic education, mathematics, science, health and physical education, art, a foreign language (often English) and economics.	Currently, there are largely three types of entrance examinations and requirements: • General entrance examinations (Ippan nyusi) which assess academic achievement, such as the National Centre Test for University Admission (Daigaku nyusi senta siken, NCTUA); • Recommendations from upper secondary school principals (Suisen nyusi) which are based on the recommendation letters from principals promoting the students, which are then evaluated by the universities; • Admission office entrance examinations (AO nyusi). The admission office entrance examination is an evaluation based on applicants' own recommendations to comprehensively judge the ability, competence, and purpose of applicants through the application documents combined with elaborate interviews.
Turkey	Secondary School Diploma (Lise Diplomasi), Secondary Vocational School Diploma (Meslek Lise Diploması), or Secondary Technical School Diploma (Teknik Lise Diploması)	Secondary education includes the subjects of biology, chemistry, foreign language, geography, health, history, mathematics, military science, philosophy, physical education, physics, religious education and ethics, and Turkish language and literature. These subjects have an impact on the admission points by OBP secondary school achievement scores and vary according to different secondary education diploma.	A two-staged standardised test, comprising of the YGS and LYS, covers the following subjects: • YGS includes the subjects of Turkish, Basic Mathematics, Social and Natural Science; • LYS includes the subjects of Mathematics, Natural Science, Literature and Geography, Social Science and Foreign Language.

USA	High school diploma	There is no set of required courses for admission in to higher education, though in order to complete high school, students are required to complete core subjects. These core courses can be taken into account in the evaluation of an application. Though these subjects may vary slightly per state, they will often include English, sciences, math, social science, and a foreign language. Specific courses or universities may require student to have attained specific levels (AP or Honors).	The general SAT covers skills in critical reading, writing and mathematics, and is usually taken in the penultimate or ultimate year of high school (11th grade (junior year) or 12th grade (senior year)). The general SAT is often a requirement for admission into undergraduate programmes in the US. In addition, applicants can also choose from twenty subject specific tests, articulated around five areas: (i) English literature; (ii) Languages (choice of nine languages ranging from Spanish, French and German, to Korean and Hebrew); (iii) History and Social Studies: US and World history; (iv) Mathematics; and (v) Science: biology, chemistry and physics. The ACT is divided in a multiple choice and an optional writing part. The ACT includes four subject tests plus the optional writing part. These subject tests are the following: • English; • Mathematics; • Reading; • Sciences.

Source: Case study data collection reports

Annex 3:   Main actors in admission process to higher education

COUNTRY	MAIN ACTORS
France	Universities formally admit students, but are bound to host the students dispatched by the central admission systems. Other types of higher education institutions can select students, for example on the basis of a competitive examination (*Grandes Ecoles*). The admissions system is managed by the Ministry for Higher Education and Research, and coordinated by Admission Post-Bac. The Ministry defines national policies, guidelines and curricula, with devolved responsibility at various territorial levels.
Germany	Higher education institutions formally admit students, especially for non-regulated courses. The central clearinghouse and uni-assist portal support the management of admissions. The federal Government does not have any formal powers in admissions. Legislators at the state level are in general responsible for decisions on educational systems. On behalf of the Standing Conference of the Ministers of Education and Cultural Affairs, the Central Office for Foreign Education is the official agency for the evaluation and recognition of foreign educational qualifications.
Italy	Admissions for specific programmes (i.e. medicine and surgery; veterinary medicine; dentistry; nursery; architecture) are regulated at national level by Ministry of Education, University and Research (MIUR). MIUR is in charge of designing and supervising the standardised national test, setting the ceiling of admitted students for each degree each year. Individual institutions have the authority to set ceilings and to autonomously design admission tests for university regulated programmes. In certain instances universities may restrict the admission to degrees, but they must seek authorization from the MIUR to set a ceiling. Additional actors include the Information Centre on Mobility and Academic Recognition (CIMEA), which is the body responsible for issues around transferability of qualifications, thus having an important role in the admission of foreign students in the Italian system.
Slovenia	Higher education falls under the responsibility of the Ministry of Higher Education, Science and Technology, which decides on student quotas in cooperation with Universities. The National Examinations Centre is responsible for the technical organization and implementation of the general matura, including the appointment of the staff required for the implementation of the matura, such as chief examiners, assistants and external markers. The Examinations Centre is composed by four sub-bodies, each with the specific fuctions: the National Committee for the Matura (NCM), which is in charge of preparing and administering the Matura; the Subject Testing Committees for the Matura (STCM), which are in charge of designing the written exams;School Committees for

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	the Matura (SCM), in charge of preparing and administering the Matura exams in schools; and the School Examination Boards for the Matura (SEBM), which carry out oral exams in individual subjects.
Sweden	In practice, higher education institutions can decide on the number of available places on courses and study programmes, and admission and enrolment procedures, but regulations from the Swedish Parliament (Riksdag), the Swedish Council for Higher Education and the Government apply. Regulations regarding applicants with foreign grades are also issued by the Swedish Council for Higher education.
UK(England)	Universities and colleges have a large degree of autonomy in setting admissions procedures and requirements, and the selection and judgment of candidates' suitability lies solely with the institution. Other actors include examination boards, such as AQA[90], OCR (Oxford, Cambridge and RSA Examinations), Pearson Edexcel and WJEC[91]. Ofqual is responsible for ensuring quality and consistency of secondary school leaving examinations, UCAS (management of all undergraduate applications in England and the UK), the Quality Assurance Agency, the Office for Fair Access (OFFA) and SPA (Supporting Professionalism in Admissions), which works with universities and colleges in the UK to enhance professionalism in the recruitment and selection of students to higher education.
Australia	Australian universities are autonomous, independent and self-governing bodies, which set requirements for admissions individually. Independent tertiary admissions centres (TAC) serve to allocate positions for tertiary institutions in the respective state, but do not select applicants. As a federal state, the governments of each Australian state/territory and the Australian Government share responsibility for the regulation of higher education and for decisions in this area.
Japan	All universities are allowed to decide admission policies, types of entrance examinations, admission procedures and applicant selection procedures, as long as they follow the implementation guidance for the entrance selection of university applicants. This choice is guided by the Ministry of Education, Culture, Sports, Science and Technology (MEXT). MEXT is responsible for entry qualifications for universities, considering School Education Laws and other laws and regulations, and designing the implementation guidance for entrance selection of university applicants. Additional actors include the National Centre for University Entrance Examinations, responsible for administering the National Centre Test for University Admissions, and the Institute of National Colleges of Technology, responsible for establishing and administering all national colleges of technology, and offering single general entrance examination for all national colleges of technology.

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[90] Previously known as the Assessment and Qualifications Alliance.
[91] Previously known as the Welsh Joint Education Committee.

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Turkey	Higher education institutions do not have direct influence on decisions concerning admission process and selection of applicants in most disciplines. The Council of Higher Education (Yükseköğretim Kurulu, YÖK) is responsible for the Student Selection and Placement System and sets Higher Education Law. YÖK is supported by the Student Selection and Placement Centre (ÖSYM), which is responsible for the realization of the admission procedures defined by YÖK and the administration of entrance tests for higher education. The Ministry of National Education (MEB) defines secondary education curricula, and is responsible for managing the relationships between YÖK and the Great National Assembly of Turkey.
USA	Universities decide on their own admission procedures in the US, with some state systems fixing guidelines for admissions. State Boards of Education are responsible for implementing the provisions of state and federal laws and regulations in effective and efficient ways. Providers, including the College Board and Educational Testing Service, provide and manage standardise tests such as the SAT. The US Department of Education has no remit in admissions (bar on the indirect matter of financial aid). Membership organisations, such as the National Association for College Admission Counselling (NACAC), support applicants through the college admissions process and improve the process for students and their families.

Source: Case study data collection reports

Annex 4:   The cost of enrolment to higher education

The table below provides an overview of the costs that are connected with admission (strictly speaking) in the broader context of the cost of general cost of attending university in the various countries. The division of different fees is somewhat arbitrary as there is not a standard definition across countries. In particular, administrative / application fee and tuition fee may not always be clear-cut. As a general approach, we list under administrative / application fee, the one-off cost incurred by students to enrol to university prior to start. Tuition fee refers to the cost that each student has to face every year to attend university. 'Other fees' refer to the costs related to taking standardised admission tests. Finally, the right column provides an overview of the differences in costs that foreign applicants face (if any).

COUNTRY	ADMINISTRATIVE /APPLICATION FEE	TUITION FEE	OTHER FEES (E.G. TESTS)	SPECIFIC FEES FOR FOREIGN APPLICANTS (IF APPLICABLE)
France	183 EUR			
Germany	Approximately 50 EUR	No fee apart from Lower Saxony students have to pay fees of maximum 1,000 EUR per academic year		EU and non-EU students might have to pay depending on their individual situation. Foreign students who apply for a degree course that is registered with the applicant portal uni-assist have to pay standard application fees of 43-68 EUR depending on the applicant's country of origin. If foreign applicants are required to do an assessment test students have to pay registration fees between 30 and 200 EUR depending on the university. An initial assessment of a foreign secondary school leaving exam costs 100 EUR (Kultusministerkonferenz, 2013).
Italy	Approximately 200 EUR	1,300 EUR (average)		

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Slovenia	30 EUR (admission fee for the first year of study)			Candidates from non-EU countries must pay a tuition fee in addition to the admission fee. Tuition fees vary between 1,500 EUR per year and over 10,000 EUR per year depending on the degree.
Sweden			SWESAT 350 SEK (approx. 40 EUR)	Since autumn 2011, all foreign students (except those from the EU/EEA and Switzerland) are required to pay an application fee of approximately 100 EUR for each term they submit an application for
UK (England)	12 GBP (15 EUR) for one application; 23 GBP (30 EUR) for multiple courses and applications	8,385 GBP (average) (10,245 EUR)		Fees are unregulated
Australia	30-40 AUD (26 EUR) in addition to processing fees of 100 AUD (65 EUR)	3000-4000 USD (2190- 2915 EUR)		
Japan	17,000 yen (131 EUR) for public universities and 30,000 yen (230 EUR) for private universities (average fee for recommendations from principals and admission office examinations)	5000-6000 USD (3645-4375 EUR)	Between 12,000 and 18,800 yen (93-145 EUR) fee for the National Centre Test for University Admissions, depending on how many subjects are taken	
Turkey		No fee (evening students pay on average 500 EUR)	Approximately 200 TL, including YGS and all exams of LYS (70 EUR)	International students pay higher fees
US	50-150 USD (37-110 EUR)	5000-6000 USD (3645-4375 EUR)	36-52 USD (26–38 EUR) for the ACT; 51 USD for the SAT	

Source: Information in italics from: OECD (2013b); Information underlined from: Eurydice (2013); Systems Remaining information from case study data collection reports

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