



Foro de Educación

ISSN: 1698-7799

jllhuerta@mac.com

FahrenHouse

España

Hoareau McGrath, Cecile; Frearson, Michael
Admission Systems and Student Mobility: A Proposal for an EU-Wide Registry for
University Admission
Foro de Educación, vol. 14, núm. 21, julio-diciembre, 2016, pp. 167-195
FahrenHouse
Cabrerizos, España

Available in: <http://www.redalyc.org/articulo.oa?id=447546543009>

- How to cite
- Complete issue
- More information about this article
- Journal's homepage in redalyc.org

redalyc.org

Scientific Information System
Network of Scientific Journals from Latin America, the Caribbean, Spain and Portugal
Non-profit academic project, developed under the open access initiative

Admission Systems and Student Mobility: A Proposal for an EU-Wide Registry for University Admission¹

Cecile Hoareau McGrath

e-mail: cecile.mcgrath@ecorys.com

Senior Research Manager at EcorysUK. UK

Michael Frearson

e-mail: mfrearson@sqw.co.uk

Director at SQW. UK

Abstract: Europe's higher education systems are struggling to respond to the established mass demand for higher education, especially given the proportional decline in available resources per student and, more generally the demand for an ever longer education and reduction of the population of working age due to demographic decline. In addition, growing student mobility puts pressure on admission systems to set up relevant procedures for applicants who wish to enter a country. Admission systems to higher education constitute one key element in the mitigation of these challenges. Admissions can regulate student flows, and play a key role in guaranteeing the acquisition of skills in higher education by matching student profiles to their desired courses of study. This article puts European admission systems in perspective. The issue of regulation of student mobility is topical, given the broader and salient discussion on migration flows in Europe. The article uses international comparisons with systems such as the US, Australia and Japan, to provide a critical overview of the role of admission systems in an often overlooked but yet fundamental part of the European Higher Education Area, namely student mobility. The paper also argues for the creation of an information-sharing EU registry on admissions practices for mobile students.

Keywords: Higher education; European Union; Admission; Students Mobility.

Recibido / Received: 23/04/2016

Aceptado / Accepted: 11/06/2016

¹ This article is based on a report commissioned by the European parliament, Directorate general for internal policies entitled 'Higher Education entrance qualifications and Exams in Europe: a Comparison', by Hoareau McGrath, C. Henham, M.L., Corbett, A., Durazzi, N., Frearson, M., Janta, B., Kamphuis, B., Katashiro, E., Brankovic, N., Guerin, B., Manville, C. and Schweppenstedde, D. (2014). IP/B/CULT/IC/2013_007. The study is available at: [http://www.europarl.europa.eu/RegData/etudes/etudes/join/2014/529057/IPOL-CULT_ET\(2014\)529057_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/etudes/join/2014/529057/IPOL-CULT_ET(2014)529057_EN.pdf) The authors are grateful to Dr Anne Corbett (LSE) and Niccolo Durazzi (LSE) for their constructive comments on this paper.

1. Introduction

Higher education admission systems have to adapt to the increasing mobility of students, a contemporary phenomenon that most systems were not originally designed for. The number of students coming in to a country (i.e. inbound mobility flows) have increased by 68% in Austria, 74% in France and nearly doubled in Slovenia between 2005 and 2011 according to UNESCO².

1.1. *Defining student mobility in the context of the European Union*

A mobile student is a student who moved for the purpose of study; mobile students can be from the EU or international, and they can move to a country (inbound-mobility) or leave it (outbound mobility). We use the terminology of 'inbound mobile students' or 'outbound mobile students' instead of the one of 'foreign students', to highlight that we concentrate on students with secondary level qualifications acquired in another country who wish to enter the higher education system of a given country. A foreign student could be a student with domestic qualifications who does not have the nationality of the country in which he studies. 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 (UNESCO, 2012).

One of the main political counter-arguments to mobility has to do with unequal mobility flows creating 'brain drain'. Countries of origin lose future skilled labour, and countries of destination may be worried about labour market imbalances between the supply and demand for skilled labour (or student places).

Student mobility, including the mobility of first entrants, leads to several benefits, including increasing human capital, strengthening European identity and cohesiveness, achieving smart, sustainable and inclusive growth, as listed in the Europe 2020 strategy and compensating for the demographic decline which has become inevitable in several European countries.

Mobility facilitates the creation of networks and scientific diasporas, leading to an international 'brain bank'. In addition, student mobility seems to be more about 'brain circulation' than 'brain drain' given that, although little is known on mobility patterns, there is a high level of return migration (Cervantes and Guellec, 2002). This return migration then contributes to the creation of international networks which add considerable economic value (Saxinian, 2007).

² Inbound student mobility is used as a proxy for the mobility of first time entrants.

Mobility is a politically sensitive concept and of particular concern in the European Union (EU), given the increase in student flows. Barriers can be applied to admitting non-EU international students, but EU students are in principle able to circulate freely across the EU, protected by the rules of the Treaty on the Functioning of the European Union (TFEU) on citizenship: all EU citizens can apply to a university around Europe and be treated equally.

Mobility is a part of the Europe 2020 strategy for smart, sustainable and inclusive growth. It also matches a global trend known as the ‘Great Brain Race’ (Wildavsky, 2010). The European Commission has a 20% student mobility target by 2020, fostered by several initiatives, such as Youth on the Move, which concentrates on facilitating the mobility of existing students, or higher education teachers.

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 of inequalities of educational opportunity. The EU’s interest at the launch of the Erasmus programme was also to strengthen cooperation and the European dimensions of higher education in addition to preparing for the Single Market (Corbett, 2005; Teichler et al., 2011).

This is why European-wide measures were adopted to facilitate a greater comparability of higher education qualification levels across Europe and facilitate mobility. The Dublin descriptors of 18 October 2004, built into the Bologna qualifications framework, and later (2005) incorporated in the Qualifications Framework for the European Higher Education Area (QF – EHEA) were an early attempt to define characteristics of different levels of higher education, and hence facilitate mobility, by specifying the expected attributes that a student should have following the completion of a cycle and were later incorporated into the qualifications framework for the European Higher Education Area (Joint Quality Initiative, 2004). The Dublin descriptors included provisions for three cycles and a short cycles, a departure from the Bologna declaration which included undergraduate and postgraduate levels. The European Commission has supported and extended some of these initiatives in the domain of the European Community.

The 2012 European Commission communication ‘Rethinking education: investing in skills for better socio-economic outcomes’ 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).

The European Commission has also adopted the European Qualifications Framework, a complement to its long-established support for the NARIC networks (National Academic Recognition Information Centres). The Council of Europe and UNESCO, both with a long history of creating codes on recognition, also 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. While some experts have criticised its generality, and point out the growth of reciprocal arrangements (Teichler et al., 2011), the Convention is significant for present discussions. Its general principles of fair recognition and non-discrimination are the basis for reciprocal as well as general arrangements.

In addition, the European Parliament has had an increasing interest in higher education, recently exemplified by the 'Report on the contribution of the European institutions to the consolidation and progress of the Bologna process', the European Parliament resolution on the contribution of European institutions to the consolidation and progress of the Bologna process of the 13 March 2012, and the study on admissions in higher education (Hoareau-McGrath et al., 2014).

1.2. *Practical barriers to mobility*

Despite these policy ambitions, the practicalities of applying and starting a course of study abroad are complex. Qualifications acquired abroad have to be comparable to national diplomas and be recognised as transferable, and students need to be able to carry their qualifications with them ('portability') in order to be able to study in another system than the one in which they have obtained a secondary education qualification.

These principles are difficult to apply across the EU. Mobile students often need to navigate different requirements, administrative procedures and designs of programmes across national higher education systems. Students need to be able to show that their qualifications are comparable to the ones required in their country of destination and they also need to be able to understand and match other entry criteria. Students' qualifications need to be portable (i.e. applicants can bring their qualifications to other countries) and also need to be transferable, meaning that the host country can recognise these qualifications.

Explicit or implicit barriers may also exist to the mobility of students. These barriers could include the use of quotas, different regimes of tuition fees and

financial aid, and in some cases language requirements (despite commitments under the Bologna Process and the Lisbon Recognition Convention for easier recognition). Indeed the 2012 interministerial communiqué of Bucharest restated a further commitment to removing barriers to mobility (European Consortium for Accreditation, 2012). In addition, the transaction costs of processing applications from foreign countries may be high for students and higher education institutions and admission agencies. These costs increase proportionally with the number of applications submitted (especially when quotas are applied, as is the case in many European countries). 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 unfilled places. The practice of multiple applications appears relatively common in Europe (and beyond). For example, applicants in France typically register for five or six institutions, and college applicants in the US typically fill in at least seven applications in 2010 (National Admissions for College Admissions and Counselling, 2011).

In addition, evidence indicates multiple applications may occur among mobile students. For example, a service exists in the UK to support up to eight applications abroad for British and Irish students³. Students submitting multiple applications and subsequently being admitted to several universities/degree courses can create delays in the wider system and also lead to places not being allocated, as reported in the case of Germany (Hoareau-McGrath et al., 2014).

1.3. *Key questions and objectives*

This paper addresses the three following questions:

- Do the type of admission systems affect student mobility?
- What are the issues and solutions related the mobility of applicants, especially when applicants to apply to institutions across several Member States?
- How can admission systems adjust to the growing student mobility?

By answering these three questions, the paper will assess whether a coordination of admission systems at the European level would help to tackle the practical issues related to administering and processing the applications of mobile students.

³ More information available at <http://www.eunicas.com/>.

1.4. *Outline*

This paper is divided into the following sections. Section 2 explains our methodology. Section 3 covers how admission systems can regulate student mobility. Section 4 presents our proposals for a greater coordination of European admission systems and Section 5 offers some concluding remarks.

2. **Method**

Our paper is based on a comparative analysis of nine case study admission systems substantiated by stakeholder interviews. These interviews were conducted by phone in October and November 2013. They took place with stakeholders representing different levels of decision-making and management of admission systems. Interviewees had the choice to remain anonymous or to be mentioned by name. The interview questions were standardised using a questionnaire template. All interviews were summarised, and made the object of a national report which was written by a country expert. Upon request, interviewees had the opportunity to review and comment on the interview transcripts and the report. (See Hoareau McGrath et al., 2014 for further information).

2.1. *Comparative analysis*

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 using similar procedures on a research questions across cases will enhance our understanding.

Our study concentrates on a comparison of national admission systems, the main unit of analysis at play.

The EU countries included were France, Germany, Italy, Slovenia, Sweden and the UK (with a particular reference to England), and Australia, Japan and the USA served as international comparisons. These countries were selected because they provide an overview of various types of admission requirements and levels of selectivity at the entrance to higher education. We map the type of admission requirements because we assume that the more requirements the higher education system includes, the more selective the system is, including for inbound mobile students and the more difficult it would be for inbound students to be admitted to higher education.

Most European countries have an open system, which relies mostly of leaving exams (as in the case of France, Germany, Slovenia).

We have counterbalanced these European examples with other systems, including Sweden, Japan, the US and Australia, because they tend to present themselves as selective and rely on a standardised tests. In addition, systems such as the US, Australia and Japan are internationally known for their admission requirements, and have different levels of student mobility. Table 2 below, which illustrates inbound mobility percentages according to UNESCO, shows that the US, although it has one of the world's most famous and perhaps attractive higher education systems, in fact had a lower percentage of inbound mobile students as Japan, a system well-known for its stringent language requirements, in 2010 and 2011 (with 0.35 percentage points of difference in 2010 and 0.52 percentage points of difference in 2011 in the inbound mobility rate in Japan versus the US).

Finally, we have included Australia, given that it constitutes one of the most welcoming countries to inbound mobile students, with nearly a fifth of the student population being international in 2011 (19.83%) according to Table 2.

The relationship between entry requirement to higher education and type of system (open or selective) is however not always clear-cut. The UK relies mostly on leaving exams but has a selective system. Some additional exams may be required for certain disciplines or types of institutions in the countries with a mostly open system, as is the case for the competitive schools (*Grandes Ecoles*) in France.

Table 1 below provides an overview of admission profiles and output measures in selected countries, including entry requirements, measures of the level of selection at the entrance of higher education and the school system (either open which implies an automatic right to access higher education or selective, which means that additional selection criteria operate), and general information regarding the regulation of admissions.

The table also lists main entry requirements. There are other ways to enter higher education but space in the table prevents fuller discussion. For example, students can enter higher education through vocational pathways in England (e.g. Foundation Degrees and Degree Apprenticeships).

Table 1. Overview of admission profile and output measures in selected countries

COUNTRY	MAIN ENTRY REQUIREMENTS	SELECTION	REGULATION
France	Secondary leaving exam (<i>Baccalauréat</i>); Competitive entrance exams and interviews may be required for some for some higher education institutions and for the competitive schools <i>grandes écoles</i>	Open	Ministry defines national policies, guidelines and curricula. Devolved responsibility (via <i>académies</i>) to regions for upper secondary education.
Germany	Secondary school leaving exam (<i>Abitur</i>) leading to a general higher education entrance qualification (<i>allgemeine Hochschulreife</i>); Institutions may require additional exams, for example standardised aptitude tests for medical degrees.	Open	States <i>Länder</i> set guidelines. Standing Conference of Ministers of Education & Cultural Affairs of the 16 states <i>Länder</i> is main instrument of cooperation at national level.
Italy	Secondary school leaving exam (<i>esame di stato di II ciclo</i>); Institution or subject-specific exams may be required for certain degrees	Open	Centralised. Increasing formal delegation of administrative powers from central government via regions, provinces and municipalities / communes to schools.
Slovenia	Secondary school leaving exam (<i>Matura</i>); Institutions may require additional exams	Open *	Decided by higher education institutions themselves. Ministerial statutes regulate admissions of foreigners at 10%.

COUNTRY	MAIN ENTRY REQUIREMENTS	SELECTION	REGULATION
Sweden	Secondary school diploma and high school performance (<i>slutbetyg från gymnasieskolan</i>); Standardised aptitude test (SweSAT); Institutions may require additional exams	Selective	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)	Secondary school leaving exams (<i>A-levels</i> ; <i>GCSEs</i>); Institutions may require additional exams	Selective	Education is a devolved competency across the UK. Ministries define some of the regulations.
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).	Selective	State and territorial responsibilities. The commonwealth (federal) Government promotes national consistency and coherence. Collaboration takes place through the Standing Council on School Education and Early Childhood (SC-SEEC).
Japan	Secondary school diploma; standardized testing (<i>National Centre Test for University Admissions (NCT)</i>); University-specific entrance exams	Selective	Ministry oversees; prefectures operationally responsible for upper secondary, municipalities for compulsory education. Universities and junior colleges set their own admission procedures.

COUNTRY	MAIN ENTRY REQUIREMENTS	SELECTION	REGULATION
USA	High School Diploma; Standardised aptitude test (SAT)	Selective	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.

The asterisk (*) indicates that the assessment is the authors' own and did not feature in the original source.

2.2. Entry requirements in selected countries

Our examples also include *various types of entry requirements*. A majority of countries require secondary qualifications. Additional exams and competitive examinations also exist in certain countries, i.e. in France (*grandes écoles*), in Japan (which uses the National Centre Test for University Admissions (NCT)), and in the US (with the Standardised Admission Test, the SAT). Swedish applicants are selected based on minimal grade requirements and a standardized aptitude test the SweSAT. Australia uses a particular calculation, called the Australian Tertiary Admission Rank (ATAR), in order to compare student performance in the last year of secondary education⁴.

The extent to which tests are used varies. For example, the SweSAT can be taken by applicants to higher education, although it was originally designed to facilitate access from those coming from vocational training. There are not many inbound mobile students in the Swedish higher education system since the test is given only in Swedish (inbound mobile students are able to apply to English-taught programmes without a SweSAT score). The American SAT is required for all applicants to higher education, including 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 choose whether or not to include the test score in entry requirements. In some higher education systems, standardised

⁴ The system is not used by Queensland.

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 subjects 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, influenced by professional associations overseeing the supply of replacement demand for skilled labour for their sectors.

2.3. *Different levels of selectivity across admission systems*

These 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 EU countries have an open system of admissions, where fulfilling a minimal criteria guarantees access, while overall the majority of the examples have some form of selection related to admissions to higher education. Open admission systems do not necessarily correlate with a higher percentage of inbound mobile students. These systems may place additional restrictions on mobile students.

The categorisation of a system's selectivity does not necessarily reflect entry rates. For example, Germany has a nominally open system but a mere 46% of a given age group entering tertiary education (in Germany entry in higher education typically takes place at around 22 years old); while the US has a nominally selective system with 72% of a given age group (average age 23 years old) entering tertiary education in 2011 according to the OECD (2014: 299). In other words, a system can be selective but can also cater for a larger proportion of the population than an open system, which may have a lower number of total places available and different requirements for entry to higher education.

These higher education systems are embedded into *political systems of various types*, with different levels of control. For example, federal systems (Germany, Australia and the US), the British devolved system or the more centralized French system are represented. Devolved, decentralized and federal systems may lead to greater national and regional differences than unitary national systems, but they do not exclude some form of federal coordination. 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.

Understanding political systems is important to appreciating how and whether the political system of admission impact on the treatment of applications from inbound mobile students, and students' access to information. Having decentralized or federal governments in fact does not exclude centralized information system for admissions. British students apply through the University and Colleges Admissions Service (UCAS), which contains information from universities across England, Wales, Scotland and Northern Ireland (the four administrations responsible for devolved education policy in the UK). The *Stiftung für Hochschulzulassung* provides centralised information in Germany, and websites provide information regarding applications across the Australian states and territories⁵. Depending on the country, inbound mobile students may apply directly to the universities of their choices rather than through centralised portals.

3. Enabling mobility through admissions systems

This section presents trends in student mobility, before explaining how admission systems.

3.1. *Trends in inbound and outbound mobility*

Student mobility is an increasingly common phenomenon within higher education globally (OECD, 2013). Students can move at different levels of their studies. They can start their studies in another country than the one in which they have obtained a secondary education qualifications (which is where admission systems play the greater role). They can also spend a period of their home degree away (for example through an exchange programme sponsored

⁵ See MySchool (<http://www.myschool.edu.au>) and MyUniversity (www.myuniversity.gov.au).

by EU programme Erasmus+), or finish their degree in another country (for example through a double degree). Regardless, student mobility flows are considerable. In the UK for example, EU and international students accounted for 30% of the total student population in 2014/2015 according to the Higher Education Statistics Agency HESA (HESA, 2016).

Tables 2 and 3 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 patterns of applicants' mobility.

Table 2. Inbound mobility⁶

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, 2013

Table 3. Outbound mobility ratio

⁶ 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>.

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
Turkey	2.48	1.49	1.52	1.65	1.63	1.41	1.33	-46.31
Sweden	3.12	3.16	3.33	3.40	3.49	3.41	3.51	12.63
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	

Source: UNESCO data centre, 2013

Table 2 indicates that the increase in inbound mobile students across the set of European countries selected as part of this study has been higher than the increase of in inbound mobile students in Australia, Japan and the USA from 2005 to 2011. European countries 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, according to Table 3. Based on national level data in the UK, we assume that a significant proportion of this increase is composed of intra-European mobility flows. The increase in first year students between 2013/1 and 2014/15 was the largest from EU students at 7%-in comparison to international students at -1% and domestic students at 1% in the UK (HESA, 2016).

Yet barriers to mobility exist, including within the EU, and new uncertainties

have arisen as to the state of the law on mobility and non-discrimination. For example, the Government of Belgium has been able to limit by decree the number of inbound mobile students to 30% in light of the high influx of students from neighbouring countries from the EU, especially in medicine, who aim to benefit from more favourable graduation conditions in Belgium. 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 (Marcourt, 2013). Another example is that of universities in Scotland charging tuition fees to English students, even if applicants from England classify as European Union students (Marsden, 2013). Finally, a proposal issued by the Dutch Ministry for Education last year attempted to restrict the access to financial aid of German students, 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 (Myklebust, 2013).

3.2. Student mobility and admission systems

Relatively little attention has been paid to student mobility at the point of entry to higher education. The literature on admissions concentrates more extensively on evaluating the equity or quality of the system, and has not covered the capacity of admission systems to handle mobility extensively (see for example Galland and Oberti, 2000; Hoffman and Lowitzki, 2005, Geiser and Santelices, 2007, Oppedisano, 2009, Shulruf et al., 2009, Chowdry et al., 2010; Adnett et al., 2011; Palmer et al., 2011; Caroleo and Pastore, 2012; Posselt et al, 2012; Pastine and Pastine, 2012; Boliver, 2013).

It is worth noting that the field of admission in higher education, for these first year entrants, was in fact the precipitating factor of an institutional crisis in the EU institutions between 1978 and 1982, as described in Corbett (2005). The European Commission had issued a communication in 1978, based on a resolution for a package of measures for action in education, which included a discussion on deriving 'common policy' for diverse admission systems (COM(78) 468). However, the Council refused to receive this Commission communication on the grounds that it went beyond Community competence as defined in the EEC Treaty (Corbett, 2005:103). The Education Council's refusal to meet until 1982 means that there was a breakdown in education policy making at a crucial early stage just as the Commission was also developing the joint study programmes which would eventually lead the Erasmus programme (Corbett, 2005).

This explains, at least in part, why the issue of entrance qualifications and admissions has since been left aside in European Commission and EU higher education strategy documents. Conversely, issues of access have been a recurrent theme 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). For example the London communiqué of the Bologna process of 2000 reasserted that the principles of non- discrimination and equitable access should be respected and promoted throughout the EHEA.

European institutions are however in the process of raising the research agenda on admissions, having funded two comparative studies on admission systems (Hoareau McGrath et al., 2014). The increasing interest coming from European institutions comes from an increase in the proportion of inbound mobile students at the level of the first year of study, which may put pressure on admission systems. In the UK for example, EU and international students represent close to one fifth (18.4%) of first year students (HESA, 2016)⁷. In addition, there is 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); this unequal mobility flow creating imbalances across European countries.

3.3. *Admissions as a regulating mechanism*

Admission systems regulate student flows, including inbound mobility flows. Admission systems address 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 international students, not enjoying the same status as domestic students. International student mobility is understandably subject to more stringent conditions, given that international applicants do not benefit from a principle of equal treatment laid out in the treaty for EU citizens.

This regulatory process can be fairly complex. Non-national students need to get their diplomas and qualifications recognised by the country of application. This recognition is either the remit of the higher education institution where the student applies or of a specialised agency. This recognition also depends on bilateral or multilateral agreements.

Table 4 covers strengths and weaknesses for international mobile students with a particular stress on EU student mobility.

⁷ Includes EU and non-EU students.

Table 4. 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 inbound mobile students per degree course. Quotas for non-EU applicants Inbound mobility low compared to other large EU economies (e.g. France or UK). Leaving exam (<i>Abitur</i>) grades not compared across states 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 inbound mobile students are unlikely to know
Slovenia	Clarity of requirements.	Lack of information about possibilities for outward mobility. Additional application requirements for inbound mobile students are a possible disincentive for inbound mobile students. Vertical mobility difficult given the examination <i>matura</i> as requirement for higher education.
Sweden	Outbound mobility facilitated by English as secondary school requirement.	Standardised test 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.

COUNTRY	STRENGTHS	WEAKNESSES
UK (England)	High inbound mobility.	Cap on student numbers applicable to EU students.
Australia	Comparatively high percentage of inbound mobile students. 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)
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.

Table 4 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 exist in various European countries.

For example, 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 admissions require three exams and five steps in Japan. 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.

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 Akademischer 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 developed in Italian secondary education) making it more difficult for inbound mobile students, as opposed to domestic students, to gain admission. Stringent regulations placed on quotas can also create labour shortages in certain countries, for example in France in medicine, where doctors with foreign qualifications are required in order to compensate for skills' shortages, according to Jean-Pierre Finance, permanent representative of the French Conference of University Presidents in Brussels (interview, 15th of October 2013).

4. Coordinating admissions across the EU

There are currently no Europe-wide initiatives based on admissions, and an insufficient level of coordination regarding the recognition of entry qualifications. The main coordination effort at the level of admissions includes an information portal *Study in Europe*⁸, which aims to provide information on higher education systems and requirements in EU countries. This section puts forward two proposals for EU institutions to further support its member states by coordinating admission systems.

4.1. *The case for an EU registry of admissions practices*

Introducing a unique EU-wide admissions system would be difficult politically and practically. It would imply that Member States harmonise their policies on admissions and selection of students, contrary to the treaty commitment made at Maastricht and incorporated in the Treaty on the

⁸ See <http://www.studyineurope.eu/>

Functioning of the European Union (Article 165). Admission systems are rooted within the respective higher education and legal context of a country and as such are an expression of the culture of these countries (Teichler et al., 2011). For example, Germany, like other European countries, has a strong legal interpretation of the right to education: in Germany's case this includes Articles 72.6 (which stipulates that the states (*Länder*) can enact laws at variance with federal legislation) and 74.33 (which states that principle of concurrent legislative power applies to admission to higher education) of the German Basic Law (*Grundgesetz*). The UK, in contrast, follows a convention known as the Robbins principle. This treats access to higher education as available to all who are 'qualified by ability and attainment' (Committee on Higher Education, 1963).

In addition, on the same basis as a student information portal exists, the European Union could facilitate the exchange of admission information among professionals through a European registry of national admissions' agencies and admissions' procedures. Relevant agencies include admissions' agencies as well as agencies responsible for the recognition of international qualifications.

This exchange of information could be designed for practitioners (in agencies or relevant units of higher education institutions) rather than students⁹. 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. This cross-country learning would also result in tackling key themes related to equity and quality in admissions. Professor Jean-Pierre Finance, representative of the French *Conférence des Présidents d'Université* in Brussels has argued that the most effective way of promoting best practice would be for European institutions to encourage the mutual recognition of admission procedures. A registry could generate a better understanding of entry qualifications in other countries and facilitate the exchange of practices on admissions, and admissions best practices across Europe. Other registries for professional associations exist in the EU, including the European registry for quality assurance agencies and the Lifelong Guidance Policy Network (ELGPN), and are operated by national bodies such as the national Association for College Admissions and Counselling in the US and the Universities and Colleges Admissions Service in the UK.

Building on this experience, a European registry for admissions agencies and units could encourage the diffusion of best practices (for example on matching student aspirations with realistic courses, and on how to address equity and quality

⁹ 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/>.

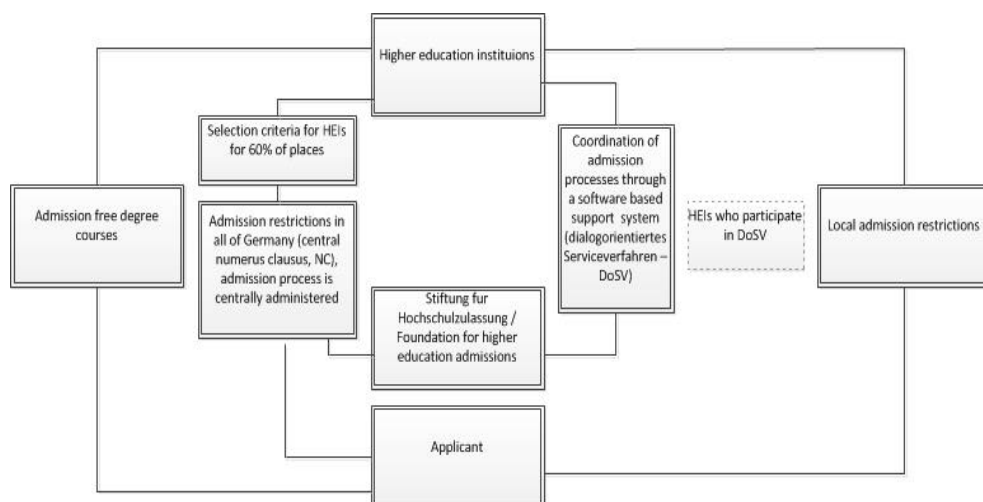
issues), as well as fostering transparency and recognition in admissions, and providing advice on technical issues in the operation of high quality admissions systems that benefit mobile students. This registry could include agencies such as the French Admission Post-Bac, the German Stiftung fur Hochschulzulassung, or the Slovenian National examination centre.

3.2. The case for an EU platform for processing applications from mobile students

Going further, the EU could also provide greater support to member states to process applications from mobile students, based on the German admissions model. Different modes of coordination exist in order to manage student applications. We have selected the German model because it includes features which could be of interest to an EU-wide extension. First, Germany is one of the countries with a centralised effort to manage applications to higher education. Second, the German model is attractive because it mixes a dual system based on federal/centralised law and state law. This dual system bears similarities to the challenges of the EU institutions, which have to act in compliance with their remit *vis-à-vis* state legislation. Third, the German system allows for legislative changes in the independence of higher education institutions, which would resonate in a European landscape where many higher education institutions have recently been reformed as part of laws to increase their autonomy.

The multi-layered German applications process involves centralised and decentralised elements as summarised in Figure 1.

Figure 1. Admissions system in Germany

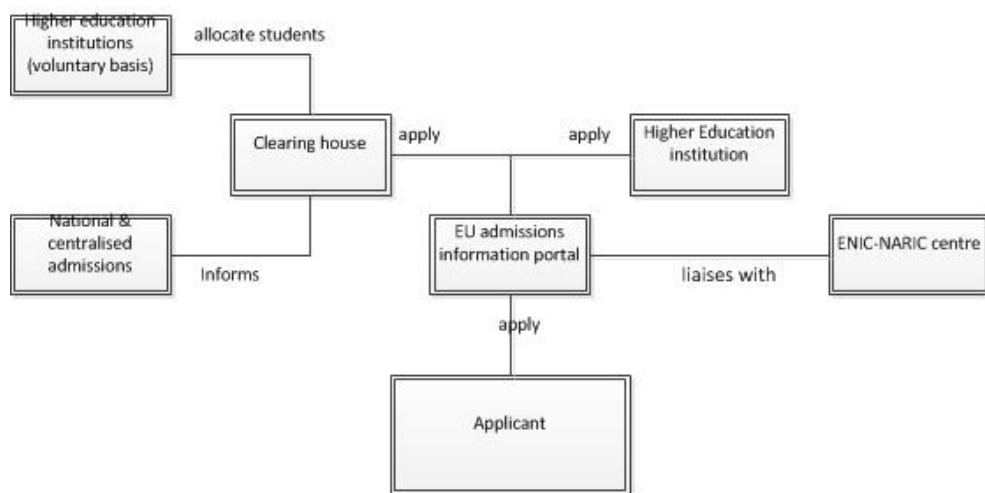


Applicants to German higher education institutions have the option to research a degree course and identify which of the optional admission process applies using for example the central database University Compass (*Hochschulkompass*)¹⁰. This central database helps applicants identify the courses he would like to apply to, the preferences that they have and the regime applicable to them. Courses with a national *numerus clausus*, including courses in medicine, dentistry, veterinary medicine and pharmacy, or those with a local *numerus clausus* are managed by the central clearing house (*Stiftung für Hochschulzulassung*). Students are allocated a place at university according to quotas based on students' high school grades and waiting times. The first 20% of places are allocated to applicants with very good average grades from high school and 20% of places to applicants who have waited since high school (for example by doing an apprenticeship). Applicants can also submit separate and potentially completely different choices to institutions (Kübler, 2011). Foreign (non-EU) applicants fall outside this system because they apply directly to the higher education institution of their choice.

The German processing of application could inform an EU model.

A proposal for an EU-wide support service for admissions is included in Figure 2.

Figure 2. A suggested information portal and support service for higher education admissions in Europe



Based on the German example, an EU platform could be envisaged supporting national admission systems receiving multiple applications from mobile students, as described in Figure 2 above. Building on substantial Member

¹⁰ More information available at <http://www.hochschulkompass.de/>.

State experience, this could be a politically acceptable solution for in the medium term, and would be in line with the voluntary cooperation mechanisms which operate in the European Higher Education Area.

Clearing houses for admissions already exist in some Member States. UK and Irish students can apply through the independent initiative European Universities Central Application Support Service Eunicas mentioned in section 3¹¹. Eunicas enables UK and Irish students to apply to up to eight degree programmes, taught through English in universities across Europe. In addition to accessing comprehensive information on programmes in Europe, Eunicas provides a support service to students, including independent advice on the choice of the programme. Eunicas is available to students upon registration and the payment of a small administrative fee (28 EUR).

A similar approach is supported by a German expert, Dr Ulf Bade from the *Stiftung für Hochschulzulassung*. He has suggested an effective cross-border technical support service, similar to the German optional central service for admission processes (*dialogorientiertes Serviceverfahren* – DoSV). In the option proposed here, 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 platform would be to reduce the transaction costs of multiple applications for students wishing to apply to several institutions across Europe. The financial costs of applications are admittedly higher for non-EU students: For example, the University of Cambridge charges around 216.45 euros in application fees for students from outside the European Union; 38.2 euros (GBP30) to process international applications, and 178.25 euros (GBP140) if selected for an entrance interview¹². EU applicants still bear costs to meet the requirements for different institutions, which, including in public higher education institutions, may involve different translation costs for transcripts and diplomas, or the time spent trying to understand different systems and filling in different applications. The European Commission and the Council of Europe have encouraged higher education institutions to issue Diploma Supplements automatically and free of charge with the view to facilitating the recognition of qualifications. However, 36% of the member states of the European Higher Education Area did not issue the Diploma Supplement automatically, and three countries of the EHEA charged a fee for this Diploma Supplement to be issued (European Commission/EACEA/Eurydice, 2015: 74-76). In addition, informal

¹¹ <http://www.eunicas.co.uk/>

¹² <http://www.undergraduate.study.cam.ac.uk/applying/copa/fees>

accounts have criticised these national figures and suggested that the actual issuance of the Diploma Supplement at the institutional level may be relatively low at the level of the higher education institutions. The European Commission has sought to investigate the veracity of these accounts by commissioning a study on the implementation of the Diploma Supplement and ways to reform it in early 2016.

An EU platform would also reduce transaction costs for institutions, which would be informed in a timelier manner of the applicant's decision pending the returns on their other applications. 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.

The platform could be introduced and administered independently from national admission systems without any need to harmonise existing admissions systems.

Use of the platform by higher education institutions would be voluntary. An institution would decide whether or not to opt in to the proposed European clearinghouse. The platform 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 platform 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 equivalents 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. In Australia, the grades of foreign students are also converted based on the applicant's position within the distribution of applicants' performance, using a ranking system called the Tertiary Entrance Rank corresponding to the course chosen. Thus the platform could reduce the admissions transaction costs for European universities.

5. Conclusion

This paper has looked at the admission systems for entry to higher education in selected countries of the European Union, and more precisely at how European admission systems handle growing student mobility. The role of admission in student mobility is a contemporary issue, which has not been extensively studied in the literature yet. We have relied on a cross-country comparison, including admissions systems in Australia, Japan and the US to further inform the debate.

This paper has shown that two thirds of the European admission systems have the ambition to allow open access to higher education, with a reliance on secondary education qualifications as a main requirement for entry into higher education. Yet, our paper dismisses the idea that open admission systems automatically facilitate mobility. Examples of implicit or explicit barriers to at least one group of students, namely inbound mobile students, including EU students, exist in Europe. In addition, high transaction costs for students and institutions attendant on multiple transactions are increasing with the growth in mobile students in Europe, which exceed student mobility flows in the US, Japan and Australia.

We propose that the European Commission may contribute to reducing these transaction costs and supporting cooperation between Member States to foster mobility at the level of admissions in two ways: by facilitating the exchange of information regarding admissions, for example through a European registry which may also cover an exchange on the policy issues related to admissions; and by providing more support to national admission bodies in the recruitment of EU students through a European-wide platform. These proposals have not been piloted or evaluated. Hence, further research should include gathering EU-wide information on application patterns across a broader set of EU countries, in order to assess the validity of further European intervention in the field of admission to higher education.

6. References

- Adnett, N., McCaig, C., Slack, K., Bowers-Brown, T. (2011). *Achieving 'transparency, consistency and fairness' in English HE admissions: progress since Schwartz?* Higher Education Quarterly, 65 (1): 12-33.
- Boliver, V. (2013). *How fair is access to more prestigious UK universities*, The British Journal of Sociology, 64(2), 354-363.
- Caroleo, F. and Pastore, F. (2012). Talking about the Pigou paradox: Socio-educational background and educational outcomes of Alma Laurea. *International Journal of Manpower*, 33(1), 27-50
- Cervantes, M. and Guellec, D. (2002). *The Brain drain, old myths new realities*, OECD Observer No: 230. Available at: http://www.oecdobserver.org/news/fullstory.php/aid/673/The_brain_drain:_Old_myths,_new_realities.html
- Chowdry, H., Crawford, C., Dearden, L., Goodman, A. and Vignoles, A. (2010). *Widening participation in higher education: analysis using linked administrative data*, IFS Working Paper, W10:04.
- Committee on Higher Education (1963). *Higher education: report of the Committee appointed by the Prime Minister under the Chairmanship of*

- Lord Robbins 1961-63*, 2154, HMSO: London. Available at: <http://www.educationengland.org.uk/documents/robbins/robbins1963.html>.
- Corbett, A. (2005). *Universities and the Europe of knowledge: ideas, institutions and policy entrepreneurship in European Union Higher Education, 1955-2005*, Palgrave: Basingstoke.
- Deutscher Akademischer Austauschdienst (2013). University admission and requirements. Available at: <https://www.daad.de/deutschland/nach-deutschland/voraussetzungen/en/6017-university-admission-and-requirements/>.
- Education Committee (1980). *General Report (agreed in substance by the Council and the Ministers of Education meeting within the Council at their session of 17 June 1980)*.
- Egging, H. (ed.) (2010). *Access and equity, global perspectives on Higher education*, Sense Publishers: Rotterdam.
- European Commission (2012). *Rethinking education: Investing in skills for better socio-economic outcomes*, Brussels 20.11.2012. COM (2012): 669 final. Available at: http://ec.europa.eu/education/news/rethinking/com669_en.pdf.
- European Commission (2015). 'Call for tender: study on the impact of admission systems on higher education outcomes', EAC/20/2015. Available at: http://ec.europa.eu/education/calls/2015_en.htm
- European Commission/EACEA/Eurydice, 2015. *The European Higher Education Area in 2015: Bologna Process Implementation Report*. Luxembourg: Publications Office of the European Union.
- European Consortium for Accreditation (2012). *Agreement of cooperation, 13th of June*. Available at: http://www.eacaconsortium.net/admin/files/assets/subsites/1/documenten/1341929050_1340721759-agreement-of-cooperation-2012-2015-13.06.2012.pdf
- European Ministers of Education (1999). 'Bologna Declaration of 19 June 1999'. Available at: http://www.ehea.info/Uploads/Declarations/BOLOGNA_DECLARATION1.pdf
- European Parliament 'Report on the contribution of the European institutions to the consolidation and progress of the Bologna process', (2011/2180(INI)). Available at <http://www.europarl.europa.eu/sides/getDoc.do?type=REPORT&reference=A7-2012-0035&language=EN>
- European Parliament resolution on the contribution of European institutions to the consolidation and progress of the Bologna process of the 13 March 2012

- European Court of Justice (2012). Judgement of the Court case C 542/09, European Commission against Kingdom of the Netherlands, 14 June, InfoCuria. Available at: <http://curia.europa.eu/juris/document/document.jsf?text=&docid=123844&pageIndex=0&doclang=EN&mode=req&dir=&occ=first&part=1&cid=936118>.
- Galland, O and Oberti, M. (2000). *Higher education students in contemporary France*, Journal of Education Policy, 15 (1):105-116.
- Geiser, S. and Santelices, M. V. (2007). *Validity of high school grades in predicting student success beyond the freshman year: High-school record vs. standardized tests as indicators of four-year college outcomes*, Research & Occasional Paper Series, Centre for Studies in Higher Education, University of California Berkeley, 6(07), 1-35.
- Higher Education Statistics Agency (HESA) (2016). 'Table 2', 09th of April 2016, Table 2, Available at: <https://www.hesa.ac.uk/sfr224>
- Hoareau McGrath, C. Henham, M. L., Corbett, A., Durazzi, N., Frearson, M., Janta, B., Kamphuis, B., Katashiro, E., Brankovic, N., Guerin, B., Manville, C. and Schweppenstedde, D. (2014). 'Higher Education entrance qualifications and Exams in Europe: a Comparison', Brussels: European Parliament, IP/B/CULT/IC/2013_007. Available at: [http://www.europarl.europa.eu/RegData/etudes/etudes/join/2014/529057/IPOL-CULT_ET\(2014\)529057_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/etudes/join/2014/529057/IPOL-CULT_ET(2014)529057_EN.pdf)
- Hoffman, J. and Lowitzki, K. (2005). *Predicting college success with high school grades and test Scores: Limitations for minority students*, The Review of Higher Education, 28 (4): 455-474.
- European Higher Education Area Ministerial Conference (2012). *Interministerial communiqué of Bucharest*. Available at: [http://www.ehea.info/Uploads/\(1\)/Bucharest%20Communique%202012.pdf](http://www.ehea.info/Uploads/(1)/Bucharest%20Communique%202012.pdf).
- European Ministers of Education (2007) 'Towards the Higher education area: responding to challenges in a globalised world', Communiqué, London 18 May 2007. Available at: http://www.ehea.info/Uploads/Declarations/London_Communique18May2007.pdf
- Joint Quality Initiative (2004). *Shared 'Dublin' descriptors for short cycle, first cycle, second cycle and third cycle awards*, Draft 1 working document on JQI meeting in Dublin. Available at: http://www.eua.be/typo3conf/ext/bzb_securelink/pushFile.php?cuid=2556&file=fileadmin/user_upload/files/EUA1_documents/dublin_descriptors.pdf.
- Kübler, D. (2011). *University admission practices – Germany, matching-in-practice. eu*. Available at: <http://www.matching-in-practice.eu/higher-education-in-germany/>

- Sargeant, C., Foot, E., Houghton, E., O'Donnell, S. (2012). *INCA comparative tables*. International Review of Curriculum and Assessment Frameworks Internet Archive. London. Available at: <http://www.nfer.ac.uk/what-we-do/information-and-reviews/inca/INCAcomparativetablesMarch2012.pdf>.
- Marsden, S. (2013). 'Greedy' Scottish universities offer more clearing places to fee-paying English students', The Telegraph, 04 September. Available at: <http://www.telegraph.co.uk/education/universityeducation/10287447/Greedy-Scottish-universities-offer-more-clearing-places-to-fee-paying-English-students.html>.
- Marcourt (2013). *Actions phares*. Available at: http://jcmarcourt.be/actions-phares/enseignement-superieur.htm#.UsXKa_RdU0E.
- Mill, J. S. (1943), *A system of logic, ratiocinative and inductive*, Longmans, Green, and Co.: London.
- Myklebust, J. P. (2013). *Countries watch EU court rulings against student discrimination*, University World News. Available at: <http://www.universityworldnews.com/article.php?story=20130814165730339>.
- National Admissions for College Admissions and Counselling (NACAC) (2011a), Admission Trends Survey, 2011. Available at: <http://www.nacacnet.org/studentinfo/articles/Pages/Factors-in-the-Admission-Decision.aspx>.
- Organisation for Economic Cooperation and Development (OECD) (2003). Glossary of statistical terms, 5th of March. Available at: <http://stats.oecd.org/glossary/detail.asp?ID=1052>
- Organisation for Economic Cooperation and Development (OECD) (2013). How is international student mobility shaping up?, 1st of July, Paris: OECD. Available at: http://www.oecd-library.org/education/how-is-international-student-mobility-shaping-up_5k43k8r4k821-en
- Organisation for Economic Cooperation and Development (2014). 'Entry rates into tertiary education and average age of new entrants 2011', Table C31.A, in *Education at a Glance*, p. 299, Paris: OECD, Retrieved from: [https://www.oecd.org/edu/eag2013%20\(eng\)--FINAL%2020%20June%202013.pdf](https://www.oecd.org/edu/eag2013%20(eng)--FINAL%2020%20June%202013.pdf)
- Oppedisano, V. (2009). *Open university admission policies and drop-out rates in Europe*, Working Papers 200944, Geary Institute, Dublin: University College Dublin.
- Palmer, N. Bexley, E. and Jame, R. (2011). *Selection and participation in higher education university selection in support of student success and diversity of participation*, CSHE: Melbourne.
- Pastine, I. and Pastine, T. (2012). *All-pay contests with constraints*, Working Papers 201204, School Of Economics, University College Dublin.

- Posselt, J., Jaquette, O., Bielby, R., and Bastedo, M. (2012). *Access without equity: Longitudinal analyses of institutional stratification by race and ethnicity, 1972-2004*, American Educational Research Journal, 1-38.
- Saxinian, A. L. (2007). *The New Argonauts: regional advantage in a global economy*, Harvard University Press: Cambridge.
- Shulruf, B. (2009). *A dual admission model for equity in higher education: a multi-cohort longitudinal study*, Procedia- Social and Behavioral Sciences, 1 (1): 2416-2420.
- UNESCO (2012). *Glossary*. Available at:
<http://www.uis.unesco.org/Pages/Glossary.aspx>.
- Teichler, U., Ferenz, I. and Wachter, B. (2011). *Mapping mobility in European higher education: volume I: overview and trends*. Available at: http://ec.europa.eu/education/more-information/doc/2011/aca_en.pdf.
- Wildavsky, B. (2010). *The Great Brain race: How global universities are reshaping the world*, Princeton University Press: Princeton.
- Yin, R. K. (1984). *Case study research: design and methods*, Sage Publications: Beverly Hills.