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Selection and Matching in Higher Education

An international comparative study

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Nederlandstalige Samenvatting

In het Nederlandse debat over de toekomst van het hoger onderwijsbestel is "***de selectie van studenten***" naast profilering één van de meest prominente onderwerpen. De Commissie Veerman (Veerman ***et al.***, 2010) heeft onder andere voorgesteld om het voor alle instellingen mogelijk te maken hun studenten aan de poort te selecteren. Daarbij moet selectie echter niet leiden tot een beperking van de toegankelijkheid maar het moet een hulpmiddel zijn om een betere match tot stand te brengen tussen de capaciteiten en interesses van de student en de oriëntatie van de gekozen opleiding: "***de juiste student op de juiste plaats"***. Op deze wijze wordt beoogd om de studiemotivatie en betrokkenheid van studenten en docenten te stimuleren, studie-uitval en omzwaaien te reduceren en de studieresultaten en rendementen te verhogen, vooral in de bachelorfase (Veerman ***et al.***, 2010).

De onderliggende studie analyseert de selectie van studenten in negen landen met een relatief strenge selectie van studenten en/of met relatief hoge studieprestaties. De gekozen landen zijn: Australië, Californië, Denemarken, Engeland, Finland, Duitsland, Japan, Zweden en Zwitserland. In deze case studies is vooral gekeken of en hoe "***matching***" een relevant en/of succesvol onderdeel uitmaakt van de selectieprocessen en procedures. Daarom sluit ieder landenhoofdstuk af met de lessen die uit de case studie getrokken kunnen worden. De belangrijkste uitkomsten van deze internationale inventarisatie van de ervaringen met selectie zijn de volgende:

- Er is bijna alom een groei van het aantal studenten waar te nemen. Alle landen proberen op hun eigen manier om te gaan met de problemen van deze druk op het hoger onderwijssysteem. Selectie vormt daarbij één element.
- In het algemeen vormt een voortgezetonderwijsdiploma de basisvoorwaarde voor toelating tot het hoger onderwijs. Vaak kunnen instellingen relatief autonoom binnen bepaalde wettelijke kaders hun eigen toelatingsbeleid bepalen. Het selectiekader heeft vaak tot doel om bepaalde groepen studenten te beschermen en om capaciteitsproblemen het hoofd te bieden. In Californië moet bijvoorbeeld 12,5% van de beste studenten, op grond van hun gemiddelde eindcijfer in bepaalde vakken, worden toegelaten tot de University of California, de hoogst aangeschreven instelling aldaar. In Duitsland gelden federale restricties voor studieprogramma's waar het aantal aanmeldingen het aantal beschikbare studieplaatsen overstijgt. In het VK ziet de ***Office of Fair Access*** erop toe dat en hoe universiteiten een deel van hun collegegeldinkomsten inzetten om studenten uit lagere sociaal-economische groepen een studieplaats te bieden.
- In veel landen vormen de eindcijfers in het secundair onderwijs of staatsexamens de belangrijkste basis voor toelating omdat deze worden gezien als de beste voorspellers voor studiesucces in het hoger onderwijs. Instellingen kunnen daarnaast vaak nog aanvullende voorwaarden stellen, die dan een grotere rol spelen dan cijfers of centrale examens. In Japan ondergaan aankomend studenten bijvoorbeeld een dubbele screening. Naast een nationale test geldt er voor iedere instelling een afzonderlijk en

strenger toelatingsexamen plaats. In Engeland moeten er bij het toelatingsformulier ook een persoonlijke motivatiebrief en een referentie van de middelbare school worden toegevoegd. In Finland spelen vooral intake-interviews een grote rol. Maar persoonlijke interviews worden vaak als een kostbaar instrument gezien en gelden derhalve meer als uitzondering dan als regel, behalve in Oxford, Cambridge en Finland.

- Verschillende landen hebben een centraal toelatingsorgaan of systeem. Centrale toelatingsorganen beperken de nadruk op specifieke instellingstesten en vormen op deze manier een bescherming tegen de extra kosten, werk en complexiteit van een sterke decentrale toelating.
- Sommige landen bevinden zich in het proces om hun selectieproces grondig te hervormen of een nieuw systeem te implementeren. De discussie binnen deze hervormingen spitsen zich vaak toe op de financiële implicaties voor de hoger onderwijsinstellingen.
- Studiesucces moet altijd worden bezien in de context van het eigen (hoger)onderwijssysteem. Zwitserland en Duitsland kennen bijvoorbeeld beide binnen OECD verband relatief lage deelname- en slaagcijferes (rendementen) omdat er een goed aanbod en veel vraag is naar professioneel onderwijs op tertiair Type-B niveau.
- In het algemeen lijkt de vraag van “matching” van studenten met een bij hen passende opleidingsplaats geen prominente rol te spelen in de onderzochte landen. Het belangrijkste thema blijft het zekerstellen van de toegankelijkheid voor studenten uit sociaal minderbedeelde groepen en minderheden. Maar het onderwerp speelt wel een rol als het gaat om het gebruik van geaggregeerde informatie zoals gemiddelde eindcijfers en welke rol zulke informatie echt zou moeten hebben in het selectieproces.

Executive Summary

Major issues in relation to selection and matching in higher education

This document reflects on the notion that selection in Dutch higher education might lead to better "matching" between students and their chosen field with positive effects on study output. With the purpose of feeding into the Dutch national debate on the matter, this report takes a closer look at how selection is organized and functions in a nine countries.

The main findings include (see also Dutch Summary above):

- Expansion of student populations is a common trend. All countries are trying to tackle this problem in different ways. Selection policy is one of these ways
- Generally, secondary school matriculation has been the principal prerequisite for entry into tertiary education. Institutions can autonomously set their admissions within a legal framework. Such a framework is typically meant to protect certain groups of students and to address capacity problems in the system
- High School grades and/or state examinations are largely used as the basis for admission and are considered the best predictors of collegiate success. Institutions can set up additional requirements, which might outweigh the role of grades or central exams. In general, personal interviews are said to be very costly and are an exception rather than the rule
- Several countries have central admission agencies. Central admission agencies may limit undue emphasis on institutional admission testing. Over-reliance on institutional admissions may produce more costs, labour and complexity
- Some countries are in the process of implementing or designing major reforms in their selection rules. These reforms are usually debated because of their financial implications for tertiary providers
- Student success must be assessed against the backdrop of tertiary offerings. Some countries (e.g. Germany and Switzerland) provide sophisticated professional tertiary education (tertiary B-level), which is much sought by school leavers
- Overall, the question of "matching" does not appear to have the greatest prominence in the countries studied. Ensuring access for minorities or the socially disenfranchised appears still to be the main concern. However, the issue is salient when it comes to the use of aggregate information such as is presented in, say, high school grades and what weight such information should really have in selection processes

The main findings per country are as follows:

Australia

- Higher education providers in Australia include universities, self-accredited providers or non self-accredited providers
- Australian universities are comprehensive institutions offering a variety of programmes. Australia's higher education is not binary nor is secondary education tiered
- Student numbers have expanded over the years. In 2009 the number of commencing undergraduate domestic students was reported to be 204,879, against 189,516 in 2008—an 8% increase year-on-year. 85% of eligible applicants are offered a place in higher education
- In Australia, undergraduate admission is usually based on a score, rank or index determined by the tertiary entrance system in a student's state or territory
- In 2009 the Australian Tertiary Admissions Rank (ATAR) was gradually introduced to unify the university entrance system in Australia. Previously, each state or territory had its own individual system
- The ATAR is derived from student performance in a standardised senior secondary school curriculum, and is intended to support the reliable evaluation and comparison of student achievement. It is the most important determinant in admission procedures in Australia
- The ATAR is an aggregate score that does not uncover subject-specific strengths or weaknesses.
- Each university maintains its own admissions policies but, because applications are coordinated centrally, undue emphasis on institutional admission testing is avoided
- Some students may have a further opportunity to demonstrate their ability by undertaking student aptitude tests or other alternative paths but in general, the use of qualitative selection criteria remains rather limited
- UniTEST is an example of the attempt to introduce in Australia aptitude tests in university admission procedures to offset the over-reliance on the tertiary education scores
- In Australia, selection is not primarily concerned with "matching" student preferences and abilities with a course of study. Current policies focus on expanding participation and insuring diversity
- In 2012 Australia will introduce an "uncapped placement" system, which is expected to increase participation because students will have a better chance of gaining their first-preference course and thus a greater incentive to enrol.
- The "uncapped placement" system is meant to "allow government funding to shift between institutions in response to student demand and to create a system in which each institution's funding is determined dynamically by the quality of its performance rather than by an historically-based system of centrally-planned student load allocations" (Bradley report)

California (United States)

- Higher education in the United States (U.S.) is the responsibility of the states, rather than of the federal government. Institutions are free to set their admission policies within certain boundaries set by the states
- In California there are three paths to admission: (a) eligibility state-wide, (b) eligibility in the local context (ELC) and (c) eligibility by examination alone. The high school GPA plays an important role and differs by institutions
- UC and CSU may impose additional requirements, which might differ by campus
- In California there are both public and private institutions of higher education. Private institutions can be for profit or non-for profit. Public institutions include the University of California (UC), California State University (CSU), and the Californian Community College system (CCC)
- According to the 1960 California Master Plan, in-state applicants in the top 12.5% of their high school graduating classes must be offered a place at UC, while in-state applicants in the top 33.3% of their high school graduating classes must be offered a place CSU. CCCs admit any student capable of benefiting from instruction
- The kind of review known as Comprehensive Review considers an extensive set of criteria per application (e.g. letters of recommendation, exam scores, high school grades, socio-economic status, and life challenges). However, each section is reviewed by different people The "Holistic review" is a subset of the former: it looks at each application in its entirety. The "Holistic review" is widely used at UC
- In California there is a good transfer system allowing students to transfer from community colleges to the university sector without standardized test requirements but only based on their GPA
- Policy debate on selection focuses traditionally on predictive validity and inclusiveness.
- A major change is going to take place in 2012: there will be a shift from 4% to 9% eligibility in UC's ELC (Eligibility in the Local Context)

Denmark

- The higher education system in Denmark has a binary structure. Universities offer programmes at three levels. The Ministry of Science, Technology and Innovation is responsible for the university sector
- The 2007 Universities' Law increases university autonomy
- University education is free for Danish students and universities are funded via a student voucher system
- Student selection is coordinated in the country via a central admissions agency, KOT
- The criteria for selection are decided by the faculties in universities and include general and specific criteria and vary per programme and per university
- Universities also decide how many students will be admitted in their programmes but the Ministry can fix the number of students for certain fields of study
- The student admissions are regulated via the "Quota 1" and "Quota 2" system. In "Quota 1", admissions are based on high school exam grades; the "Quota 2" system is geared towards students who have professional experiences

- Some universities have been using “soft” student selection mechanisms for “Quota 2” applicants
- The Life Long Learning strategy addresses the issues of the lack of information dissemination and transparency in programmes offered at higher education institutions and is an answer to the government’s aspirations to increase participation

England (United Kingdom)

- The UK has a unitary higher education system. Students have to pay fees the amount of which vary per programme, per level of study and per university and per type of student
- British universities are free to select their students
- The application to the undergraduate degree programmes are processed by the central agency UCAS
- Besides the grades obtained from school or college qualifications, the application form requires a personal statement from the applicant and a reference from the applicant’s school or college which assesses his/her suitability for higher education
- Some universities may hold interviews, use admissions tests and/or use other contextual factors.
- The Higher Education Act 2004 (England and Wales) introduced initiatives to help students from poorer backgrounds to access higher education, such as a means-tested financial aid for students and the creation of the Office for Fair Access (OFFA).
- Universities must agreements with the OFFA. The OFFA checks how universities invest some of their additional income from fees to attract applications from students from low income groups
- In the past five years universities received £392 mi to widen participation. The evaluation of this initiative showed a lack of transparency.
- Several initiatives have been put in place to facilitate the admissions process (e.g. the Delivery Partnership, the Supporting Professionalism in Admissions Programme for universities in – both in 2006)
- According to Scott (2009), in the United Kingdom, a distinction is now drawn between “increasing participation” and 'widening participation'
- The new Browne’ Review Report (2010) advises (among other things) to remove the cap on student recruitment and increase fees. The government’s response so far has been retaining the cap but increasing the fee

Finland

- Finland has a binary higher education system. Universities are state-owned and mostly financed from the state budget. Participation has grown since the binary model was introduced
- Students do not need to pay tuition for their education
- Under the new Universities Act 2009, Finnish universities are independent corporations under public law or foundations under private law
- The selection process to higher education is administered centrally through the Ministry run internet platform

- Admissions criteria are set by the institutions. The institutions perform entry examinations and select their students. Universities decide on the field-specific student intake according to the agreed target number of degrees. Universities can set quotas for specific types of students
- Student numbers are determined in performance negotiations with the Ministry
- The Ministry is proposing to reform student admission in higher education to expedite the transition from the secondary level to higher education and improve the position of those seeking admission for the first time
- The proposal is to focus on matriculation grades or vocational qualification certificate and have a separate selection for those who have already gained admission to higher education institutions

Germany

- In Germany, the Abitur or another equivalent school-leaving certificate serves as the main entrance requirement to access (public) higher education
- In some cases, universities have special admission procedures to identify a course related aptitude
- Since 2009, the right to apply has also been granted to those persons who have successfully completed vocational training and have acquired three years of experience in their occupation
- Nation-wide admission restrictions apply for those study programs where the number of applications surpasses the number of available study places (biology, medicine, pharmacy, psychology, dentistry). Access is then administered by HochschulSTART (formerly ZVS), according to the 20-60-20 rule: 20% of study places to the best graduates, 20% according to a “post-Abitur waiting list” and 60% distributed by the institutions
- There may be local admission restrictions for courses that do not form part of the national admission procedure. In this case the higher education institution is solely responsible for admission
- Although local admission procedures promise a better matching between student and study program, the trade-off effects are higher administrative costs and considerable delays in the allocation of study places
- Students tend to apply at several universities because multiple applications are believed to increase admission prospects
- Germany’s first-time graduation rates are 23%. The OECD average is 39%. However, it must be recalled that this indicator just captures first-time graduation from university. To get an overall picture of the first-time graduation situation in Germany, one must consider that Germany has a sophisticated postsecondary vocational training system
- Tertiary B-level education is popular among high school graduates

Japan

- In Japan, providers of tertiary education include universities, junior colleges and colleges of technology

- In Japan private institutions constitute about 80% of the over 1,000 tertiary education providers
- Universities and junior colleges are autonomous in setting their own admission procedures
- To access national and public universities, applicants must go through a double screening: the National Centre Test (NCT) and the entrance exams created and administered by each institution
- The NCT is meant to measure basic academic achievement of university applicants across different subject areas upon the completion of high school. However, the results of the NCT is used in various ways based on the purposes of each university
- Private providers may employ different screening procedures than public universities. However, admission by a one-shot examination is still the primary method.
- Almost 20% of private universities also use the NCT. Thus, private providers have taken up government reforms that were meant for public institutions
- In Japan the high school recommendations system is important too. There are two types of recommendation: an "open" recommendation (can be used by all high schools) and a "certified" recommendation (can be used by high schools that individual universities choose to certify)
- Over the past half a century increasing numbers of Japanese university students take alternative routes to access higher education
- In Japan, there are three groups of universities: highly selective, mildly competitive and "F-Rank". Japanese society attaches much importance to prestige in higher education (rather than a university degree as such). Élite universities tend to adopt entrance examination more than mass universities
- The key discussion in Japan is about entry examinations, their value and true purpose. Competition in these exams is so strong that the expression "examination hell" has become a common quote in Japanese society
- Japanese graduation rates are slightly above OECD-average

Sweden

- Higher education in Sweden has a unitary structure where most of higher education and research is carried out at the state institutions. There is great variety among institutions in size and degree of specialisation
- The Swedish higher education system has been expanding during the past two decades
- Universities offer a wide range of freestanding, self-contained courses besides regular study programmes
- The so-called "25/4"rule, meant to promote access for students over 25, and fixing the percentage of study places for adult applicants resulted in a marked increase of the number of the "mature students"
- In 2006 50% of all applicants were offered places in higher education programmes
- The crowding out of younger applicants due to such policies and a large variety of admission criteria has become a serious policy concern in the past years. So, admission requirements were changed to increase the number of recent school leavers before the age 25 by giving less weight to work experience and allowing the upper-secondary students to take national test

Switzerland

- In Switzerland, the higher education institution itself assumes responsibility for the student selection process
- Swiss universities have a classic entitlement system in place for most of their study programmes. All high school graduates (i.e. who have obtained a matura/ maturité/ maturità), are eligible for higher education
- Swiss high school graduation rates are relatively low
- Foreign candidates are usually required to prove their ability in a Swiss or Cantonal aptitude test if their school-leaving certificate is not deemed equivalent to the Swiss matura/ maturité/ maturità
- For subjects with a numerus clausus (medicine, dentistry and veterinary sciences) admittance is granted upon sitting an aptitude test prepared by the Rector's Conference
- Switzerland's study success rate is 70% (just within OECD average)

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1 Introduction: Selection and Matching in Higher Education

One of the most prominent topics in today's debates on the future of Dutch higher education is student selection. In 2010, the Veerman Committee had suggested that all tertiary providers should be allowed to select applicants at entry. However, selection ought to yield a better match between students' interests and competences and the orientation of their elected study programmes. Selection should not translate into a curtailment of participation in postsecondary education. Hence, the overarching object is ensuring students and providers alike improve their ability of getting the right student in the right spot, which in turn is expected to bolster study motivation and student/faculty involvement, reduce drop-outs and transfers, and boost baccalaureate production (Veerman ***et al***., 2010).

In many countries capacity and funding is limited. Selection procedures are implemented to regulate access either to the system overall or to certain fields where demand is particular strong. Criteria used might include candidates' quality and motivations, as well as requirements set by programmes or institutions. This study will include nine brief country studies. The countries, chosen for their relative selectivity or their higher educational attainment, include Australia, California, Denmark, England, Finland, Germany, Japan, Sweden, and Switzerland.

2 Australia

2.1 Executive Summary

The Australian higher education system includes both universities and other higher education providers. Higher education is offered at universities, self-accredited providers or non self-accredited providers. Traditionally, undergraduate admission was based on a score, rank or index determined by the tertiary entrance system in a student's state or territory. However, this system has recently been unified under the Australian Tertiary Admissions Rank (ATAR)—with the exception of Queensland. The ATAR is derived from student performance in a standardised senior secondary school curriculum, and is intended to support the reliable evaluation and comparison of student achievement. Each university maintains its own admissions policies but applications are coordinated centrally (based on the ATAR). Student numbers are increasing. In 2009, there were over a million enrolments in Australian higher education, up 6.5% from the previous. Over 90% were enrolled at public universities. About 85% of eligible applicants are ultimately offered a place in higher education. Unmet demand has been falling, but most applicants (about 61% in 2008) do not receive a first preference offer. The existing funding system is "capped" but in 2012 the Australian government will introduce an "uncapped placement" system in which providers may enrol as many eligible students as they wish and receive corresponding government subsidies for those students. This is expected to increase participation as students will have a better chance of gaining their first-preference course. The funding will follow the student, according to a "voucher system". Finally, in Australia a key concern is improving access to meet the unmet demand. Special focus is given to "equity groups" (mainly disenfranchised applicants).

2.2 Higher Education in Australia

The Commonwealth of Australia has 6 states and 2 territories – New South Wales, Queensland, South Australia, Tasmania, Victoria, Western Australia, the Australian Capital Territory and the Northern Territory. There are 3 levels of government: Australian (Federal), state and territory and local. The diagram below shows the education system of Australia (Australian Government, 2011).

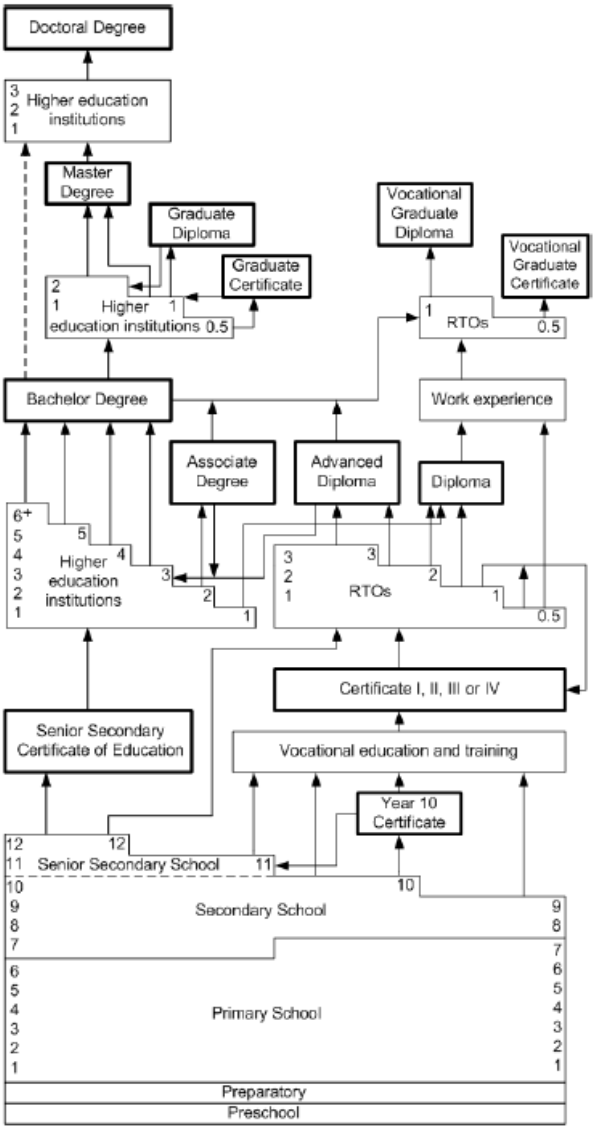

Chart 2.1: The Australian education system. Source: Australian government

The higher education system in Australia combines elements of both the British and American systems though it origins lie in the traditions of Oxford and Cambridge. The higher education sector is made up of both universities and other higher education institutions, called higher education providers. A higher education provider is established or recognised by or under law of the Australia Government, a State, the Australian Capital Territory or the Northern Territory. The higher education provider must be approved by the Australian Government Minister for Education before it can receive grants or its students can receive assistance from the Australian Government under the Higher Education Support Act 2003 (HESA).

The range of higher education providers therefore encompasses the following types of institutions: universities, self-accredited providers or non self-accredited providers. In 2010 the higher education system in Australia comprised 39 universities (2 of which private), 3 other self-accrediting higher education institutions (authorised by government to accredit

their own awards), and around 120 non-self accredited providers, most of which were private providers offering specialized courses closely related to professional work. A non self-accrediting provider is (a) recognised under relevant State or Territory legislation, (b) included in the list of non self-accrediting higher education institutions contained in the Australian Qualifications Framework Register, and (c) offers at least one course of study that is accredited as a higher education award (a nationally recognised higher education award includes a degree, status, title or description of bachelor, master or doctor. It may be an award of graduate diploma or graduate certificate, or any other award specified as a higher education award under the Australian Qualifications Framework) (DEEWR, 2011a).

Australian universities are generally comprehensive institutions offering a variety of programmes. They differ in size, ranging from the largest with around 40,000 students down to the smallest at around 2,000 students. Most range between 10,000 and 20,000 students. Many universities are located in the major cities but there are a significant number located in smaller regional centres. The larger universities usually have a number of campuses. Most universities are organised on the basis of faculties or schools but may also have a number of specialised research centres or institutes.

When talking about the 37 public universities, there exists a well-known typology of Australian universities (Marginson 1997), to some extent institutionalised via specific University associations. However, it is not a formal categorization of universities as recognized by Government policies. This typology includes:

- The Group of 8 (Go8) - 8 old research intensive universities represented by the Go8 Coalition;
- Technical Universities - represented by the Australian Technology Network ATN;
- Other pre-1987 universities, most of which represented by the Coalition of Australian Innovative Research Universities;
- Post 1987 universities, which for a period were represented by the umbrella “The New Generation Universities”

It has been shown that the groups indeed can be distinguished from one other in terms of their research output as well as indicators related to graduates (such as graduation time and employment), in part a reflection of high selectivity of the Go8 universities (Ramsden, 1999).

2.3 Selection Mechanisms in Australia

2.3.1 Description and History of Selection in Australia

In Australia, undergraduate admission is usually based on a score, rank or index determined by the tertiary entrance system in a student’s state or territory (***Ibid***). Each state and territory has prerequisites and minimum entrance requirements for entrance to university. University admissions in Australia have largely evolved around matriculation

in the final year of secondary school. Historically secondary school matriculation has been the principal prerequisite for entry into tertiary education, and it is fair to say that for some time it was the best available means of selecting for university (Palmer ***et al***, 2011). However, entrance into an Australian higher education provider is determined by the entrance requirements set by individual providers. Providers make offers to high school graduates, predominantly on their higher education ranking achieved after standardisation of "Year 12 scores".

Admission Mechanisms: The Role of Entrance Scores

Historically, each Australian State had different higher education scores handled by central admission agencies at province level. For example in Victoria they used the Equivalent National Tertiary Entrance Rank (ENTER)—a percentile ranking based on the student's subject scores as scaled by the Victorian Tertiary Admissions Centre[1] (Australian Government, 2010, p. 59). However, as states adopted a common ranking system for school-leaver university admissions called the Australian Tertiary Admissions Rank (ATAR), since 2009 the university entrance system in Australia has been gradually unified. The ATAR was introduced to unify the university entrance system in Australia, where previously each state or territory had its own individual system The ATAR is derived from student performance in a standardised senior secondary school curriculum, and is intended to support the reliable evaluation and comparison of student achievement (***Ibid***. p. 12).

Palmer ***et al*** (2011) describe how ATAR scores (and their equivalents) are derived in different Australian states:

- In New South Wales and the Australian Capital Territory the ATAR is calculated by the Universities Admissions Centre (UAC) from students' Higher School Certificate marks
- (HSC)
- In Victoria the ATAR is derived by the Victorian Tertiary Admissions Centre (VTAC) from students' Victorian Certificate of Education (VCE) subject scores
- The South Australian Tertiary Admissions Centre (SATAC) calculates an ATAR from the South Australian Certificate of Education (SACE) and the Northern Territory Certificate of Education (NTCE)
- The University of Tasmania calculates ATAR scores for that state from the Tasmanian Certificate of Education (TCE)
- In Western Australia the ATAR is derived by the Tertiary Institutions Service Centre (TISC) from students' Tertiary Entrance Aggregate, TEA (replacing the Tertiary Entrance Score (TES) in 2008)
- Queensland differs from the other States and Territories in that it does not use a TER. Instead, the Queensland Tertiary Admissions Centre (QTAC) calculates students' Overall Position (OP) rank, based on student's secondary school Subject Achievement Indicators (SAIs), on a scale of one to twenty-five (with the twenty-fifth position the lowest)

[1] The ENTER score was obtained by using English, the next best three studies together with increments for up to two additional studies

Institutional autonomy in selection decisions is preserved as each university maintains its own admissions policies, but because applications are coordinated centrally (based on year-12 scores), undue emphasis on institutional admission testing is avoided—a feature deemed one of the strengths of selection frameworks in Australia. In fact, an over-reliance on institutional admissions is feared to produce more costs, labour and complexity associated, with additional costs that would largely be borne by students (***Ibid***).

Still, it must be noted that ATAR, as the prior ranks used until recently[2], is an ***aggregate*** score that fails to uncover students' subject-specific strengths or weaknesses. Institutions are responsible for their selection criteria within a centralised system of coordination. For example at the University of Melbourne the Clearly-In 2011 ATAR scores are (***inter alia***) 88 for Arts, and 98.45 for Biomedicine (University of Melbourne Website, 2011). At Deakin University[3], the Clearly-In ATAR score for the Arts is 82.05 (Melbourne Campus at Burwood) or 50 (Warrnambool Campus), and 87.85 for Biomedical sciences (Melbourne Campus at Burwood) (Deakin University Website, 2011). A Clearly-In ATAR is the ATAR most school-leaver applicants need to achieve to be offered a Commonwealth Supported Place (CSP) in a particular course. CSP is a university place for which the government makes a contribution towards the cost of a student's education (***Ibid***.)

Two points are of relevance:

- Australian states do not differentiate their entry requirements for in-state applicants vs. out-of-state applicants (like in the United States). This means that in principle competition for admission to any Australian provider is nation-wide (even though out-of-state students naturally incur additional costs and are, thus, less numerous than in-state applicants)
- Australia's higher education is not binary nor is secondary education tiered (like, for example, the Dutch system where the VWO leads to university and the HAVO to Universities of applied sciences). In Australia the entire education career system is stratified and flexible, with college choices made at a later time in life that in the Netherlands. Nevertheless, secondary education systems are state-based. This can create awkward consequences on the admission procedure because comparisons are difficult since high school exams are not identical across the country

Other Mechanisms Influencing Access to Australia's Tertiary Education

Some students may have a further opportunity to demonstrate their ability by undertaking student aptitude tests or other alternative paths but these forms remain an issue of continued debate. "Soft" mechanisms are meant to test skills and motivations that cannot emerge from curricular work alone (let alone from an aggregate computation such as the TER). Alternative paths may include:

[2] Equivalent National Tertiary Entrance Rank (ENTER), Overall position (OP) Rank the University Admission Index (UAI) and the Tertiary Entrance Rank (TER)

[3] Information about 2010

- Standardized Tests: James ***et al.***, 2009 (p.1) mention that in the State of Victoria "[…] School achievement, as measured by ENTER is not the only criterion for tertiary selection in Victoria, but it is clearly the dominant one. While it is difficult to categorise and to quantify the nature and extent of the use of alternative criteria, VTAC estimates 75 per cent of offers are based predominantly on ENTER […]". For example, the new uniTEST standardized test is barely used (see below)
- Portfolios: increasingly popular in creative disciplines (although what is expected and their relative weight in the process as a whole varies by discipline), they are believed to enable evaluation of students on characteristics that prior academic performance alone fails to reflect. For example, a design student applying to university or transferring may be able to present only extracurricular work.
- Applicant interviews: though still fairly common in admissions processes to the most selective disciplines, applicant interviews are increasingly questioned because of their ***poor predictive validity*** and potential ***bias***. There is an advantage, however: interviews help students gain insights into the academic environment at a time when choices can still be reversed without excessive damage or disappointment. In fact, this is said to be the key reason for interviews' endurance in processes that ultimately attach little weight to them in the final decisions.
- Principal's Recommendation Schemes whereby high school principals can point out particular aspects in favour of the applicant. This scheme works quite well in less selective regional universities but can go to the detriment of the highest scoring students—who at any rate are more likely to apply at selective providers
- "Bonus points" for low SES and minority applicants: at equal admission scores, such applicants can receive extra points to bolster their chances of success

In general, interviews confirmed that the use of qualitative selection criteria remains both limited and even rather elusive. Countries with robust institution-based admission centres (e.g. the U.S.) apply "soft" selection mechanisms more extensively. But in Australia there is no unequivocal formula to factor these different mechanisms into the overall selection process. The value of "soft" elements is negotiated and, ultimately, discretionary. Centralised admission agencies at province level handle all quantitative criteria while academics or heads of department deal with qualitative discipline-related criteria such as those just described.

However, two interesting institutional experiences[4] can be mentioned because they may affect matching, at least potentially:

- At the University of Newcastle admission to the Medical school relies in full on alternative criteria such as interviews and standardised test. So far the experience is viewed as relatively successful, but as it is a recent experiment, it is not yet possible evaluate objectively whether it will actually yield greater student success (e.g. retention and graduation rates)
- The University Melbourne has been engaged in an interesting experiment. They have moved away from professional degrees as independent undergraduate degrees, opting instead for graduate entry professional degrees. This is generally referred to as the ***Open***

[4] Mentioned during expert interview

Model or the ***Melbourne Model***. So far performance indicators seem good, but in fairness it is a recent experiment (the first cohort is of 2007)

2.3.2 Selection Policies in Australia: Rhetoric and Debates

In Australia, policy debates on selection and matching can be discussed against the backdrop of three salient issues (without pretence of exhaustiveness). First, the system's competitive nature; second, the effects of government funding mechanisms on institutions' selection behaviours; and third the continued relevance of tertiary admission ranks in the selection process (vis-à-vis other mechanisms). The next paragraphs will look at these three elements in some more depth.

The literature and expert opinions point at the Australian tertiary education as a highly competitive system. However, selection, albeit a crucial component of the country's mass higher education system, does not seem concerned with matching student preferences and abilities with a course of study. In the Australian context ***matching remains a secondary concern***. Current policies focus on expanding ***participation*** and insuring ***diversity*** (see the move to "uncapped" admissions described below). Although more scrutiny to subject specific competencies might help matching, there is no evidence of any fundamental interest in this issue. Even the discourse about attrition and time to graduation (undeniably a concern for any institution) is generally overshadowed by efforts towards greater participation and diversity. There seems to be a normative belief that the nation's extant (high) graduation rates will not necessarily suffer from expanding entry rates and diversity in student population, which are deemed inevitable developments.

The impetus of change in selection in Australia is given by the way undergraduate enrolment is funded. The existing funding system is "capped". In other words, the government funds a certain number of students per institution and all universities work on allocated places. As a result, institutions justify their strict tertiary admission rank-based selection with a limited capacity of funded students[5] (but the tertiary admission rank has little ado with what applicants are able to do or interested in studying). However, in 2012 Australia will introduce an "uncapped placement" system expected to provoke fierce competition amongst institutions to enrol ever more students in the absence of any form of sanction. The uncapped system is demand driven, and is expected to increase participation because students will have a better chance of gaining their first-preference course and thus a greater incentive to enrol (although unmet demand has been falling, 61% of applicants did not receive a first preference offer) (Parliament of Australia, 2009). The funding is supposed to follow a "voucher system" where funding follows the student.

In other words deregulation of student places is expected to give universities greater flexibility and incentives to expand and produce a more competitive system. The Review of Australian Higher Education (Bradley Report):

[5] However, Australia is going to pass to an "uncapped" system as of 2012

> "[***a demand driven system intends***] to allow funding to shift between institutions in response to student demand and to create a system in which each institution's funding is determined dynamically by the quality of its performance rather than by an historically-based system of centrally-planned student load allocations" (p. 156)

Indications suggest that already at the time of writing universities are enrolling more students than previously to increase revenues (up to about 25% more) because they will not be penalized. To date, it is still unclear how to handle this change (which many deem illogical and a source of unforeseeable consequences nationwide).

The ATAR remains the most important determinant in admission procedures in Australia, but it is an ***aggregate reflection of ability*** and says little about individual subject scores. Indeed, the current system is said to steer students towards marketing themselves, in a struggle to gain access into highly coveted prestigious institutions. Fulfilling true predisposition is generally considered less worthwhile than achieving a high aggregate entrance rank—a trend some would call a "perverse incentive". In general, institutions in city centres are the most selective, which means that an applicant's tertiary admission ranks must be very high. That universities rely heavily on the TER to select students has been true for several decades. Whether this emphasis should be redressed is a continued topic of debate. Already in the 1990s arguments have been made to limit the role of the TER in thinking about selection methods (see: Pascoe ***et al.***, 1997), mainly arguing that this would have positive effects on access for under-represented groups.

The Review of Australian Higher Education ("Bradley Report") (p. 27) states that:

> Australia has not provided equal access to all groups from society. People from lower socio-economic backgrounds, those from regional and remote Australia as well as Indigenous Australians are under-represented in higher education compared to their incidence in the general population.

However, the pre-eminence of the admission ranks has never been seriously challenged. Some institutions have proposed the use of aptitude tests as a means of admitting more disadvantaged students, but whether this would help is under discussion. So far such plans have been not been implemented (except very few pilot experiments), partly because of concerns that this would not eliminate the bias in outcomes by socio-economic status. The Bradley Report (pp. 38 ff.) emphasises that, while current university admission/selection processes might reproduce a certain social order,

> The Canadian and United States experiences show that the design of the test and the tutoring available to higher socio-economic status students lead to a greater proportion of high socio-economic status students achieving higher scores

UniTEST is en example of the attempt to introduce in Australia aptitude tests in university admission procedures to offset the over-reliance on the TER (uniTEST website, 2011). This new test has been given positive coverage, also by the media[6] but has as yet yielded very little: the only institutions to use uniTEST for its 2011 entry is the Australian National University (***Ibid***). In general, standardized testing is used more for rejection after minimum requirements (i.e. the scores) have been reached.

Including "soft mechanisms" such as those used at Newcastle University's Medical school has also been a source of debate, but so far there has not been any seriously take-up. The Newcastle experience (which pre-dates the 1997 report) suggests that students perform the same or better than at other institutions and, at any rate, it was suggested that conducting interviews as part of the application process may not be as useful as desired given that at that time students have already matured their decision to apply

Thus, the debate on selection in Australia goes on, amidst a still widespread reliance on admission ranks. Nor is there evidence that will point one way or the other (in changes in success rates/drop-outs). Moreover, in Australia (though this is a generalization) most students work to pay the studies. Also, domestic students are usually less motivated also because they pay less than international students.

As mentioned above, one key topic of debated over the past years has been the reform of selection procedures (for example through the introduction of standardise aptitude tests). In general, it is agreed that more widespread use of different approaches to selection and admission, with a broader range of criteria in addition to or replacing tertiary admission ranks and which recognise structural disadvantage, should be trialled (Bradley ***et al***., 2008)

However, another key question, in Australia like elsewhere, is how to match student choice with particular fields of study and labour market needs. The Bradley Report concluded that the current system provides little labour market information, leading to potential mismatched with the country's workforce needs. The report (p. 150 ff.) calls for "demand-driven entitlement model for higher education", which would result (***inter alia***) in "no nationally specified criteria for selection of students and eligible providers would set their own entry standards and determine which students to enrol."

James ***et al***. (2009), in their report on the State of Victoria, mention that the forms of selection should reflect the nature of student demand. Thus, tertiary institutions can be divided into three types (p. 8):

- Selector institutions, where there is high demand and entry is competitive, such as in some high-status professional fields. The main challenge is to justify, objectively, the rejection of certain (meritorious) applicants.
- Matcher institutions, where effort is devoted to assessing the aptitude of individual students for particular fields of study and for particular fields and future careers in those fields. These institutions/courses discriminate on the likelihood of academic

[6] See for example Ten News Adelaide, at: http://www.youtube.com/watch?gl=AU&hl=en-GB&v=xczvrVtusNw

success and career effectiveness. Whilst desirable, the report emphasises that this is a very costly form of selection
- Open entry institutions

2.3.3 Experiences with Selection in Australia

Thus far this chapter has outlined key selection mechanisms and policy rhetoric. Before presenting advice for the design and/or reform of selection mechanisms based on informed expert opinions and essential reading, this section will take a closer look at whether selection has impinged on critical performance indicators such as acceptance rates, diversity, &c.

In general, experts concur that ***evidence corroborating the "matching" and predictive powers of "soft" selection mechanisms is wanting***. And although creative-type programmes (as opposed to the hard sciences) customarily adopt interviews and qualitative mechanisms in their admissions, there is appears to be no discernible relationship with student success—top universities select very strictly at entry and invest less in the actual education processes than lower level universities. The latter (e.g. the University of New England) invest much more time and energy on campus to guide students through to a degree and in fact provide more added-value in transformational terms. Although this is a gross generalization (and as such should be taken ***cum grano salis***) the motto might be "low selection, high personalized education"[7]. Usually the Associate Dean for teaching and learning will try to match students to programmes based on his/her assessment on applicants' quality. Professional staff is also involved, at faculty and some institutional central but it differs from institution to institution (for example the process at University of New England is very centralized—the course coordinator would get all applications that passed the initial selection by support staff[8].

In general, the numbers of students has expanded over the years. In 2009 the number of commencing undergraduate domestic[9] students was reported to be 204,879, against 189,516 in 2008—an 8% increase year-on-year (DEEWR, 2011). A summary document from the Department of Education, Employment and Workplace Relations (DEEWR) published annually shows that the number of students has been steadily increasing over the years and outlines the following details (***Ibid.***):

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[7] Students from top institutions are more likely to graduate because they have been strongly selected at entry. Like in the case of California's low baccalaureate production mentioned in the chapter about California, this matter exposes the problem of an overly diversified system that, by denying opportunities at the outset, risks endangering ultimate the system's aggregate attainment levels

[8] It must be noted, however, that universities always try to fill all their places not to miss government money which is based on the number of student (as mentioned above, the forthcoming "uncapped" funding system is feared to boast admissions out of control)

[9] The choice of this indicator is justified given that the main issue here is selection for entry to undergraduate studies, and that rules differ for international students. Moreover, "commencements" are deemed important as they provide an early indicator of growth and decline (see http://www.deewr.gov.au/HigherEducation/Publications/HEStatistics/Publications/Documents/2009/09FullYearSummary.pdf)

- By 2009, the number of student enrolments at all Higher Education Providers reached 1,134,866, an increase of 6.5% from 2008 (previous year: +3.5%)
- There were 813,896 domestic students in 2009 - comprising 71.7% of all students—an increase of 5.4% from 2008 (previous year: +2.0%)
- Overseas student enrolments increased by 9.1% to 320,970 in 2009(previous year: +7.7%).
- More than half the student enrolments were for females (55.4%).
- More than two-thirds (70%) of students were studying full-time
- The majority (94.0%) of students were enrolled at public universities (Table A providers)—enrolments reached 1,058,399 (up 5.6%; previous year: +2.6%)

Chart 2.2 (taken from DEEWR, 2008) shows that, at a national level, Australia's overall offer rates[10] (as of 2008) are approximately 85%. This means that 85% of eligible applicants[11] are ultimately offered a place in higher education. In 2008, eligible applicants were 216,134. Of those considered eligible, 183,161 received an offer and 132,552 accepted their offer (***Ibid***). The peak was Western Australia (88%) and the lowest rate was registered in Tasmania's 73%

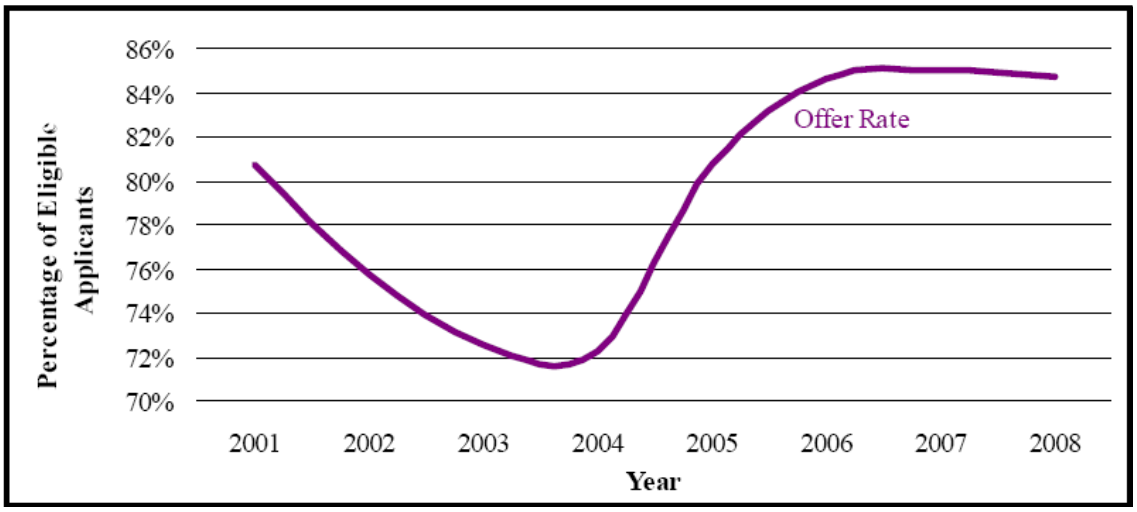

Chart 2.2: Offer rates, 2001 to 2008, Taken from DEEWR, 2008, p. 14

In addition, the same document reports a national unmet demand of around 5.8% in 2008. This figure discounts unsuccessful eligible applicants with limited preferences and multiple applications, as well as those who applied with a low TER (***Ibid***. p.17).

As the statements just made seem to corroborate, although there is talk about "matching", it nevertheless seems less of a concern in Australia that ***improving access*** to tertiary education ***per se*** to meet unmet demand (which is indeed said to be gradually diminishing). The concentration on equity and access over matching is particularly evident when it

[10] These are the offers ultimately made to eligible students. This figure, thus, does not include ineligible students nor does is measure the actual acceptance rate, which the DEEWR defines as the students ultimately accepting an offer. The acceptance rate (as just defined) is, thus, of less relevance in the selection discourse, in that it follows the selection process

[11] Eligible applicants exclude school leaver applicants with low tertiary entrance scores below an agreed benchmark but include all non school leaver applicants. The definition of eligibility does not mean that those defined as ineligible are automatically excluded from receiving an offer (DEEWR, 2008, p.1)

comes to data on disenfranchised applicants (so-called "equity groups"). "Equity groups" include of (a) students from a non-English speaking background, (b) students with a disability, (c) women in non-traditional areas, (d) indigenous, (e) low SES[12] and (f) Regional/Remote[13].

The Charts below show changes in commencing students from 2001 to 2009, according to the aforementioned categorization. It is clear that SES plays the key role, but data also show that the majority of commencing students do derive from one or another equity group and that this trend has increased over the past couple of years (see chart 2.4)[14]. Moreover, attention to this issue is increasingly felt (see Chart 2.5), and therefore it is not altogether surprising that "matching" remains somewhat overshadowed by more "traditional" equity and access considerations.

[12] Defined in different ways, however for the purposes of this report they are unified. The Australian government defines low SES ***by postcode*** (based on the students' postcode of permanent home residence, with the SES value derived from the 2006 Socio-Economic Indexes for Areas (a.k.a. SEIFA) Education and Occupation Index for postal areas, where postal areas in the bottom 25% of the population aged 15-64 being classified as Low SES) and by census Collection District (CD), with SES value derived from the 2006 SEIFA Education and Occupation Index for CD, where CDs in the bottom 25% of the population aged 15-64 being classified as Low SES (this is a new method that still under examination). See: http://www.deewr.gov.au/HigherEducation/Publications/HEStatistics/Publications/Documents/2009/Appendix%202_Equity.xls#'2.1'!A1

[13] Regional and Remote categories are derived from Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) classifications, which replace the old Rural and Isolated categories. for the purposes of this report they are unified. See: http://www.deewr.gov.au/HigherEducation/Publications/HEStatistics/Publications/Documents/2009/Appendix%202_Equity.xls#'2.1'!A1

[14] However, Australia is known to be very competitive. The figures above are aggregate, which do not point out the large cross-institutional differences in selectivity (e.g. rural vs. urban)

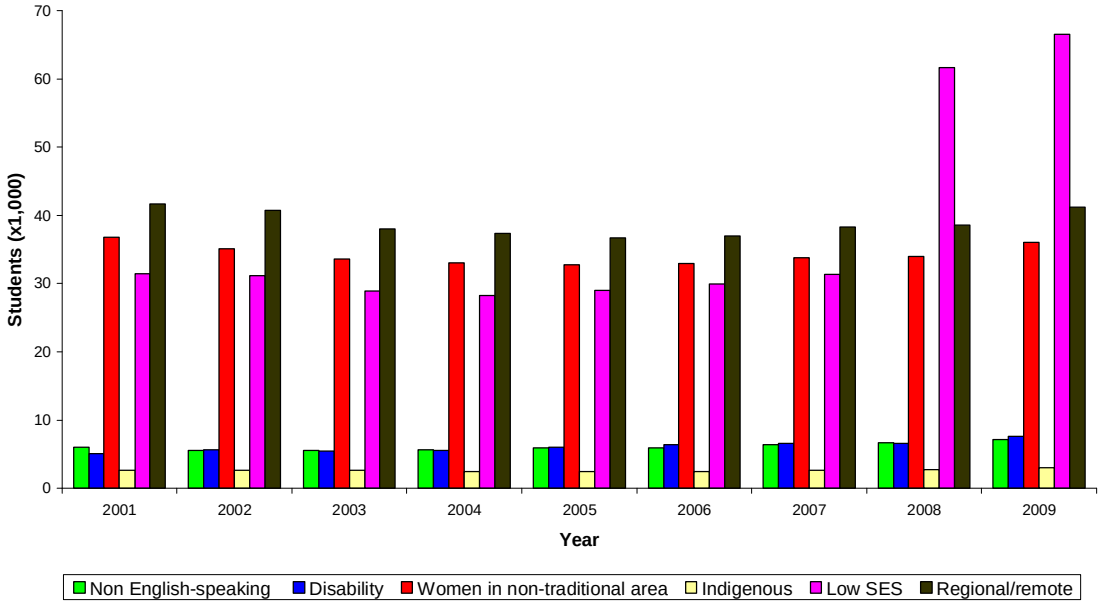

Chart 2.3: Commencing domestic students by equity group (2001-2009). Source: DEEWR, 2011

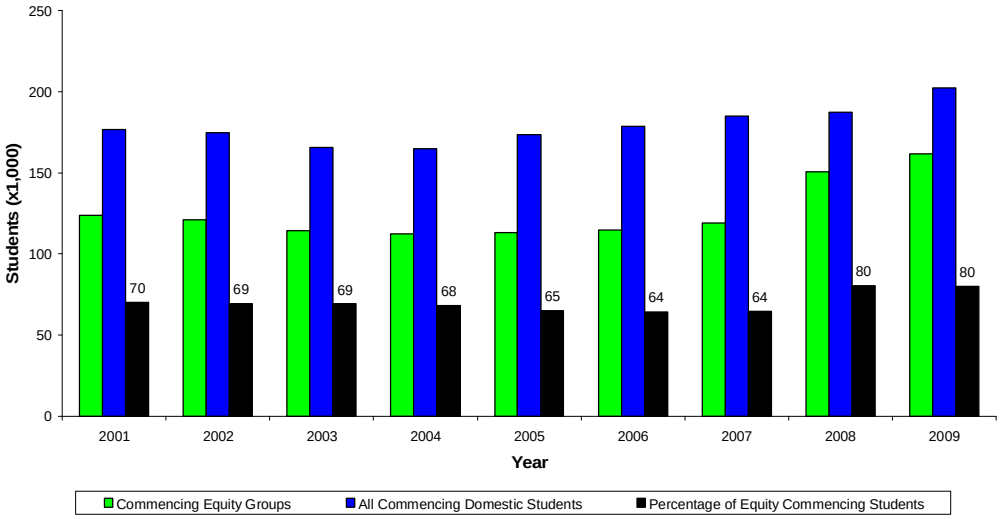

Chart 2.4: Commencing Equity Students and All Commencing Students (2001-2009). Source DEEWR, 2011

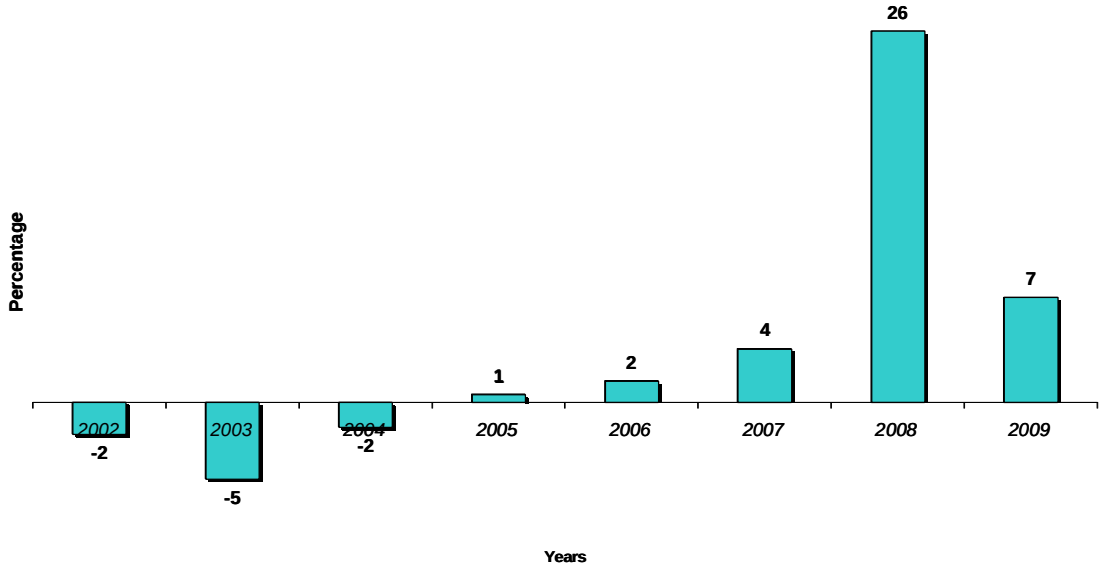

Chart 2.5: Changes in Equity Group Commencing Students (2001-2009). Source: DEEWR, 2011

In closing of this section, it is necessary to pause on the effects of selection, as it currently takes place in Australia, on student success. The DEEWR (2011) provides comprehensive information on retention rates per institution. Chart 6 below compares the retention rate[15] of the University of Melbourne and the University of Newcastle. These two institutions have been chosen because of their supposed different selectivity (the former is generally considered "more selective" than the latter). It is apparent that the more selective institution performs better over time on this indicator. However, it must also be pointed out (again) that this is an aggregate measure that does not show programme-specific differences. Nor does it provide information on the (transformative) added value to students.

[15] The Retention rate is defined as the number of students who commenced a Bachelor course in year(x) and continue in year (x+1) as a proportion of students who commenced a bachelor course in year(x) and did not complete the course in year(x).

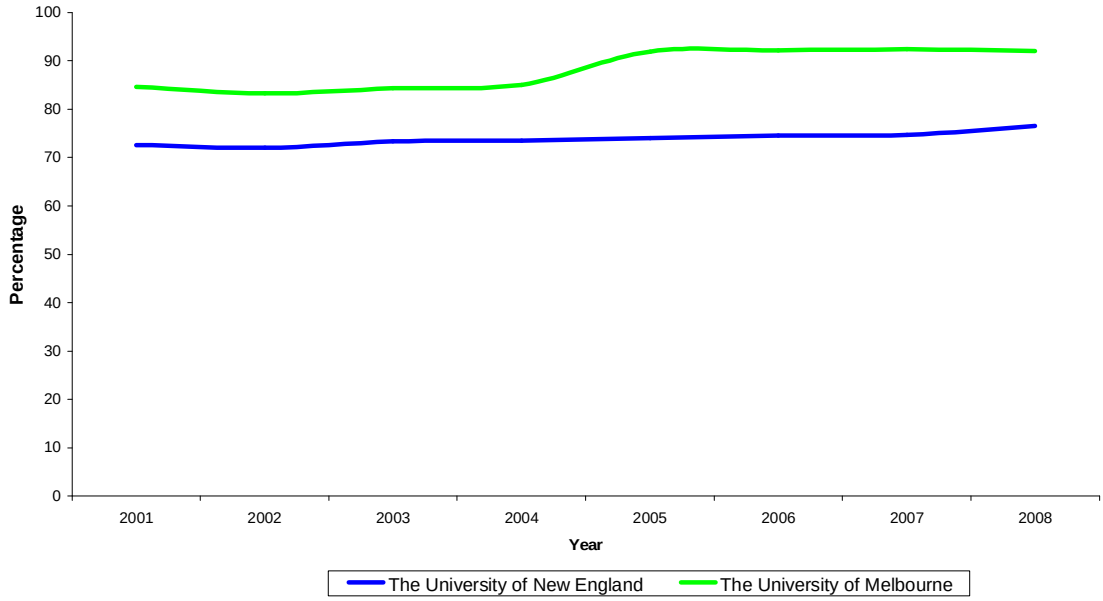

Chart 2.6: Retention rates at University of Melbourne and at the University of New England from 2001 to 2008. Source DEEWR, 2011

2.4 Conclusions

As emerges from what is reported hitherto, changing admission mechanisms is, in Australia as elsewhere, a prominent motif. However, it is hard to find best practices when it comes to selection because countries differ in their higher education on several aspects including fees, level of student tracking (early vs. later), &c. Hence, the selection and matching discourse depends largely on the higher education system. For instance, Australia is not a binary system, which creates a situation where students can apply for all sorts of programmes across the country. At the same time, inter-state mobility is limited (also because of the country's size) notwithstanding equal tuition fees for in-state and out-of-state residents (i.e. there is no U.S.-style in-state vs. out-of-state difference applied to applicants). The main costs are the living and moving. In designing any system that wishes to empower a better match between student ability and programme choice, these matters need to be kept in mind.

The report "Improving Selection for Tertiary Education Places in Victoria" (2009) mentions pros and cons of Victoria's centrally coordinated tertiary application process administered by VTAC. The report states that "[…] it has numerous advantages, including the preservation of institutional autonomy over selection decisions. ENTER has the advantage of being relatively transparent and has face validity as an objective and fair measure of school achievement, and thus preparedness for university. Some of these benefits are somewhat illusory, however, and ENTER is attributed a precision that is not deserved. There are further problems with ENTER that have been identified by this study, as well as

by previous analyses […]". Next (pp. 25 ff.), the report suggests principles for improving tertiary selection practices in Victoria (which could be of interest to other states), including:

- Centralised coordination of applications and data should continue
- Less emphasis should be placed on school achievement as a selection criterion across the tertiary sector as a whole, though it will remain an important consideration for certain courses and institutions[16]
- A tertiary selection framework should be developed that defines the available selection criteria and articulates agreed protocols for the use of each
- A generic state-wide aptitude test should be introduced
- A single composite index or rank should not be calculated by VTAC from the available quantitative measures
- Admissions testing on an individual institutional basis are to be avoided
- Institutions should be explicit regarding the ways in which, and the extent to which, various criteria are factored into selection decisions for particular courses

Nonetheless, it is increasingly recognized that selective systems do not yield ***sic et sempliciter*** higher graduation rates (see also above and the California chapter). Rather, ruthless selection might reduce the odds of accessing tertiary education with potentially bleak consequences on baccalaureate production. All too true. And yet the allure of tough selection seems hard to resist. The next points (based on interviews and the literature referred to in the main text) are meant as food for thought in the process of reforming access mechanisms to post-secondary education:

- ***Look carefully at an applicant's secondary education subject portfolio***: an effective "matching strategy" should shun exclusively aggregate performance measures (such as the TER/ATAR) because these measure an "aggregate ability" but do not necessarily reflect a particular set of positive characteristics or skills, or aptitude or achievement in particular disciplines or subject areas (see Palmer ***et al***, 2011), which is the ultimate goal of "matching". Rather, one should look at (a) high school subject choices and performance (b) high school graduate's compliance with relevant subjects (c) standardised tests and (d) qualitative assessment mechanisms such as interviews
- ***Time interviews and other qualitative mechanisms well to succeed in the matching strategy***: students are likely to be interviewed at a stage when they have already resolved where to apply. Nor are applicants likely to initiate explorative colloquia independently very early on (which would be an unreasonable expectation). Therefore, interviews would be most beneficial if conducted at least one academic year prior to application or possibly sooner during the early years of secondary education
- ***Emphasize achievement and mastery of college preparatory materials***: prior academic performance is a good predictor of success and brings scrutiny to the question of academic pathways (post-secondary school). Predicting student performance in college on the basis of factors known at point of admission is very hard[17].
- ***Consider when to emphasize subject achievement***: the "Open Model" (a.k.a. the "Melbourne Model" mentioned above) is an interesting example. It is kind of the opposite of early

[16] This point is consistent with the critique of aggregate scores as chief eligibility indicators

[17] See also California report—section on recommendations

tracking because it offers very broad undergraduate courses and postpones professional specialisation to the graduate level. So far it seems satisfactory—undergraduate learners seem to enjoy not being forced into an early specialized choice but being able to build professional specialty later in their educational trajectory

3 California

3.1 Executive Summary

Higher education in the United States (U.S.) is the responsibility of the states. California has most degree-granting institutions of all the U.S. Institutions are free to set their own admission requirements, within boundaries set by the states. California's public higher education is "tripartite". It includes the University of California (UC) system, the California State University (CSU) system and the California Community College (CCC) System. Admissions differ for in-state vs. out-of-state applicants (faced with higher requirements). The 1960 California Master Plan for Higher Education (and its subsequent modifications) is the most important piece of legislation affecting admission to California's public tertiary education. It sets the eligibility targets for each system: in-state applicants in the top one-eighth of their high school graduating classes must be offered a place at UC, those in the top one-third must be offered a place at CSU, and CCCs have open admission. Both CSU and UC use a combination of high school grades and standardized test scores (such as the Scholastic Aptitude Test, or SAT) in their admission decision. However, the Grade Point Average (GPA) plays the main role and is said to be the best predictor of collegiate success. "Soft" mechanisms are used in selection but are not commonplace. Interviews are deemed too costly. UC adopts a "holistic review" of applications. A "holistic review" looks at each application in its entirety. A major change in admissions to California's higher education was the repeal of Affirmative action in higher education in 1996. Another major shift will take place at UC in 2012. By then UC will guarantee eligibility for the top 9% state-wide and the top 9% at each high school. Finally, California has a sophisticated "CCC transfer system" which allows CCC graduates to transfer to the university sector (UC and CSU) without additional tests, provided they reach a GPA threshold set by the institutions. The Master Plan did not set eligibility requirements for transfer students.

3.2 Higher Education in the United States

Higher education in the U.S. is the responsibility of the states, rather than of the federal government. Thus, with some exceptions (such as the military service academies) public higher education is owned and controlled by the federate states. This section takes closer look at the State California.

With over 36,960,000 inhabitants in 2010, California is one of the largest and most populated states of the United States. 12% of people living in the U.S. live here. There has been a 9% population increase between 2000 and 2009 (same nationally), and the population is very ethnically diverse, including 42% of Caucasians, 37% of Hispanic-

Americans, 13% of Asian-Americans and 8% of African Americans, as well as other minority groups including Native Hawaiian, Other Pacific Islander, American Indian and Alaska Native persons (U.S. Census Bureau, 2010).

In general, in the U.S. higher education is accessible to students with the required entry qualification and grades. Chart 3.1, below, gives a snapshot of the whole U.S. education system. U.S. Higher education offers a variety of opportunities to prospective students. For example a high school senior might choose for a two-year junior College degree offered by a Community Colleges, leading to an associate degree of Arts or of Science (an "AA" or "AS"). Finally there is vocational (technical / professional) higher training. Individual institutions can set their own entrance requirements. There is no one nation- or state-wide standard[18].

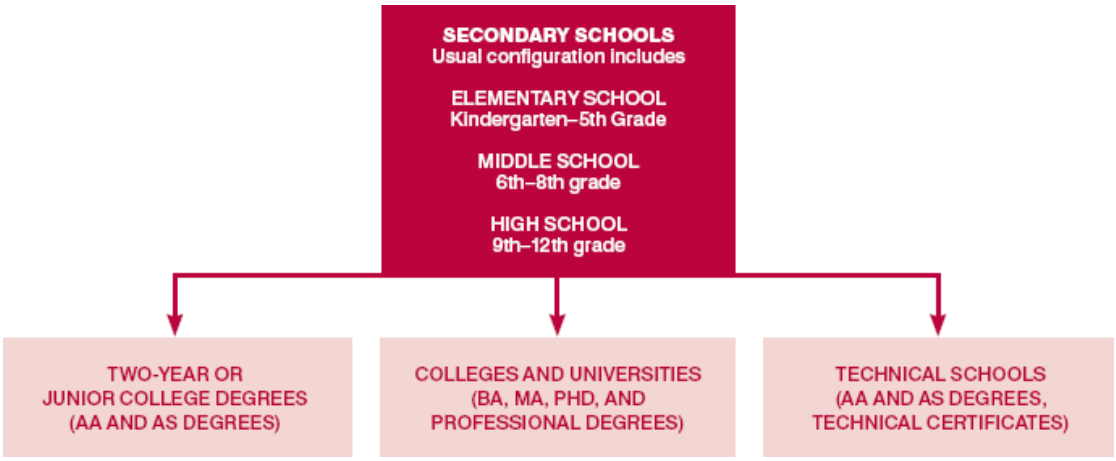

Chart 3.1: The U.S. Education System (taken from Belyakov, Cremonini, Mfusi and Rippner, 2009)

In California there are both public and private institutions of higher education. Private institutions can be for profit or non-for profit. Public institutions include UC (10 campuses), CSU (23 campuses) and the CCC (112). Other non-public institutions include dozens of independent colleges or universities and of proprietary institutions (CPEC, 2011a).

As can be seen in Chart 3.2 below, with its 426 degree-granting institutions in 2008-2009 California tops the list also for purely degree-granting institutions. New York is second (307) and Alaska remains the state with least degree-granting institutions (7).

[18] Thus, a key debate in the United States is how to align the preparation of students graduating from high school and the requirements to attend college rather than changing admission rules tout court (Belyakov, Cremonini, Mfusi and Rippner, 2009)

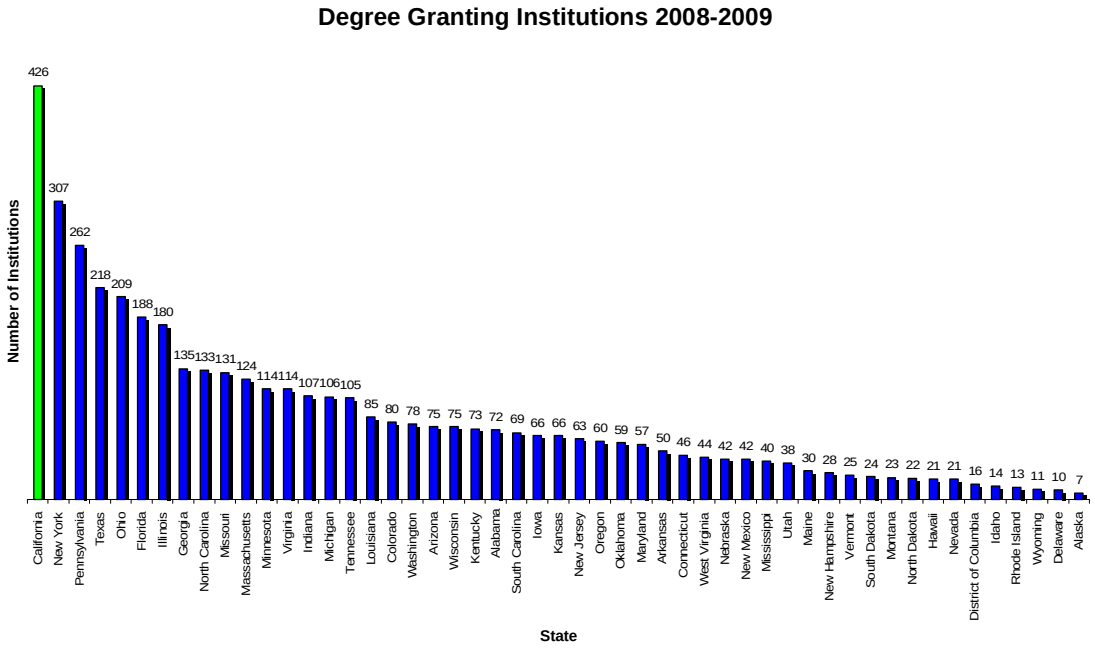

Chart 3.2: Number of Higher Education Institutions in the United States, by State, 2009, Source NCES, 2011

3.3 Selection Mechanisms in California

3.3.1 Admission to Californian Postsecondary Education

In the U.S. higher education is accessible to students with the required entry qualification and grades but public institutions set their own admission requirements within boundaries set by the states[19]. California moved very early on towards a mission differentiated structure of its higher education institutions, which therefore were free to set their admission policies in line with their stated missions. Hence, although there is no national standard for admissions, selection remains a crucial component in managing California's mass higher education system, and is believed to have been successful thus far. Community Colleges have neither subject requirements nor additional testing whilst universities do. Main admission requirements are set according to the 1960 California Master Plan for Higher Education and its subsequent modifications: in-state applicants in the top one-eighth (12.5%) of their high school graduating classes must be offered a place in the University of California system, while in-state applicants in the top one-third (33.3%) of their high school graduating classes must be offered a place in the California State University system. Community Colleges admit any student capable of benefiting from instruction[20].

[19] Private higher education institutions are not really publicly accountable and do different things – thus the rules are slightly different

[20] See the 1960 California Master Plan for Higher Education. The California Master Plan for Higher Education is a major effort to plan the future of the state's system of public higher education. It was passed

In California, students can qualify for admission at university in different ways. First, there are the official requirements (e.g. being in the top 33.3% enables access to the CSU system); second, there are so-called "soft" mechanisms; and finally there is the transfer option, available to Community College graduates. These mechanisms are described succinctly hereunder, with a focus on UC[21].

Gaining Admission to California's Tertiary Education

As mentioned above, according to the Master Plan, the different systems are required to meet certain targets in their admissions (12.5% for UC and 33.3% for CSU). However, admission requirements used to reach these targets differ among the systems (LAO, 2010). For example, CSU uses a combination of GPA and standardized test scores, with some programmes defined as "impacted" (i.e. higher admission standards are in place for these programmes). At UC freshmen can pursue three "paths to admission" (University of California Website, 2011)[22]:

- Eligibility in the State-wide Context (or the "Statewide Path"): applicants must have completed at least 16 year-long high-school courses in the so-called "a-g" subjects[23], have a Grade Point Average (GPA) of ≥3.0 (≥3.40 for non-residents), and take additional tests[24] (American College Testing (ACT) and/or Scholastic Aptitude Test (SAT)
- Eligibility in the Local Context (ELC): through the ELC path, the top 4% of students at each participating California high school are designated UC eligible and guaranteed admission to one of UC's campuses. Applicants must complete the equivalent of 11 year-long courses of the "Subject Requirement"[25], and have a GPA ≥3.0.
- Eligibility by Examination Alone: students may also qualify for admission to UC solely on the basis of high ACT or SAT scores (in which case they must achieve a minimum score calculated according to the Eligibility Index—see below).

Thus, high school grades are the primary source of information and ***best predictor of collegiate success***. This became particularly true after 1996, when Affirmative Action in

in 1960 and is embodied in a series of documents, including a study completed by the Master Plan Survey Team in early 1960, and approved by the State Board of Education and the University of California Board of Regents, the Donahoe Act placing in statute a number of key components of the proposed plan, and a constitutional amendment allowing for the establishment of the California State Colleges Board of Trustees (what was renamed the California State University by 1974) (The history of the Plan, 2009)

[21] Conditions differ slightly the between the more selective UC system and the less selective CSU (Community Colleges have no restrictions beyond high school graduation). UC is taken here as an example)

[22] CSU uses similar criteria for admission (see: CSU Website at http://www.calstate.edu/). Moreover, criteria differ (are usually more stringent) for U.S. citizens who are non-residents and for international applicants

[23] History and social science, English, mathematics, laboratory science, foreign language, visual and performing arts, and college-preparatory electives

[24] Specifically, students must take the ACT, the writing or the SAT reasoning test, and two SAT subject tests chosen from English, history and social studies, mathematics science or foreign language

[25] History and social science, English, mathematics, laboratory science, foreign language, and visual and performing arts or electives

Californian higher education was abolished (see below). Both UC and CSU are free to define higher standards for certain programmes and/or campuses as long as this does not affect the achievement of participation targets. Other elements such as standardised tests play a more limited role in public institutions admissions. In fact, more often than not, SAT/ACT scores are used to justify rejections rather than admissions (e.g. if two applicants have similar GPAs). Faced with thousands of eligible (and often bright) applicants and limited capacity, admission officers are often confronted with the daunting prospect of turning away otherwise eligible students. Standardised test scores are then a justification for tough decisions.

Potential applicants can also be evaluated on so-called "soft selection mechanisms", including aspects such as civic engagement, public service, the range of courses attempted, student governance involvement and leadership, and personal circumstances (e.g. economic hardship). Moreover, highs school students may take Honours Courses, which are "college-level" courses rewarded with assigns extra points (these arrangements meant to motivate students to make choices in line with the policies of their university of choice). Although personal interviews are admittedly a good way of evaluating applicants' chances of success and their potential "match" with their desired study, because of the costs involved they remain exceptional rather than commonplace–both in California and nation-wide. Typically, "soft" mechanisms such as those described are an addition to standard requirements or they limit the stringency of official requirements, but do not wholly substitute them. For example, non-traditional students (e.g. home-schooled) may get accepted without having the required GPA, but need to pass standardized tests and have a secondary diploma none the less[26].

Besides selection at entry, within the system there are a number of ***flexible transfer options***. The Community College transfer function allows moving on to a full degree programme at a college or university. Besides assessing CCC graduates' GPA, the transfer does not require any additional tests. In fact, UC has lower admission thresholds for CCC transfer students than for high school graduates (which means that admission to, say, Berkeley can be simpler for a CCC transfer student than for a high school graduate). The CCC transfer option, though considered positive, is not immune from critiques. The main problem seems to be the ability of CCC graduates, whose college instruction does not comprise a "major", to fulfil academic requirements of a university education. UC is putting forth that community colleges should offer more than general education and their degrees should have a "major" attached (interview data).

A key debate remains how to align the preparation of students graduating from high school and the requirements to attend college rather than changing admission rules tout court (Belyakov, Cremonini, Mfusi and Rippner, 2009). Moreover, two aspects should be kept in mind when looking at the California model:

- Self-selection is common: most high school graduates are aware of their chances to be accepted because the chief eligibility determinants are their grades

[26] On this, see for example the website of UC-Riverside at http://my.ucr.edu/admissions/Pages/pathsAdmission.aspx

- The U.S. adopts a broader view of the university experience than (continental) Europe: talents which might not be deemed very relevant in a European academic experience (e.g. sport) are often factored in U.S. selections

All of the points above are kept into account (and to some extent epitomized) by what is commonly called "comprehensive review" – an admission review that considers all facets of the application (see next paragraph).

3.3.2 Managing Applications: the "Comprehensive Review" and the "Holistic Review"

As mentioned earlier in this chapter, Californian post-secondary education is tripartite, including the UC, CSU, and the CCC systems. Each system sets its own admission requirements (within state-set limits)[27]. The UC system is a good showcase of how it manages its applications[28].

The University of California system serves over 230,000 students (including all levels) and is made up of 10 campuses (CPCE, 2011). It has a 2-tier selection process:

- The "UC eligibility" level consists of clear and transparent eligibility criteria based on high school grades, following the paths to admission described above. UC-eligible applicants can be admitted to one of the 10 UC campuses, albeit not necessarily their preferred one. Within the system there are differences in what individual institutions require and how these requirements match the student's wants
- The ***Eligibility Index*** is a sliding scale of test scores to recalibrate who was admissible and deal with high school grade inflation. As the GPA grows, the SAT score threshold is reduced. Hence, test scores become a means for determining eligibility if a student's GPA is below the UC eligibility threshold. Effectively, the Eligibility Index does not undermine the pre-eminence of grades in the selection process but reinforces it

Since individual universities can set admission criteria ***in addition to*** the system-wide requirements, selection dynamics and staff involvement therein differ at institutional level. For instance, at UC the Board of Regents delegates responsibility for setting admission rules to the Academic Senate, which will make admission decisions in line with the institutional budget (to avoid implementing too lenient policies resulting in financially unmanageable numbers of applicants). It is, thus, a shared responsibility with the university President at system-wide level and Chancellors at campus level.

Moreover, support is provided by professional institutional research staff, which sits on each of the campus admissions committees. Interviews, recommendations &c. differ by campus, within the UC-wide and state-wide policy frameworks. For example, in its admission decisions, the Academic Senate at Berkeley relies on support from faculty and administrative staff who make different policy choices and give guidelines to assess individual admission.

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[27] Community Colleges are open entry and thus have no admission requirements (except having successfully completed secondary education)

[28] Based by and large on interviews with experts from Berkeley

The kind of review known as ***Comprehensive Review*** considers an extensive set of criteria per application (e.g. letters of recommendation, exam scores, high school grades, socio-economic status, and life challenges). However, each section is reviewed by different people. Berkeley (amongst other UC campuses) has opted over the past two decades for a ***Holistic Review***, which is a subset of the Comprehensive Review. A Holistic Review looks at each application in its entirety. At Berkeley two readers are assigned to read applications and come up with a grade from 1 (max) to 6 (min) to rank the applications. It is, thus, the readers who combine the various factors in their mind (if the readers are very different it goes to a 3rd review). Other campuses have opted for different approaches, for example to weigh each factor (hardship, leadership, &c.) and then develop a numerical score and rank.

Whatever the procedure, the main feature of a Holistic Review is its concentration on each individual application. This makes the process labour intensive but, admittedly, addresses (at least to some extent) the issue of validity so prominent in the policy rhetoric (see below). The workload can easily be rationalised into three groupings, namely (i) students just off the charts—sure in, (ii) students at the bottom—surely not admitted, and (iii) students on the margins of eligibility—which is the main source of labour.

3.3.3 Selection Policies in California: Decades of Rhetoric and Debates

In California the policy debate on selection has traditionally centred around two chief issues, namely ***predictive validity*** and ***inclusiveness*** of admissions procedures. First, as to validity, while public institutions are autonomous in their admission policies, procedures are expected to address key elements (the overall question being the true validity of grades vis-à-vis standardized tests and other selection mechanisms):

- What are students asked to do to be admitted?
- How do individual requirements match with admission policies?
- What happens when students enter university to ensure (as far as possible) their continued success?

Second, historically California has witnessed enduring controversy surrounding Affirmative Action, which was meant to address the problem of inclusiveness but was felt by many as a quota system under false pretences. Affirmative Action in public higher education was finally abolished in 1996; however, the issue of inclusiveness could not be ignored, and led to the introduction at UC of the ELC system.

Scenarios developed at the time showed that not only high school grades have better predictive value, but also yield greater inclusiveness of lower SES students as well as greater geographic and ethnic representation. De-emphasizing standardized testing would thus lead to a win-win situation, (i.e. more predictive and more inclusive).

The paragraphs above have succinctly described functioning and the key issues relating to selection in California's post-secondary education system. Yet, whom and how to admit has been a topic of continued debate in state politics for over half a century. The California Master Plan for Higher Education, which set out basic admission rules for the three higher

education systems, dates back to 1960; the 1996 abolition of Affirmative Action and the introduction of ELC were other milestones, and major changes are set to take place in 2012. In fact, higher education policy is about distributing a highly sought public good and thus is a political smatter that often transcends rational policy-making.

Looking at how the selection discourse has evolved over time, the most significant change has been the introduction of the ELC. However, there is some irony in this in that before the Master Plan UC accepted around 10% of applicants on ***alternative admission policies***, devised to offset potential SES differences amongst candidates or high schools' different course offerings. Data gathered at the time showed no discernible detriment to student performance as a result of alternative admission mechanisms—neither at aggregate nor at individual level.

The 1996 referendum that eliminated affirmative action in public universities was of particular importance. Affirmative action affected especially selective institutions (e.g. UC/Berkeley). Some consider its removal positive in that is deemphasized standard tests in favour of high school grades and class rank (see above)—a win-win strategy that better enables prediction ***and*** inclusiveness. However, the move is still contested as others claim it affected minority participation negatively (interview data).

The above-mentioned ELC includes applicants ranked in the top 4% of their high school class in select UC-approved courses. This system is said to yield a more diverse student body because it guarantees admission to one of UC's campuses to the top 4% at each high school (based on GPA alone), including "lower performing". However, major reforms are due in 2012. UC will to guarantee access into the system to the top 9% of high school graduates in the ELC (based on GPA only) and to the top 9% state-wide (based on GPA and standardized testing). This system is called in jargon "the 9 by 9". It has been calculated that the combined eligible populations will constitute about 10.5% of all high school graduates. These students will be guaranteed admission to at least one UC campus; the next 10% of high school graduates are entitled to a full review of their application but are not guaranteed admission (LAO, 2011). This move is considered by many no more than a political response to 15 years of controversy following the 1996 referendum, and it is meant to remain in the "UC 12.5% requirements". However, the reform is viewed with scepticism because of fears it will increase drop-outs. Modelling to estimate potential effects of different ELC levels conducted at UC at the time ELC was first implemented suggested that as eligibility thresholds were relaxed (e.g. to include the top 8%, 12%, &c. of high school graduates) drop-out rates also increased and negative effects on the match of students' ability and desires to the institution became visible.

Many argue that the problem with the 2012 change is its underlying political justification and the resulting lack of sound analytical work to underpin it. Indeed, that policy changes do not ineludibly produce what is expected is a truism all too often overlooked. For example, introducing ELC was meant to boost the share of African American and Latino students but in fact benefitted mostly rural White students.

3.3.4 Experiences with Selection in California

The level of selectivity is represented in the participation rates at the different systems. The impact of study costs (fees and other costs) must also be kept into account. The following charts present data on enrolment rates in the different California systems (California Postsecondary Education Commission, 2011)

- Chart 3.3 shows data for 2009 only, split up by ethnicity
- Chart 3.4 presents data from 1990 and to 2009 for "first time freshmen"[29]—it shows the number of high-school graduates over time, the number of those who passed the "a-g" courses
- Chart 3.5 shows the proportion of high-school graduates who passed the "a-g" courses who subsequently could enrol as first-time-freshmen at UC and CSU
- Chart 3.6, shows the enrolment trend over the past five year, by system and includes undergraduate and graduate students[30]

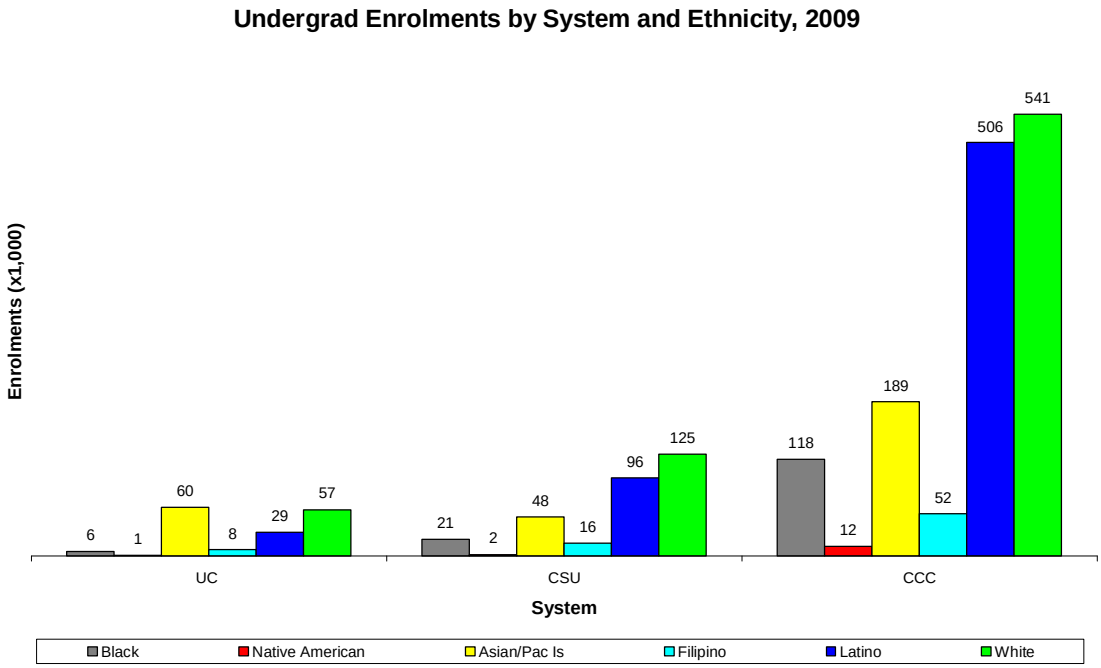

Chart 3.3: Undergraduate enrolments by system, 2009. Source CPEC, 2011

[29] Entering freshmen (age 19 and under) who have never attended any college or other postsecondary institution (see: http://www.cpec.ca.gov/SecondPages/Glossary.asp#First_Time)

[30] Does not include CCC District Office, Other Public Colleges and Universities, WASC-Accredited Non-public 4-Year Institutions, WASC-Accredited Non-public 2-Year Institutions, State-Approved Institutions, Institutions Exempt from State Approval, Closed and Other Institutions

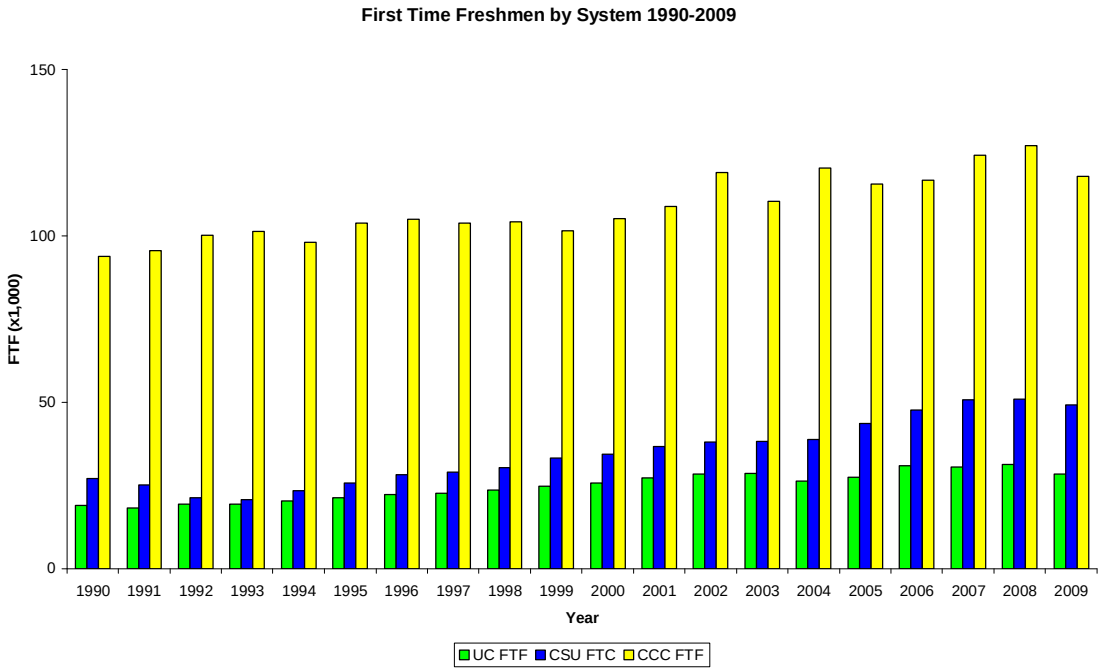

Chart 3.4: First-Time Freshmen by system, 1990-2009. Source CPEC, 2011

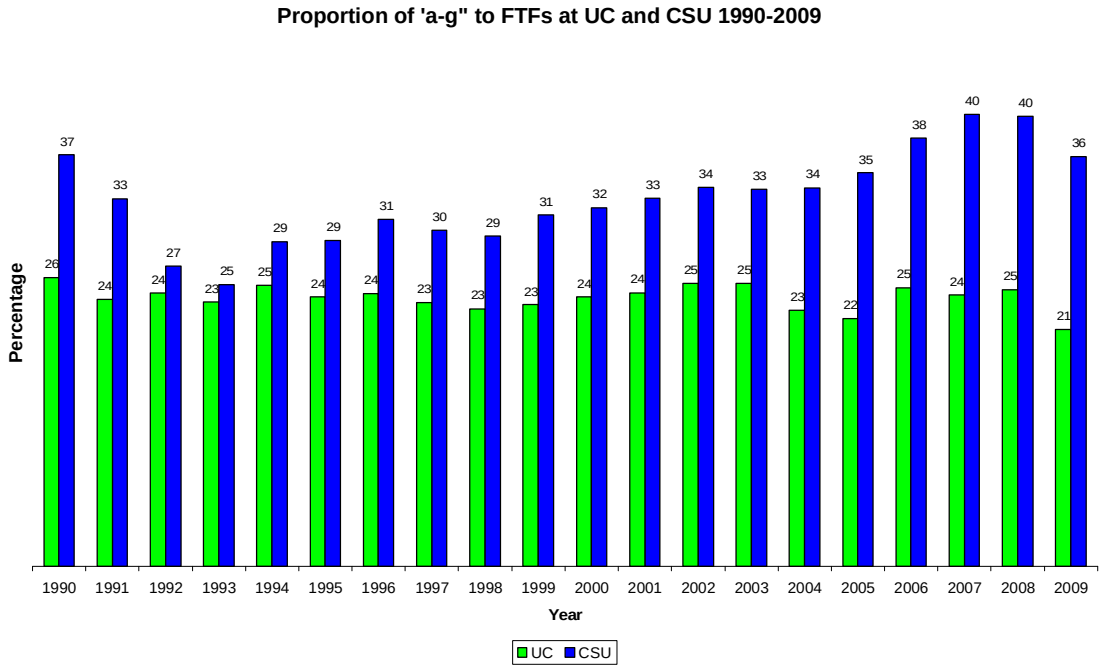

Chart 3.5: students passing the “a-g” courses who enrolled at university by system. Source CPEC, 2011

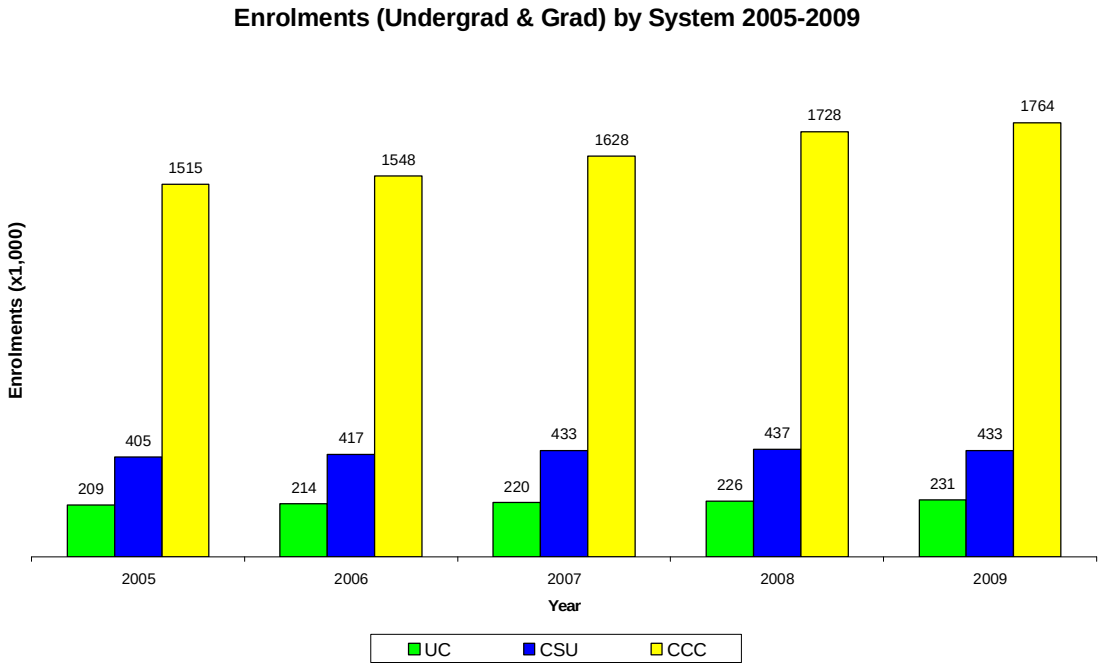

Chart 3.6: Enrolment trends 2005-2009 (undergraduate and graduate). Source CPEC, 2011

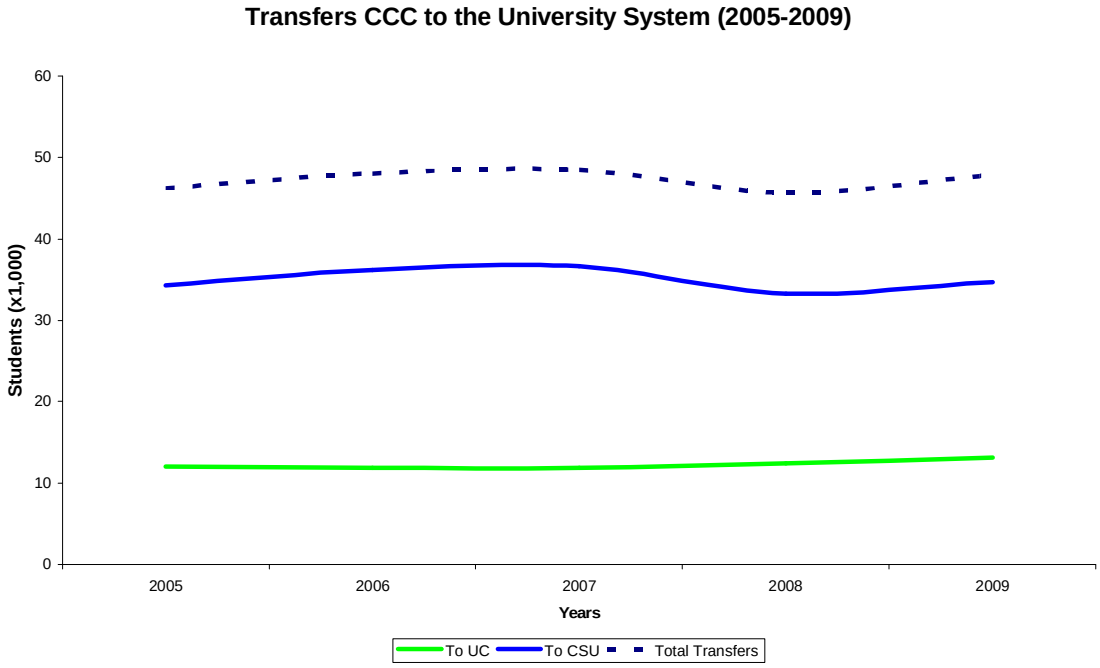

Chart 3.7: California Community College Transfers 2005-2009. Source CPEC, 2011

The data confirm that, unsurprisingly, less selective institutions allow more access. Community Colleges have the highest access rates level (they are also the least taxing on the family purse since their tuition fees are lower)[31]. Over the years, there has been a slight increase in enrolments in higher education institutions across the different California systems (e.g. UC enrolled 209,000 students in 2005, and over 230,000 in 2009)[32]. But what is interesting to note, is that the CCC transfer system is rather widespread and over the years has accounted for about 9% of enrolments in the university sector[33]. It is believed to help students access the university system (UC or CSU) although they might not be eligible at the time of high school graduation.

Finally, the student population in the California higher education system is diverse. Two characteristics should be noted: Caucasians are still the majority across the board, both at the university level (UC and CSU), and at the CCC level. However, other ethnic groups, (in particular Hispanic-Americans) are increasingly represented as well, but mostly at the CCC level. In addition, at UC, Asian American undergraduate enrolments outnumber Caucasians' (albeit not by much). This fact is interesting because, as is mentioned below, Asian American students seem to be particularly opposed to the ELC admission reforms planned for 2012, which they feel will limit their share while favouring African American or Latino applicants (interview data)

In general, however, there seems to be no significant interest in "matching". For over a century, concerns have focused on primarily on access and equity for different socio-economic groups. The main point seems to be the role of standardised tests, which appear to hamper access of smart but low SES students rather than promote bright applicants across society[34]. Moreover, these tests are coming under increasing scrutiny because as it becomes evident that they are becoming predominantly a business for testing agencies with limited predictive value (Atkinson and Geiser, 2009).

Finally, the changes are controversial. The 12.5% rule is often seen as a zero-sum game. This means that the planned ELC expansion (from 4% to 9% mentioned above) cannot result in a truly large change. The guaranteed full review (see above) suggests that of the 10% of fully reviewed applications, only a small share will be actually accepted after eligible "9-by-9" students are placed at one of UC's campuses.

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[31] Private institutions have the lowest undergraduate enrolment, but CPEC data show that they are the most sought when it comes to full-time graduate studies (probably because graduate students see their studies consciously as a direct investment in their future career and are therefore willing to spend more). See: : http://www.cpec.ca.gov/StudentData/StudentSnapshot.ASP

[32] However, the effects of the forthcoming 2012 changes will be interesting to monitor

[33] In 2009, CPEC shows a total of 538,071 enrolments between UC and CSU, and a total of 47,867 CCC transfers (CPEC, 2011)

[34] There are several reasons for this claim, including e.g. the fact that students get better preparation at high schools in upper socio-economic environments (which means that low SES students are ill-prepared to pass such tests to begin with), or that standardized tests barely account for cultural differences. Studies have shown that for students from some cultures, impersonal test situations (such as the SAT or ACT), produce far worse results than test situations in which a personal relationship with the tester exists. For Mexican American and African American students, collaborative efforts tend to be more successful than individualized ones because of the collectivist origins of their respective cultures (see Zimbroff, 2005)

On the one hand, non UC-eligible students can attend Community Colleges as an alternative (and subsequently transfer). On the other hand State wide standards will be raised considerably (e.g. raising the GPA requirement. This is feared to create ever more "peaks and valleys" at the secondary level. For instance, many high schools with students from higher income areas (and that currently have many UC- eligible students), are likely see their UC-eligibility numbers fall as a consequence of the new reforms because these reforms oblige UC to accept the top 9% of all high schools, including those where higher grades are given profligately and where students would not expect to be eligible at all. Ion other words, the reforms are seen as an incentive to apply for students who did not think they had a chance of admittance. Whether this is good or bad remains open to question, but the reforms have already brought to light socio-ethnic and divides not previously evident. For example, the Asian American community, foreseeing significant loss lose in their share of participation, has been particularly vocal against the changes. This appears to be a politically motivated shift, not founded on systematic analysis and therefore with potentially unwanted consequences.

3.4 Conclusions

This chapter has taken a look at selection mechanisms in California's higher education. California is a good showcase of selection mechanisms in tertiary education. It is a highly successful system because it guarantees access to qualified students and has a good transfer system between its systems. At the same time it remains selective to ensure, as far as possible, student success. Studies on selection and how to ensure collegiate success are common. Moreover, over past decennia, important reforms have taken place in how students are selected for entry. Based on the case evidence and expert interviews, these concluding paragraphs provide thoughts on what ought to be taken into consideration when designing selection policies:

- ***Make incremental changes***: since policy reforms do not always produce predictable outcomes, changes should be incremental and marginal. For instance, although primarily meant to promote ethnic diversity, California's ELC benefitted rural white students over African Americans and Latinos. Similarly he planned shift from 4% to 9% eligibility in California's ELC as of 2012 (see above) is not looked at favourably
- ***Balance politics with analysis***: that politics affects policy-making is inevitable, still analysis should back any decision-making. For instance, the 2012 ELC threshold reform (mentioned in the bullet above) is generally deemed perilous because it answers to political pressures that have little ado with system improvement. Analyses following the introduction of ELC indicated already at that time that an enlargement of the pool of potential students would augment drop-outs. Today's reform appears to have no sound analysis to back it. Dictated by politics, it is looked upon with suspicion
- ***Take an all-inclusive approach to selection***: simple variations in the pool of applicants do not impinge ***ipso facto*** on the match between students' wants and their choice of study. Toughening or relaxing grade requirements, attributing more or less weight to standardized testing does not guarantee more student success
- ***Carefully balance quality and quantity of collegiate attainment***: As mentioned at the outset of this chapter, California is highly differentiated, including a range of institutions from

very selective to open admission. California's exacting selection procedures are believed to have engendered high graduation numbers and good graduates, together with a wealth of opportunities at different levels within its tripartite system (see above). However, it has recently been pointed out that intra-systemic diversity in California is such that the proportion of college age students in four-year colleges is lower than elsewhere because they are denied the opportunity to participate—an unwanted and perverse effect of differentiation policies, which are nevertheless increasingly "trendy" worldwide. Thus, differentiation taken to the extreme may reduce baccalaureate production and affect the composition of the student population in unfavourable ways—regardless of new admission policies (Geiser & Atkinson, 2010). In fact California ranks 43rd among the 50 states in B.A. attainment among 18-to-29 year olds (***Ibid.***, p.9)

- ***Emphasize achievement and mastery of college preparatory materials as primary criteria in admission policies***: predicting student performance in college on the basis of factors known at point of admission is very hard. Selection mechanisms based on predictive validity (particularly, but not solely, of standardized tests) account for no more than 30% of the variance, while over 70% of the variance remains unexplained (Atkinson & Geiser, 2009, p.672) . In other words, the error band around admission is substantial. For example, using the tests scores of students with similar (high) grades is likely to cause errors in selection decisions (the best predictors of student success remain high-school grades, but even these are not a panacea)
- ***Apply "soft" selection mechanisms with mastery and transparency***: much has been said to the benefit of California's Comprehensive Review (and UC's Holistic review). These procedures invest much time and labour to maximize the probability that accepted students will match the institution's mission policies and succeed (where the understanding of "success" in California, including factors such as civic engagement, is somewhat broader that the European connotation). And, in fairness, at over 80%, UC completion rates (over 6 years) are impressive (CPEC, 2011b). Yet, it is also claimed that these processes (a) do not perceptibly improve actual predictions of collegiate success (which, as mentioned on several instances in this report, seem to be predominantly dependent on grades) and (b) might even enable the inclusion of impermissible criteria because of their subjective nature
- ***Design selection mechanisms that adequately reflect high school composition***: selection is ***naturaliter*** about managing tensions between who can participate vs. whom should be excluded from tertiary education. As applicant cohorts come from high schools, it is important that access to university reflects their ethnic, regional, and racial diversity to avoid compounding new tensions to pre-existing differences[35]

[35] This is a very Californian issue – and source of endless debates there –, which may apply to the Dutch context to some extent

4 Denmark

4.1 Executive Summary

The higher education system in Denmark has a binary structure and consists of universities and colleges. Universities offer programmes at three levels. The Ministry of Science, Technology and Innovation is responsible for university sector. In 2007 the Universities' Law was passed which aimed strongly at increasing university autonomy. Student selection is coordinated in the country via a central admissions agency, KOT. The criteria for selection are decided by the faculties in universities and include general and specific criteria and vary per programme and per university. Universities set their own criteria with the approval of the Ministry. Universities also decide how many students will be admitted in their programmes, although the Ministry can fix the number of students for certain fields of study. University education is free for Danish students and universities are funded via student voucher system. The student admissions are regulated via Quota 1 and Quota 2 system. Quota 1 system means admissions based on high school graduating exam grade, while Quota 2 system is geared towards students who have professional experiences. Some universities have been using 'soft' student selection mechanisms for Quota 2 type of applicants. The key problems regarding admissions and participation have been tackled in the Danish Life Long Learning strategy which addresses the issues of the lack of information dissemination and transparency in programme offers at higher education institutions as well as points to the governmental aspirations to increase the overall participation rate.

4.2 Higher Education in Denmark

Higher education in Denmark has a binary structure (see Diagram below) and consists of two sectors, a university sector and a college sector. The university sector until 2007 included 12 universities, which were merged into 8 universities following the University Law in 2007. The aim of the mergers was to create new and stronger universities with better services as a part of the Danish government's globalization strategy. Currently five of the universities are comprehensive universities, and three are specialized in the field of engineering, the Technical University of Denmark, information technology, the IT University and business studies (Copenhagen Business School).

The universities offer programmes at three levels: Bachelor's degree (3 years), the Candidatus (Master's) degree (2 years), and the PhD degree (3 years) – the so called long-cycle of education. The universities also award the traditional Doctoral degree (dr. phil) after a minimum of 5-8 years of individual research. University programmes are research based.

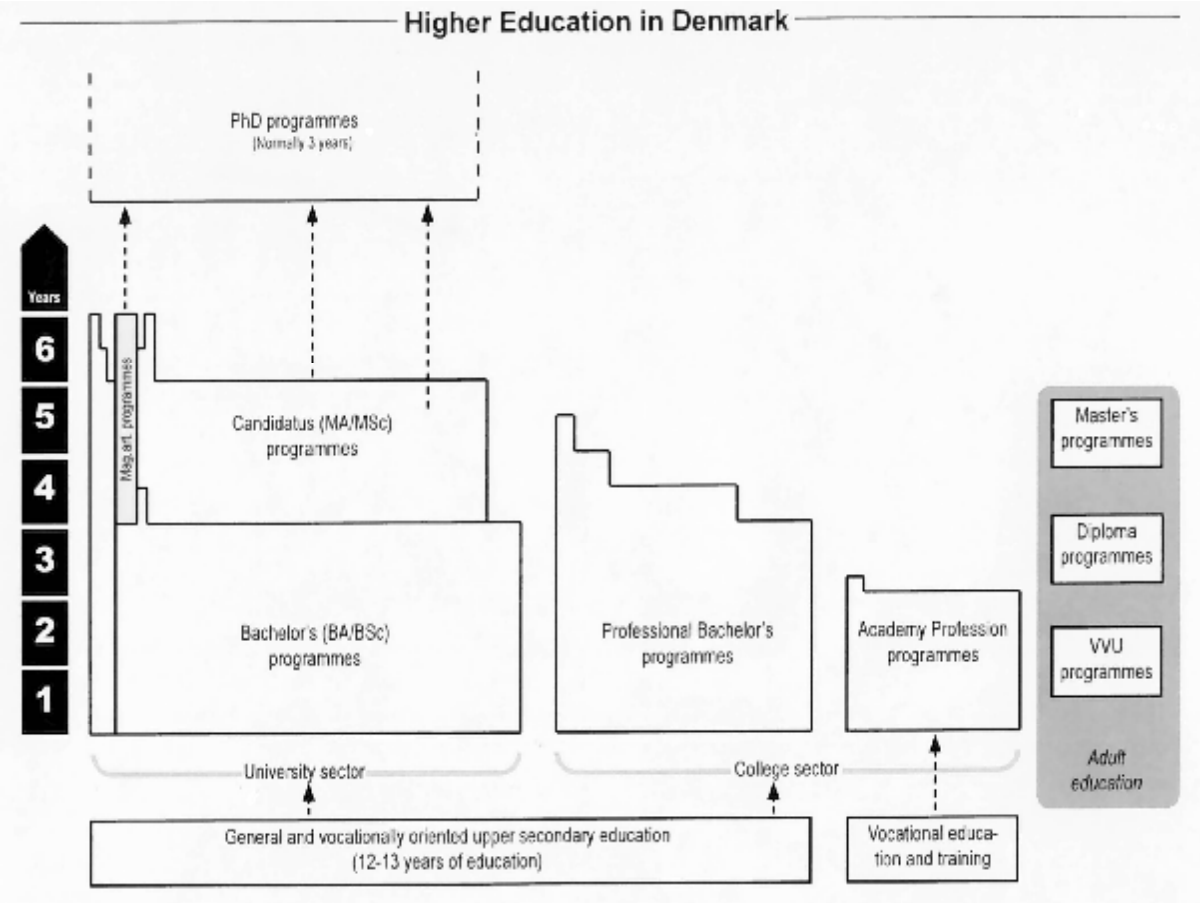

Diagram 1. Danish higher education system. Source: Danish Agency for International Education: http://en.iu.dk/education-in-denmark/detailed-information.

Public higher education in Denmark is free, but students need to pay the fees to take their exams. An exception is admission to the adult education system, where students have to pay tuition fees. The government finances higher education based on a voucher system per student. The grants are calculated on the recorded student activity measured as their participation in courses and examinations. The rate varies according to subject field and the level of higher education. Foreign students from outside the EU have to pay tuition fees, unless they are permanent or temporary residents in Denmark (Eurydice 2009).

The number of entrants into higher education has been fluctuating over years, although a general increase in student numbers may be seen in the university Bachelor studies (As showed in Chart 4.1 and Table 4.1 below). Traditionally, Danish students would enter the labour market and travel right after finishing high school and only later enter higher education. This trend has been changing during the past years both due to the changing mentality of students who instead of gaining experience in the labour market want to get their degree as soon as possible. Further, the policy incentives for students to enter higher education within the two years after the finishing could be another reason (Interview data).

[36] Source: http://www.euroeducation.net/prof/denmarco.htm

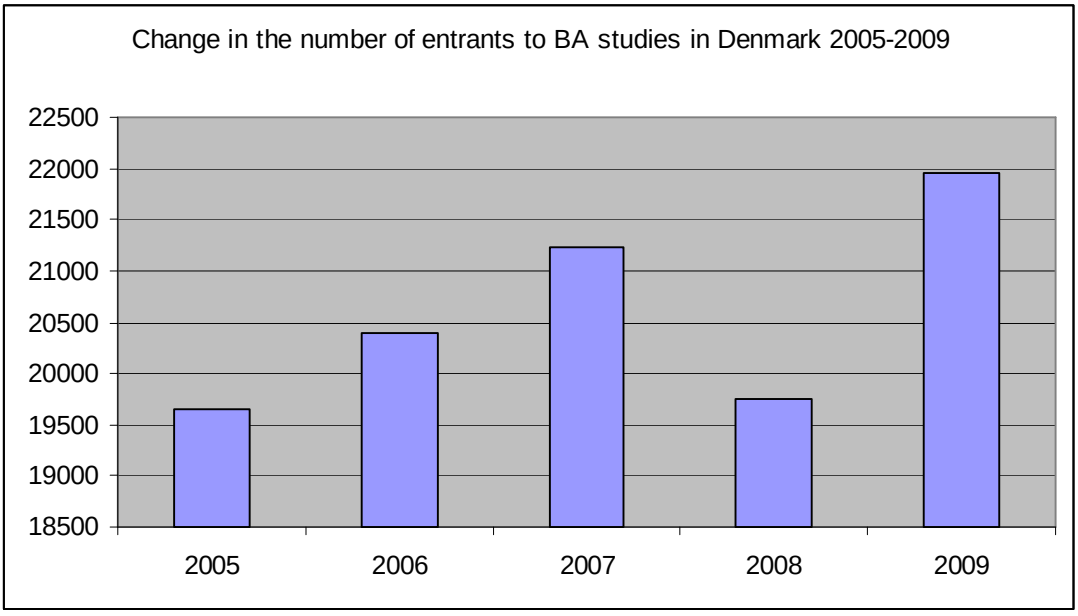

Chart 4.1: Entrants to BA studies in Denmark 2005-2009. Source: Danish Statistics Agency, 2010.

Table 4.1. Number of students per higher education programme 2000-2005.

	2000	2001	2002	2003	2004	2005
	Number					
Higher education, total	**188,165**	**193,553**	**195,820**	**197,478**	**197,610**	**198,930**
Short-cycle higher education	***19,384***	***19,784***	***18,658***	***16,937***	***16,990***	***18,508***
Medium-cycle higher education	***114,757***	***118,786***	***120,747***	***123,047***	***124,373***	***126,275***
Professional bachelor education	65,493	67,439	69,159	69,625	69,591	68,512
Other medium-cycle higher education	1,804	1,754	1,697	1,701	1,695	1,632
University bachelor education	47,460	49,593	49,891	51,721	53,087	56,131
Long-cycle higher education	***54,024***	***54,983***	***56,415***	***57,494***	***56,247***	***54,147***
Uniform master's programmes (candidatus)	22,065	20,444	18,630	16,863	13,821	10,803
Two-step master's programmes (candidatus)	31,959	34,539	37,785	40,631	42,426	43,344

Source: Danish Ministry of Education, 2010.[37]

[37] Available at: http://pub.uvm.dk/2008/facts/kap05.html#kap06

4.3 Selection Mechanisms in Denmark

4.3.1 Description and History of Selection in Denmark

Access to higher education in Denmark varies from programme to programme. The Coordinated Enrolment System (KOT) is responsible for coordinating the admission to the universities. Admission to most study programmes depends on the fulfilment of both general requirements and specific requirements. In the following the general and specific requirements for admission to higher education will be presented.

The general admission requirement for all Bachelor level programmes is the completion of one of the qualifying examinations at upper secondary level:

- The upper secondary school leaving examination (studentereksamen)
- The higher preparatory examination (HEF)
- The higher commercial examination (HHX)
- The higher technical examination (HTX)

The specific requirements are stipulated by the Ministry of Science, Technology and Innovation after recommendation by the university. The specific requirements may require that students need to have completed more subjects and at higher levels in order to attend a specific BA programme and/or to take a practical test specified by the university. Admission to programmes in certain fields such as art and music requires an entrance examination based on talent. Based on Universities Act 2003 and the Ministerial Order on Bachelor and Master Programmes, 2004, No. 338, section 3, paragraph 8, admission to BA programmes require an upper secondary qualification and the ability to meet any specific entry requirements as specified by ministerial order on admissions to universities.

The admission requirements are explicitly described in the study programme descriptions and admission requirements by the universities. In certain Bachelor's degree programmes, alternative entry is possible on the basis of a relevant educational qualification (typically a professional bachelor's degree) combined with 2 or 3 years' work experience. Additional requirements may apply.

In Denmark universities are responsible for regulating the size of the student population, including the specific number enrolled in each programme. The Ministry of Science, Technology and Innovation can however determine the maximum number of students in specific fields of study. Apart from that, individual institutions may have restricted admission for certain fields of study. There are two quotas used in admissions in Denmark. Quota 1 admission is based on grades and is administered centrally via the KOT website. The minimum level of average grades needed for admission according to Quota 1 are published in daily newspapers end of July and is determined by the Ministry. Quota 2 admission depends on a number of different criteria, such as grades and work experience and is directly administered by the faculties in the universities. The admissions procedure then may include a motivation letter and a test or an interview as it happened in the universities of Aalborg, Aarhus and University of Southern Denmark. In 2010, these

universities used both the high school grades and interviews. The feedback from universities regarding the use of interviews has been positive. Students selected via interviews manage their studies well in the view of the National Student Union representative (Interview data). These criteria are set by universities. The rationale for the interview is to get a better match between the university programme and the student (University of Southern Denmark Website[38]). During the interview the academic staff discuss with the student his/her motivation to study particular subject at that particular faculty. The specific procedures of "Best Match" vary from faculty to faculty depending on the area of study.

Another common requirement for foreign applicants who apply for Danish taught programmes is the Danish language entrance requirement (The Study Test in Danish as a Second Language).

At the end of the first admissions round higher education institutions can have vacant places. A list of the vacant places is published on the KOT's website and the prospective students may use that list for later applications.[39] Students who do not get admissions, may appeal.

The system of short-cycle, medium-cycle and long cycle higher education programmes have existed for the past decade. The increase in offers of vocation education was mainly aimed to cater for the expansion of student numbers in the country. Already in the 1990s the Ministry of Education had the authority to restrict access to certain areas of study if it found it necessary because of a limited demand for graduates. However, there was mostly free intake to most higher education programmes on a national basis in 1980s and 1990s. However, as noted by Fägerlind and Stromquist 2004, the students in the most popular areas of study had often to move to other parts of the country to be admitted.

The geographical distribution of higher education has little changed since 1970s despite the university mergers in 2007. The bulk of universities are located in the Copenhagen area and the rest in major cities in other parts of the country: Aarhus, Odense, and Aalborg. The greatest number of students is located in Copenhagen area. As noted by Fägerlind and Stromquist 2004, educational level is higher in this area, much graduate employment is concentrated here and the urban lifestyle is attractive to young people. As a result, it has been already since years that the average grade levels required for entry into popular study programmes (such as media studies) are highest in the Copenhagen area and there have been considerable differences in the academic quality of students admitted in different parts of the country (2004, p. 65).

[38] http://www.sdu.dk/Uddannelse/Optagelse/Bacheloruddannelser/Kvote_2
[39] http://www.kot.dk/KOT/Afslagsbrev_eng.pdf

Policies on selection-related issues in Denmark

The Government has launched according to the Ministry website extensive educational reforms that will contribute to welfare in Denmark: ”The reforms are to ensure higher quality and better coherence in educational efforts– from pre-school class to higher education and in adult education and continuing training ” (Ministry of Education, 2010).
In spring 2007 the Government drew up a report concerning Denmark’s strategy for lifelong learning as part of European cooperation on education. This is a long-term strategy to be implemented in the period 2007-2012, which is to improve both the quality and capacity of the education system and of adult education and continuing training. Among the main governmental goals in this report attention is paid to increasing the participation rate as well as encouraging young people to start higher education earlier and finish on time:

- At least 50 per cent of a youth cohort are to have a higher education in 2015
- The quality of short cycle and medium cycle higher education programmes and university education programmes must match the best in the world
- The content of all higher education programmes must match the needs of society
- All young people are to obtain an education with a global perspective
- Young people are to be encouraged to begin higher education programmes earlier, and the education programmes are to be organised so as to minimise delay

The life long learning strategy has a number of action lines:

- Professional guidance for future students
- Increasing the cohesion and transparency of the higher education system
- Recognition of prior learning are given particular importance

Guidance of young people at all levels of education system about choosing education programmes” that corresponds to their own desires and abilities and to society's need for qualified labour” needs to be more professionalized according to the report. The concern is how to bridge between the different levels of education. Further, attention is paid to the guidance about opportunities in adult education and continuing education for employees. For the groups that have the greatest barriers to participation, the outreach guidance and counselling effort is to be increased by means of a number of new initiatives in the area of adult guidance and counselling.

The second action area is to improve the transition between all levels in the education system and opportunities to transfer credit, and for the education system to be transparent and accessible to all. This is to be implemented through, in particular, better bridging between the primary and lower secondary school and youth education programmes, better opportunities for credit transfer in the education system, increased recognition of prior learning in adult and continuing training, and the development of a national qualifications framework for lifelong learning.

As noted by the Ministry, the government aims to create better opportunities for individuals to have their knowledge, skills and competences assessed and recognised

within the adult education and continuing training system regardless of where they were acquired. This is to promote the participation by adults in adult education and continuing training and to improve their opportunities in the labour market. It is to be promoted especially through the implementation of legislation on increased recognition of prior learning in adult education and continuing training, from general adult education to diploma level, which will enter into force in 2007/2008.

In Denmark a variety of policy mechanisms are used to improve the age of students and time to degree problem via incentivizing both students and universities. Those students who apply to universities directly after high school can add extra points on their high school grades in Quota 1. The second mechanism was to reduce the Quota 2 to 10%. Currently, a student support mechanism is discussed where students who enter university right after high school get higher support than those who enter higher education at the late stage of their professional lives. The Universities are incentivised via financial policy instruments. They get more funding per student if the students get their degree faster. Thus, in response universities have developed new policies. They have a right to expel the student if there is a one year delay. Universities also these days sign contracts with each student for writing theses. Moreover, if students fail their examinations at universities – they have to retake them in a short period of time (Interview data).

4.3.2 Experiences with Selection in Denmark

Traditionally, students in Denmark have been older of age when graduating, and their age has been increasing. However, it seems that this trend is turning except for the university bachelors where the age has been constant. As noted by student representative, students are getting younger and their mentality is changing –they do not want to be delayed with their studies. At the same time, the student financial support system is such, that student have to work while they are studying, which deters their time to degree. Only one third of students are using student loan system, others are working and traditionally Danish students are not financially supported by their families. They leave parental home early and start working (Interview data).

In 2005, the age of the students who completed a short-cycle higher education was 25.8 years. As such, they were slightly younger than in 2000-2001 when the age was a little over 26 years (Chart 4.2).

After a slight decrease in 2005, the students who completed a professional bachelor programme were 27.3 years old, whereas the students in the university bachelor programmes with 25.2 years of age were a little more than two years younger. In the university bachelor studies, 74% who started are expected to complete (Denmark Facts and Figures 2009, p. 91) In Table 4.2 below we can see that the number of drop-outs from university bachelor programmes as well as numbers of students who have completed their degrees has been slightly rising. Overall, the number of university bachelor students has been rising 14% between 2005 and 2008 (***Ibid***., p. 89).

Table 4.2. Completion and drop-outs of university bachelor programmes.

	2000	2005	2006	2007	2008
Completed BA studies	8,441	10,612	10,666	11,820	12,153
Discontinued BA studies	4,387	4,907	4,392	4,771	4,986

Source: Denmark Facts and Figures 2009

According to the Ministry of Education (2009), every second student who discontinued a university bachelor programme started another education within 27 months. In this group, somewhat more than half of the students, started a medium-cycle higher education especially including a professional bachelor programme (Denmark Facts and Figures, 2009, p. 91).

From 2000 through 2005, the students in the master's programmes (candidatus) have generally become slightly older at graduation. From a graduation age of 27.8 years in 2000, the age rose to 28.6 years in 2004. In 2005, the graduation age had fallen slightly to 28.5 years.

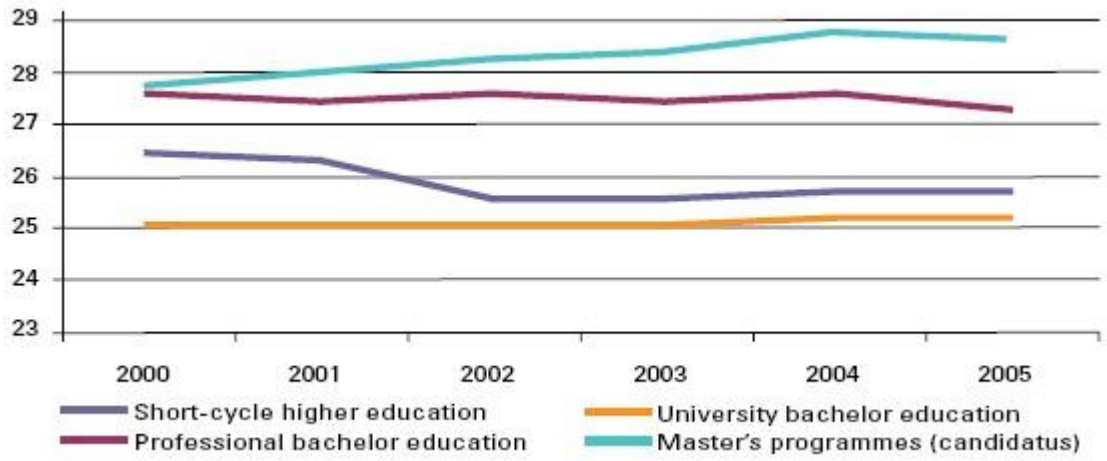

Chart 4.2: Median age at graduation. Source: Ministry of Education, 2010.

The acceptance rate varies per year, since the admissions very much depend on how many students in a particular year apply for a particular study area and a particular university. In 2010, around 30% of applying students are not admitted to higher education. It is also the question of which choice students get – their first choice of the programme or the last choice of the programme. While applying, students have 10 choices to choose programmes (Interview data) As noted by the National Student Union representative, most of students do not use all the choices.

Employers are very much interested in shortening graduation times and getting students with better qualifications and grades into the labour market. Policy makers have attempted to meet the needs of employers by putting a range of incentives in universities to shorten the time to degree.

Student admission to higher education is currently a hot topic in the policy debates in Denmark. All the stakeholders – policy makers, student unions, university management as well as employers have strong opinions about it. The policy makers and employers are more in line to shorten the time to degree as this benefits the economy and produces graduates faster for the labour market. The concerns of the labour market have been more focussed on the quality of graduates and one of the ways policy makers have responded was to make the entrance grades higher and to put incentives in place for students to enter higher education up to two years after finishing high schools. In the opinion of the Student Union in Denmark, the biggest debate related to admissions is the currently proposed changes to reduce Quota 2 from 40% to 10% and to increase of the entry grades for Quota 1 students, since they have certain implications for life long learning. The concern is that these changes increasingly exclude mature students, This may cause particular discrimination against students from lower income families who tend to work more after high school rather than to go straight into higher education. Another concern expressed by the students is related to the view that increased importance put on the high school grades presses the students with very high grades to go for the most competitive programmes in law and medicine, just because they have excellent grades, rather than choosing the programmes that they would like to study.

4.4 Conclusions

The Danish system of student admissions may be interesting for the Dutch higher education sector insofar the practices of some Danish universities, such as Aalborg, Aarhus or University of Southern Denmark are concerned. These universities combined the admissions mechanisms of high school grades and interviews. Since the evaluations of these interviews have been positive as seen from the students and universities point of view, their experiences may be useful for the Dutch debates on student and study programme matching.

5 England (United Kingdom)

5.1 Executive Summary

The UK has a unitary higher education system with 115 universities. Students have to pay fees the amount of which vary per programme, per level of study and per university and per type of student.

British universities are free to select their students although the application to the undergraduate degree programmes are processed by the central agency UCAS. Currently the higher education funding bodies make allocations to institutions to meet the yearly overall student number plans and set targets to institutions for student numbers, although this is about to change in England.

Besides the grades obtained from school or college qualifications, the application form requires a personal statement from the applicant and a reference from the applicant's school or college which assesses his/her suitability for higher education. In addition, some universities may hold interviews, use admissions tests and/or use other contextual factors. Over the past years a few criticisms regarding meeting the goals of increasing participation have been discussed.

The Higher Education Act 2004 (England and Wales) introduced initiatives to help students from poorer backgrounds to access higher education. These include the means-tested financial aid for students and the creation of the Office for Fair Access to improve access to university for people for under-represented groups. Currently universities have to make agreements with OFFA, where it is checked how universities invest some of their additional income from fees into attracting applications from students from low income groups through bursary and other financial support and outreach work. In the past five years universities received £392 million to widen participation. The evaluation of this initiative showed the lack of transparency. In addition in 2006, a UK wide higher education sector-led Delivery Partnership of different education stakeholders was established to implement reforms to improve the applications system. Another recent initiative to facilitate the admissions process was the establishment of a Supporting Professionalism in Admissions Programme for universities in 2006. According to Scott (2009), in the United Kingdom, a distinction is now drawn between 'increasing participation' – in other words, general expansion – and 'widening participation' – the positive reduction of barriers to access experienced by students from less privileged social backgrounds. The question for the future is how the system will change in England following the new Browne' Review Report (2010) which among other things advises to remove the cap on student recruitment and increase the study fees. The government's response of retaining the cap, but increasing the fees may mean further challenges for student access in England.

5.2 Higher Education in the UK

The United Kingdom is a unitary state but has seen some devolution in the past years. There are therefore sometimes differences between, England, Scotland, Wales and Northern Ireland in their Higher Education policies. When thinking about these differences it is important to keep in mind that 80% of the UK population lives in England, it is for that reason that this report deals first and foremost with the situation in England.

The education system is made up of primary education, secondary education, further and higher education. Compulsory education starts at the age of five. At that age, about half the children have already been enrolled in some form of pre-school education. Primary education lasts six years, usually divided into infants (5-7 years) and juniors (8-10 years). Pupils enrol in secondary education when they are 11 years old. In Scotland, however, primary education begins at the age of 5, and lasts 7 years (up to the age of 12). Secondary education consists of a variety of systems, provided by local education authorities (LEAs). Compulsory education ends at the age of 16 with the General Certificate of Secondary Education (GCSE), but most secondary schools provide some form of sixth form education leading to General Certificate of Education (GCE) Advanced (A) levels (Brennan &Shah, 1993). After the age of 16, pupils can continue with Further or Higher Education (Brennan & Shah, 1993; Eurybase, 2005).

The single most important issue here is that of the different types of secondary education that lead up to university entrance. In the UK there is a private secondary education system alongside the public system. To complicate matters the private schools are called public or independent schools; the publicly funded state schools are comprehensive schools or, fewer in numbers, grammar schools or more recently academies and free schools.[40] The private schools are expensive and are still quite often boarding schools. There is a strong debate in terms of equal opportunities of access to higher education. Numbers from 2003/4 show that 45% of the entrants to Cambridge and Oxford were from public schools, where less then 7% of all the students in Britain have attended a public school (HESA, 2005; Independent Schools Council, 2007).

The UK has a unitary higher education system. There are 115[41] universities in the UK today (including 89 in England, 14 in Scotland and 10 in Wales and 2 in Northern Ireland). Universities in the UK have been established in four 'waves'. The first universities were Cambridge and Oxford. In the nineteenth century the so called Redbrick universities followed, catering for a new market of students and employers that came into being as a consequence of the industrial revolution. The third wave of universities was established in the 1960s again to cater for a growing demand in society for higher education. The fourth wave of universities are the former polytechnics that were given university status in 1992. The universities that were established in the first two waves were created by Royal Charter, the universities that were established later are based on Parliamentary Statute. Whatever the legal basis, each university is self-governing. Any amendment to institutional charters and statutes is made by the Crown acting through the Privy Council on the application of the universities

[40] See: http://www.education.gov.uk/schools/leadership/typesofschools/academies.

[41] See: Universities UK http://www.universitiesuk.ac.uk/UKHESector/FAQs/Pages/About-HE-Sector-and-Universities.aspx#Q1

themselves. Each university determines which degrees and other qualifications it will offer (Leisyte, 2007).

In the United Kingdom the total number of students in tertiary education increased from 1.94 million in 1998 to 2.34 million in 2006. In terms of the total number of graduates (Bachelor's, Master's and doctoral awards) a similar pattern can be observed – from 374,000 in 1998 to 514,000 nine years later (Scott 2009). In terms of number of applicants to higher education institutions, there is a steady increase over years, as shown in the Table 5.1:

Table 5.1

Total applicants (5 years)					
	402,831	435,658	464,167	555,439	583,501
Diff (+/-)	-	32,827	28,509	91,272	28,062
Diff (%)	-	8.1%	6.5%	19.7%	5.1%

Source: UCAS 2011.

As stated in the HEFCE (2010) report, young participation in higher education in England has increased from 30 per cent, for the 94:95 cohort, to 36 per cent for the 09:10 cohort (Chart 5.1).

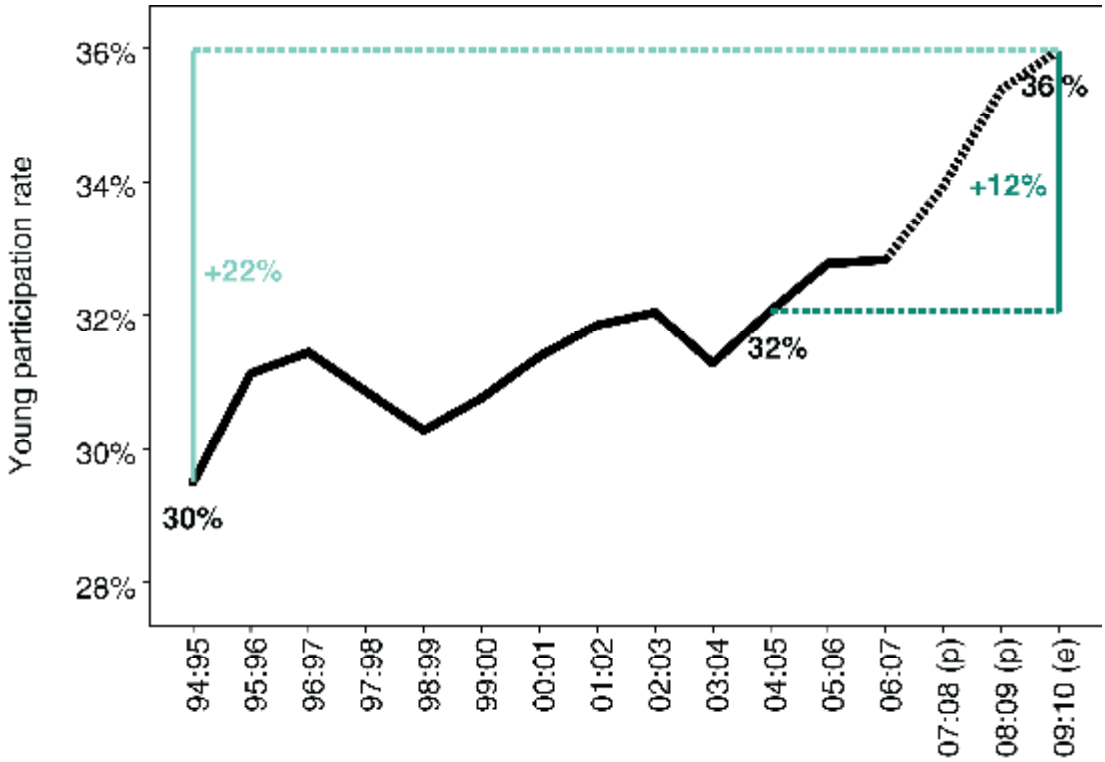

Chart 5.1: Trends in young participation for England. Source: HEFCE 2010

The increase in young participation has been more rapid in the later part of this period, rising from 32 per cent to 36 per cent between the 04:05 and 09:10 cohorts. Another report

from the Department of Business, Innovation and Skills notes that for full-time students the figure was 39% in 2008/2009 (BIS, 2010)[42]. According to HEFCE, there is no indication from the national-level trends that changes to HE tuition fees or student support arrangements have been associated with material reductions in the overall HE participation rate (2010, p. 5).

5.3 Selection Mechanisms in the UK

5.3.1 Description and History of Selection in the UK

British universities are free to select their students. In England, Wales and Northern Ireland, overall student number for the higher education sector as a whole are government determined. The current Browne review (2010) suggests a more market oriented approach by removing the cap on student numbers. However, as the system still works today, the higher education funding bodies make allocations to institutions to meet the yearly overall student number plans and set targets to institutions for student numbers. The purpose of the targets set by the funding bodies is to ensure that institutions deliver teaching activity for the funding provided. For a few subject areas there is a greater degree of central control. Undergraduate medical and dental courses are subject to quotas to ensure that the number of medical and dental students required to meet national needs is delivered. Nursing and midwifery provision is largely funded by the health authorities, which contract with institutions for the delivery of specified numbers of trainee nurses and midwives. In England, the Training and Development Agency for Schools sets intake targets for initial teacher training for those wanting to work in primary and secondary schools, but it is currently to be abolished (Interview data).

The student selection is carried out by higher education institutions (HEIs). The Universities and Colleges Admissions Service (UCAS) is a single clearing-house for applications for admission to full-time undergraduate courses. UCAS is a charity and a company limited by guarantee. Each applicant pays a fee, universities pay subscription. UCAS does not set the admissions requirements or decide on the admission of individual students, but provides information for the prospective students on the choice of course, institution and entry qualifications normally required. Prospective students apply to UCAS normally by 15 January for entry the following September.

Students submit their applications online via the UCAS website. Institutions receive the applications electronically and a number of institutions also receive applications in paper format via UCAS. All application forms and sends them to the institutions mentioned at the form. After an institution has selected students, they inform students via UCAS about their offers. At this stage students did not have their final exams yet and therefore the offer of the institutions is conditional, which means that the offer stands under the condition that the examination results of the candidate meet the demands of the institution. When students receive the offer of the admission of the institutions, they have to react formally to

[42] See http://stats.bis.gov.uk/he/Participation_Rates_in_HE_2008-09.pdf.

the offered places by choosing two offers, one as a firm offer and one as an insurance or back up offer.

Besides the grades obtained from schools, the application form requires a personal statement from the applicant and a reference from the applicant's school or college which assesses his/her suitability for higher education. As students wishing to enter higher education from school apply before they have obtained their final qualifications, the reference includes predicted grades. Based on this information, and in some cases on an interview, each institution named on the application form decides whether to make an offer. If the applicant has not yet obtained their qualification, the offer will be conditional, and will specify the grades that must be obtained. After the examination results are known in usually in August, UCAS will report them to the universities. If an aspirant-student meets the required demands, the institution is obliged to confirm his/her study place. If a candidate does not meet the demands, the institution may after all accept him if the institution has places available. Applicants without a confirmed offer at this stage are eligible for 'clearing', that is, they can apply via UCAS website to the places at other higher education institutions which publish still available vacancies (Eurydice 2009, Interview data).

Historical development

UCAS was established in 1993, as a result of the merger of three bodies: Universities Central Council on Admissions, Polytechnics Central Admissions Service and Standing Conference on University Entrance. In 2007 a UK Postgraduate Application and Statistics Service (UKPASS) was launched which offers an application system for postgraduate courses in the UK as a part of UCAS.

The Code of Practice for the guidance of institutions in admissions was developed by the Quality Assurance Agency for Higher Education. It has a section No. 4 on selection:

"Institutions' selection policies and procedures are clear and are followed fairly, courteously, consistently and expeditiously. Transparent entry requirements, both academic and non-academic, are used to underpin judgments made during the selection process for entry" (QAA 2006).

One of the problems in student selection was the use of predicted examination results, which are inaccurate. The Schwartz review of 2004 'Fair admission to higher education recommendations for good practice (DfES, 2004) advised to improve the existing arrangements of applications. One of the recommendations was to introduce a full 'post-qualifications application' system (PQA) by 2012, which would allow students to apply after receiving their exam results.

In 2005, the DfES-led consultation Improving the Higher Education Applications Process (September 2005) has resulted in the actions to improve the HE applications system by enhancing the provision of information both for applicants and universities in the interests of increasing transparency, efficiency and effectiveness. This initiative was endorsed by Ministers of Wales, Scotland and Northern Ireland followed by the recommendations:

- Implementing a number of changes to the current system
- An impact assessment of the reforms in 2010/11 with a view to consider further the implementation of a Post Qualification Application process from 2012

In 2006, a UK wide higher education sector-led Delivery Partnership of different education stakeholders was established to implement reforms to improve the applications system. The Delivery Partnership has implemented some of the recommendations and completed its work. Of particular interest to potential applicants and institutions will be the change to the number of applicant choices from 6 to 5 which will necessitate changes to systems by UCAS and HEIs.

Student selection policies

Since the eighties, there is a serious ongoing debate on student selection criteria used by the prestigious universities. This is due to the peculiarities of the British elite universities such as Oxford, Cambridge and some universities in London. In the UK most of economic and political leadership positions are occupied with graduates from elite institutions. The British elite universities are shaped by a tradition that puts great emphasis on class habitus (Heine ***et al.*** 2006, Leisyte 2007).

The roots of the problems can already be traced back to the elite private schools which are highly selective, expensive and de facto only accessible to the upper middle class. The discussion about the lack of fairness in access to higher education in the UK concerns the fact that graduates of private schools are by far overrepresented in elite universities. In public, the great difference in participation is taken as a proof for the preferential treatment of the upper class in selection interviews. Ever since the second half of the 1990s, this question was a steady source of conflict between the then Labour government and the elite universities (Heine ***et al.*** 2006).

In such context widening access and improving participation in higher education have been very important governmental strategic aims in the UK especially under the Labour government. The Higher Education Act 2004 introduced initiatives to help students from poorer backgrounds to access higher education. These include the means-tested financial aid for students and the creation of the Office for Fair Access to improve access to university for people for under-represented groups. The rationale for the Act came from the Review of admissions practices – so called Schwartz review (2004) and the While Paper (2003) on Widening Participation in Higher Education.

Following the Schwartz review (2004) on good practice in university admissions key principles were developed for the admissions systems:

- Be transparent
- Enable institutions to select students who are able to complete the course as judged by their achievements and their potential
- Strive to use assessment methods that are reliable and valid
- Seek to minimise barriers for applicants
- Be professional in every respect and underpinned by appropriate institutional structures and processes

The Schwartz Review proposed 16 recommendations. For example, it recommended that a central source of expertise and advice on admissions be established. Following the recommendations the Supporting Professionalism in Admissions Programme was established in 2006 and the implementation group be set up to explore post-qualification applications (Schwartz, 2004). The aim of Supporting Professionalism in Admissions Programme (SPA) is to act as a source of expertise and advice on admissions for UK institutions. Initially, this was a two year programme that aims to enhance good practice in admissions, student recruitment and widening participation across the UK higher education sector which was created as a result of the Schwartz report.[43] The range of their work includes helping admissions offices at universities from outreach in high school to the questions of retention of the first year students in the undergraduate programmes at the higher education institutions. The SPA continues its operations today and has been active in sharing best practices in student admissions across the UK.

Another recommendation was to replace the entrance interviews with standardized tests comparable to the American SAT model. However, this recommendation was not enacted since a study undertaken by the Sutton Trust, BIS, National Foundation for Educational Research and the College Board concluded that SATs do not add value compared to the A-levels and GCSE results. Moreover, most of universities no longer use interviews and besides the A-levels and GCSE scores, rely on student's statement, recommendations from schools and other pertinent information, such as the postal codes of students (Interview data, Kirkup ***et al.*** 2010). Sir Peter Lampl, chairman of the Sutton Trust, said: "These findings provide further evidence that universities are right to take into account the educational context of students when deciding whom to admit – alongside other information on their achievements and potential"[44]. As noted also in the interview data, contextual data is gaining importance in admissions in the UK with the view that it improves the matching between the student and the programme. Overall, the professionalization of the admissions process has increased among the UK institutions and there is a general move towards central admissions policy within higher education institutions (Interview data)

Bearing in mind the Schwartz review, the white paper Widening participation in higher education indicated four areas of concern: attainment, aspiration, application and admissions. The focus on standards and achievement at all ages has proven worthwhile as the programmes targeting early years, raising attainment in primary and secondary schools as well as creating new opportunities in 14-19 education proved useful. Standards have risen and more pupils from all socio-economic groups are reaching higher thresholds of achievement (DfES, 2006, p. 6)

One of the major policy instruments used to widen participation is providing information to students and parents. A national programme called Aim higher was established as a result of the 2004 Act to widen participation in higher education and to increase the

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43 http://www.universitiesuk.ac.uk/ABOUTUS/ASSOCIATEDORGANISATIONS/PARTNERSHIPS/Pages/AdmissionsDeliveryPartnership.aspx

44 See: http://www.suttontrust.com/news/news/comprehensive-pupils-outperform/

number of young people who have the abilities and aspirations to benefit from it. The programme is run by the Department for Business, Innovation and Skills (BIS) that includes universities together with the Higher Education Funding Council for England. Its major activities in 44 locations throughout the country include providing materials to inform young people about the benefits and opportunities of higher education, especially young people from families who have no tradition of higher education. The programme brought together universities, colleges and schools to raise the attainment levels of young people. The evaluation of the programme showed positive results, although there is still HEFCE Review's opinion that there should be more targeted activities on those from low socio-economic groups.

The third and fourth areas of improving application and admissions have been facilitated by the establishment of the Office for Fair Access (OFFA)[45]. OFFA prepared its strategic plan 2005-2010 which lays down three core aims:

- To support and encourage improvements in participation rates in higher education from low income and other under-represented groups
- To reduce as far as practicable the barriers to higher education for students from low income and other under-represented groups by ensuring that institutions continue to invest in bursaries and outreach
- To support and encourage equality of opportunity through the provision of clear and accessible financial information for students, their parents and their advisers (OFFA, December 2005)

After the establishment of Office for Fair Access (OFFA) following the Higher Education Act 2004 in order to ensure that the introduction of higher tuition fees in 2006-07 does not have a detrimental effect on widening participation and that institutions are explicitly committed to increasing the participation rates of under-represented groups, institutions have been required to submit access agreements to OFFA for approval. These agreements show that universities will invest some of their additional income from fees into attracting applications from students from low income groups through bursary and other financial support and outreach work. From the first results it is seen that in 2006/07 about 25% of the additional income raised from the variable tuition fees will go to investment in financial support for students from low income and under-represented groups (DfES, 2006, p. 16).

As seen from the evaluation of the House of Commons Public Accountability Committee report Widening Participation in Higher Education (2008-2009) has concluded, that the Department for Innovation, Universities and Skills (today called Department of Business, Innovation and Skills) and the Higher Education Funding Council know too little about how universities have used the £392 million allocated to them over the last five years to widen participation. This money was coming from the government to help institutions to

[45] Though there is a central agency co-ordinating the admission procedures for almost all full-time university programmes (the Universities and Colleges Admission Services, UCAS), the universities themselves are responsible for the selection of students. They decide on the criteria used, which may differ from department to department. Universities are not obliged to explain the reasons for admission or rejection. The admissions policies and procedures of universities are outside the remit of the access agreement of OFFA.

attract students from disadvantaged backgrounds. The committee urges universities to provide sufficiently detailed and comprehensive information so that universities' progress in widening participation is transparent. OFFA in their view should use such information to help spread good practice and hold universities to account if they do not meet their commitments.

In addition, the representative bodies of universities as well as the funding agencies have established a special website ww.hero.ac.uk, which provides details of higher education opportunities at universities throughout the UK.

In England and Northern Ireland no special selection provisions exist in public TEIs to improve the participation of underrepresented groups. A discretion is used in Wales by higher education institutions to facilitate the participation of students from non-English speaking backgrounds in order to improve the participation of the groups of under-represented students (Santiago ***et al.*** 2008, p. 55).

Participation in higher education by students with disabilities is facilitated by policies which given HEIs responsibility over meeting individuals' educational needs. The UK government expects the HEIs to develop awareness of the variety of needs of students with disabilities and to take initiative in developing strategies to meet them. The commitment of the universities in the UK has been strong according to the OECD compared to other countries, since the government provides special funding to improve access which encourages HEIs to continuously improve their level of accessibility and raise attainment of student with disabilities (p. 58***).***

5.3.2 Experiences with Selection in England

As seen from Tables 5.2-5.5 below, the student participation has increased over years. However, not all students willing to go to higher education do so. According to the International Independent, those students who pulled out of the race in 2010 cited the prospect of rising debts or being left with a limited choice of courses as their main reasons for doing so. The procedure of clearance in UCAS has been used and chief executive of UCAS, Mary Curnock Cook, has indicated that she expected more than 150,000 people to not be placed in total. At BIS, David Willetts, said those who did not get the offer of a university place had other good options including apprenticeships and college places. The reaction of the president of the National Union of Students, Aaron Porter was not that optimistic as he noted that a generation of students were 'facing a very uncertain future' (Garner ***et al.*** 2010). Generally, admission decision makers at higher education institutions who often are professional administrators who liaise with academic staff on an annual basis to agree criteria for entry, look at academic merit and potential together with a range of other factors such as career aspirations and motivation and those that may be specific to a course such as an audition for drama, a portfolio for art and design or interviews for teachers. A wide range of factors is taken into account, such as applicant's post-school and out-of-school experiences and breadth of interests, as well as, and in some cases in place of, their examination results Holistic or overall assessment of the applicant is encouraged, and as announced by the government in England in early 2011 this may include contextual factors. If universities want permission to charge the maximum

£9,000-a-year tuition fee, they will have to show they are doing as much as they can to admit students from all backgrounds (interview data).

Table 5.2 Socio-economic status of applicants to undergraduate degree programmes 2003-2008

Applicants						
Socio-economic status	2003	2004	2005	2006	2007	2008
Higher managerial and professional occupations	69,700	70,059	69,631	67,250	70,817	71,544
Lower managerial and professional occupations	100,465	102,737	105,698	97,668	102,428	108,498
Intermediate occupations	49,803	50,500	52,423	46,518	48,657	54,873
Small employers and own account workers	24,616	24,663	25,394	24,524	26,014	27,583
Lower supervisory and technical occupations	16,540	16,054	16,348	15,113	15,685	16,299
Semi-routine occupations	44,834	45,789	50,563	45,661	49,962	66,393
Routine occupations	19,243	19,358	20,392	19,490	20,894	24,679
Not classified / unknown	84,767	84,174	104,181	115,972	119,691	132,592
Total	409,968	413,334	444,630	432,196	454,148	502,461

Source: UCAS 2010

Table 5.3. . Socio-economic status of accepted applicants to undergraduate degree programmes 2003-2008

Accepted applicants						
Socio-economic status	2003	2004	2005	2006	2007	2008
Higher managerial and professional occupations	59,472	59,679	59,670	57,010	60,492	60,708
Lower managerial and professional occupations	83,113	84,628	87,107	79,777	84,075	88,455
Intermediate occupations	40,576	40,790	42,222	37,190	39,020	44,071
Small employers and own account workers	19,992	19,881	20,668	19,771	20,926	22,403
Lower supervisory and technical occupations	13,457	13,114	13,454	12,258	12,757	13,195
Semi-routine occupations	35,254	35,516	38,866	34,949	38,081	51,277
Routine occupations	15,183	15,199	16,062	15,267	16,182	19,520
Not classified / unknown	66,895	65,488	82,195	89,342	93,011	105,395
Total	333,942	334,295	360,244	345,564	364,544	405,024

Source: UCAS 2010

Table 5.4. Race distribution of applicants to undergraduate degree programmes 2004-2009

Applicants - expressed as percentages						
Ethnic group	2004	2005	2006	2007	2008	2009
White	76.0%	76.4%	75.9%	76.0%	75.2%	76.0%
Black	4.5%	5.2%	5.5%	5.8%	6.5%	7.1%
Asian	8.6%	9.4%	9.7%	9.3%	9.3%	9.3%
Mixed	2.2%	2.6%	2.7%	3.0%	3.1%	3.2%
Other	0.9%	1.1%	1.1%	1.1%	1.0%	1.0%
Unknown	6.7%	5.3%	5.1%	4.7%	4.9%	3.4%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: UCAS 2010

The rate of acceptance has been slowly improving as can be seen from Table 5.5 below:

Table 5.5. Total UCAS applications, applicants and accepted applicants 2004-2009

	2004	2005	2006	2007	2008	2009
Applications	2,098,710	2,285,596	2,215,434	2,355,069	2,195,637	2,387,415
Applicants	486,028	522,155	506,304	534,495	588,689	639,860
Accepted applicants	377,544	405,369	390,890	413,430	456,627	481,854
~ Main scheme accepts	317,496	342,765	325,072	343,833	375,105	399,283
~ Extra accepts	2,621	3,391	3,262	3,767	5,327	5,619
~ Clearing accepts	34,862	37,197	38,032	38,858	43,890	47,673
~ Direct entrants	22,565	22,016	24,524	26,972	32,305	28,897
~ Adjustment accepts	-	-	-	-	-	382
Applications to acceptances ratio	5.6	5.6	6	5.7	4.8	5.0
Applicants to acceptances ratio	1.3	1.3	1.3	1.3	1.3	1.3
Average applications per applicants	4.3	4.4	4	4	3.7	3.7

Source: UCAS 2010

Table 5.6. Applications (choices), acceptances and ratios by subject group 2009

Applications (choices), acceptances and ratios by subject group 2009				
Subject Group	Subject Line	Applications	Accepts	Ratio of apps to access (:1)
Group A Medicine & Dentistry Total		84,479	9,233	9.1
Group B Subjects allied to Medicine Total		247,812	48,171	5.1
Group C Biological Sciences Total		185,656	37,049	5.0
Group D Vet Sci, Ag & related Total		21,607	5,542	3.9
Group F Physical Sciences Total		81,235	17,328	4.7
Group G Mathematical & Comp Sci Total		122,817	28,538	4.3
Group H Engineering Total		123,027	25,452	4.8
Group J Technologies Total		11,536	3,177	3.6
Group K Architecture, Build & Plan Total		50,519	10,289	4.9
Group L Social Studies Total		205,063	36,977	5.5
Group M Law Total		111,085	22,059	5.0
Group N Business & Admin studies Total		285,634	58,545	4.9
Group P Mass Comms and Documentation Total		53,546	11,057	4.8
Group Q Linguistics, Classics & related Total		69,829	12,910	5.4
Group R European Langs, Lit & related Total		24,253	4,618	5.3
Group T Non-European Langs and related Total		7,758	1,494	5.2
Group V History & Philosophical studies Total		79,139	14,848	5.3
Group W Creative Arts & Design Total		236,077	52,382	4.5
Group X Education Total		77,135	16,128	4.8
Y Combined arts Total		67,076	13,532	5.0
Y Combined sciences Total		33,737	7,907	4.3
Y Combined social sciences Total		33,026	5,617	5.9
Y Sciences combined with social sciences or arts Total		97,512	21,016	4.6
Y Social sciences combined with arts Total		61,926	12,509	5.0
Z General, other combined & unknown Total		15,931	5,476	2.9
Total		2,387,415	481,854	5.0

Source: UCAS 2010

Stakeholder views

According to Vice-Chancellor of Kingston University, Peter Scott (2009), in the United Kingdom, a distinction is now drawn between 'increasing participation' – in other words, general expansion – and 'widening participation' – the positive reduction of barriers to access experienced by students from less privileged social backgrounds. Until 10 years ago this distinction would have made little sense; it was accepted as axiomatic that higher level of participation by such students could only be achieved if the total number of students continued to expand. The government sees the distinction between widening participation and fair access. The origins of this dis-articulation of access from expansion are varied; they include disenchantment with the results of expansion on the overall composition of the student population; a belief perhaps that the social dynamics of mass higher education systems are different (and less socially progressive?) than those of elite systems, at any rate elite systems of the meritocratic variety; and an unwillingness to fund further student growth combined with a reluctance to abandon the access agenda entirely. But this disarticulation has had important consequences, at both normative and conceptual and policy and organisational levels (Scott 2009).

As seen in the Times Higher Education Supplement debates, university managers and academic staff as well as students are the usual participants of the discussions. The university representative group Universities UK is particularly active in expressing their positions. As a response to the latest report on the student financing changes, which is related to access, all pertinent stakeholders have expressed their opinions, ranging from the intermediary bodies, such as Quality Assurance Agency, university managers and academics. For example, in response to the Browne's report of increasing the study fees and removing the cap on student recruitment, the diversity of opinions were expressed in different media. In Times Higher Education supplement, for example, Roger Brown, professor of higher education policy at Liverpool Hope University, said allowing student choice to drive quality was "misguided" and risked creating a "two-tier" system. The opposite opinion was expressed by Nicholas Barr, professor of public economics at the London School of Economics, who said: "It is terribly important to set quantity free so that you don't have excess demand. As somebody who cares passionately about access, I think this a good plan." Alasdair Smith, professor of economics at the University of Sussex and the institution's former vice-chancellor, said it would allow the best institutions to expand and force poor-quality providers to change or face closure (Baker 2010).

In response to the Browne's report, the government proposes to retain the tuition fee cap. However, they are willing to increase the threshold of the fees to 6000 pounds per year, and in exceptional cases to 9000 pounds per year. To ensure the access to higher education, the government proposes to increase the role of OFFA in sanctioning institutions if they do not meet the goals set forth in the access agreements (Willets, 2010).

5.4 Conclusions

The 'soft' student selection mechanisms, such as motivation letters and letters from the high schools have been used to ascertain about the student's suitability for a particular programme. Only a few universities, such as Oxford and Cambridge hold interviews with

the applicants. Increasingly, with the help of Supporting Professionalism in Admissions Programme, the admissions procedures include a variety of new measures to ascertain where students come from, and what their academic standing is. This is especially important for the lower social income students who graduate from poorer neighbourhood high schools and might have had lower overall grades than those students who are from privileged backgrounds and went to elite high schools, but at the same time, may have high potential for academic achievement.

6 Finland

6.1 Executive Summary

Finland has a binary higher education system consisting of 20 universities and 27 polytechnics. All the 20 universities in Finland are state-owned and mostly financed from the state budget and students do not need to pay for their education. Under the new Universities Act 2009, Finnish universities are independent corporations under public law or foundations under private law. The amount of students in higher education has grown vastly since the introduction of the binary model.

The selection process to higher education is administered centrally through the Ministry run internet platform. The student admissions criteria are set by individual higher education institutions. The institutions perform entry examinations and select their students. Universities decide on the field-specific student intake according to the agreed target number of degrees. The numbers are determined in performance negotiations between the Ministry of Education and the universities. Universities can set quotas for specific types of students. There is ***numerus clausus*** –a certain number of places in all fields of study available each year, thus entrance is restricted. Universities use different kinds of student admission criteria as there are more applicants than there are places available.

The Ministry of Education committee proposes to reform student admission in higher education. It has submitted the proposal for change in 2010. The proposal aims to expedite the transition from the secondary level to higher education and improve the position of those seeking admission for the first time. The committee proposes a student selection mainly based on matriculation grades or vocational qualification certificate and a separate selection for those who have already gained admission to higher education institutions.

6.2 Higher Education in Finland

The Finnish higher education system is binary and consists of 16 universities and 25 polytechnics (universities of applied sciences). The mission of universities is to conduct scientific research and provide undergraduate and postgraduate education based on it. The mandate of polytechnics is to provide education which responds to labour market needs. Their task is also to conduct R&D which supports their instruction and promotes regional development. Both sectors have their respective legislation. The University Act of 1997 increased university autonomy by delegating various governance issues to universities themselves. Under the new Universities Act, which was passed by Parliament in June 2009, Finnish universities are independent corporations under public law and 2 of them are foundations under private law (Foundations Act). The universities operate in their new

form from 1 January 2010. Their operations are built on the freedom of education and research and university autonomy.
The traditional university sector consists of multi-faculty universities, universities of technology, business schools and art academies, all of which carry out research, provide under- and postgraduate education based on research and award degrees up to doctorates. In addition, university level education is provided at one military academy, the National Defence College.
All the 16 universities in Finland are state-owned and mostly financed from the state budget. Their operations are built on the freedom of education and research and university autonomy. Universities do not charge tuition fees.
The implementation of a two-tier degree structure and the introduction of ECTS in 2005 has been the rather recent development in the Finnish higher education. It divided the former Master's level undergraduate degree programmes into separate Bachelor's (180 ECTS credits ~3 yrs) and Master's degrees (160-300 ECTS credits ~5 yrs) (Nokkala 2007).

The total number of students at universities was 23500 in 1961,while in 1986 it was already 93 800 (Holta 1995). The amount of students in higher education has grown vastly since the introduction of the binary model. The participation rate in 2005 was rather high, 40% (EPI, 2005).
According to Statistics Finland, a total of 168,500 students attended university education leading to a degree in 2009. This is 2,7 per cent more than in the year before. In 2009 the highest numbers of students were studying in the fields of science and technology, natural sciences and humanities. The proportion of women of all students attending education leading to a degree was 54 per cent and their proportion of new students was 56 per cent.

Table 6.1: New students and students in universities in Finland

Year	New students, total	New students, men	New students, women	Students, total	Students, men	Students, women
2009	20, 169	8, 963	11, 206	168, 475	78, 292	90, 183
2008	19,643	8,643	11,000	164,068	76,392	87,676
2006	20, 150	8, 763	11, 387	176, 555	81, 508	95, 047

Source: Education 2009. Statistics Finland

6.3 Selection Mechanisms in Finland

6.3.1 Description and History of Selection in Finland

The applications to universities in Finland are processed by the internet based platform run by the Ministry. This online National Joint Application System (run annually in March and

April and in September) is the major route for applying for up to four different degree programmes per student and is free of charge.

However, the admissions criteria as well as the admissions process itself, such as entrance examinations and interviews are set by individual universities. They decide on the field-specific student intake according to the agreed target number of degrees. The numbers are determined in performance negotiations between the Ministry of Education and the universities. Universities can set quotas for specific types of students. There is ***numerus clausus*** – a certain number of places in all fields of study available each year, thus entrance is restricted. Universities use different kinds of student admission criteria as there are more applicants than there are places available (Eurybase 2009). Student admission may be based on: the grades attained in the matriculation certificate (and in the general upper secondary school leaving certificate) together with the results of an entrance test, which is the most common procedure; the results of an entrance test only; or the grades attained in the matriculation certificate and in the upper secondary school leaving certificate only.

In addition, some fields, such as teacher training may place additional emphasis on work experience, studies, practical training, etc. Entrance tests are designed by the university, faculty or department in question to assess the applicants' motivation, suitability and aptitude in the field concerned. The tests are often based on required reading which is usually substantial. The aim of these tests is to ascertain the motivation of the student to pursue the studies. There may also be interviews or specific subject examinations, and students may be required to demonstrate their skills (for example, at art academies). The role of the interviews is more to test the motivation and suitability and personality of a student for a specific programme, such as teacher training or psychology. A student is interviewed by academic staff who also can hold administrative posts in Finland. In the case of teacher training, at the University of Turku, also a practicing teacher from school is invited to join the interviewing process. Students without the certificate of matriculation are usually selected on the basis of the entrance test (Eurybase 2009, Interview data).

The Finnish matriculation examination provides general eligibility for university education. The same eligibility is also provided by the International Baccalaureate (IB), European Baccalaureate (EB) and Reifeprüfung examinations. In addition, those with a Finnish polytechnic degree, post-secondary level vocational qualification or at least a three-year vocational qualification also have general eligibility for university education. Universities may also admit applicants, who are otherwise considered by the university to have the necessary knowledge and skills to complete the studies. Most new students have completed the matriculation examination. People who received their schooling in another country may be admitted if their qualification gives eligibility for corresponding university studies in that country.

Universities co-operate in organising the student admission to varying degrees. The field of engineering and architecture applies a joint selection system, i.e. a joint entrance examination, to three universities of technology and two faculties of technology in multidisciplinary universities. Each of these universities uses the same selection criteria and the same application form. There is also cooperation between universities in, among others, biology, languages, class teacher and kindergarten teacher education, medicine and

economics. Social sciences and humanities are know for being decentralized and do not cooperate. At the same time, these are the fields which are very popular with mature students (Interview data).

The present legislation allows for flexible pathways leading to university education. Thus a student is eligible for university studies if the university acknowledges that he/she has sufficient knowledge and competences irrespective of his/her previous education. The legislation also allows for flexibility in recognising and validating prior learning. Students can, on the decision of the university, be accredited for studies at a higher or other education institution in Finland or abroad. This also applies to learning acquired outside the formal education system. The initiative for the recognition of prior learning must come from the student and he/she also has the responsibility of providing evidence to support the request. Individual study plans are used increasingly. The accreditation of prior learning in conjunction with these is based on the discussions between teacher and student.

Historical development

Since the Second World War, ***numerus clausus*** has been used in more and more study fields. There have always been more applicants than places in universities. Although the trend in recent years of policy has been to increase the number of places in higher education quite rapidly, it has not become easier for applicants to enter universities. Approximately one in four applicants was accepted to Finnish universities in the 1980s and 1990s. As noted by Prof. Sakari Ahola, these days 1/3 of Finnish applicants get admission to universities (Interview data).

As noted by Fägerlind and Stromquist in 2004, the aims and rhetoric of 'equality' has given way to new kinds of ambitions. Belief in investing in human capital has given legitimacy to publishing educational visions proposing the wide expansion of higher and adult education. Education policy makers in the turn of the century envisaged two-thirds of the age group attaining a higher education degree with the idea of Finland becoming the most highly educated country in the world.

Policies of student selection

The current priorities in higher education in Finland are outlined in the government's five-year Development Plan for Education and Research. The focus of the policy agenda during 2007-2012 is laid on equal education opportunities, high quality education and research, and access to skilled labour. Following the policy imperatives of making Finland a knowledge based competitive economy in the world, the recent University Act has been passed in 2009. It mainly focuses on the governance and university autonomy issues (Eurybase 2009).

The trend of the last 30 years towards increasing the autonomy of higher education institutions continues. The latest University Act 2009 foresees university mergers in order to reduce the programme overlaps. However, the rule of tuition-free education still remains in the Finnish higher education.

Entrance to the Finnish higher education system remains highly competitive and the competition has not diminished over years even with the expansion of the system of higher education due to the binary divide. The so called matriculation 'bottleneck' persists (Interview data). There are no special arrangements for specific types of students or student groups (Santiago et al 2008). Delayed education has become a chronic problem of the Finnish higher education system due to this high competition. The issues of delayed education and graduation have been scrutinized recently in a special Ministerial committee. Currently the Ministry is changing the student admissions internet portal to upgrade it so that it would be easier for prospective students to navigate it.

The Ministry of Education committee proposes to reform student admission in higher education. It has submitted the proposal for change to the Minister of Education and Science Henna Virkkunen on March 18, 2010. The proposal aims to expedite the transition from the secondary level to higher education and improve the position of those seeking admission for the first time. The committee proposes a student selection mainly based on grades in the matriculation or vocational qualification certificate and a separate selection for those who have already gained admission to higher education institutions. Most importantly, it proposes by 2013 to implement a quota system for two groups – for the current high school graduates and for the mature students.

The key proposals include:

- Separating first-time applicants from the applicants who already have been admitted to higher education from the joint selection to increase efficient use of the available student places
- The national selection to universities and polytechnics should be merged into one system
- Predictability and transparency of selection criteria is important and thus the higher education institutions should publicise in advance the grades required for admission without entrance examination
- Instead of specific subjects, students should be admitted to larger entities, such as a faculty of a field of education. This would make the selection of studies on offer more comprehensible
- The schools should have goal-oriented guidance counselling, all school-leavers should have a plan for further studies
- Life long learning is very important. It should be possible to apply for entry to higher and vocational education at all stages of life and with different educational backgrounds

Financing of higher and vocational education has to be more closely linked to quality, efficiency and performance. This would encourage the institutions to put in place study processes that enable students to graduate in the normative time. If the proposal is implemented, the entry of young people into the labour market would be expedited at least by two years (Ministry of Education and Science press release 2010).

6.3.2 Experiences with Selection in Finland

The high degree of university autonomy in Finland and the traditional decentralisation of the student admissions process make it very difficult to change the situation as envisaged in the policy proposals. The only way the Ministry may influence the process is through the contract negotiation procedures while discussing future funding and performance of individual universities.

Despite the Ministry proposals to simplify the admissions criteria by putting more emphasis on the high school matriculation grades, the academic community argues that this is not enough to ascertain the motivation and the ability of students to study in a particular programme. The position of universities has been to keep the additional entrance examinations as well as other soft student selection mechanisms used in the system (Interview data).

Literature suggests that in the Finnish higher education case applicant volume far outweigh the number of places available. As noted by Fägerlind and Stromquist in 2004, despite the massification of higher education, the possibility of entering a university has remained at least as difficult as in the early 1980s. In 2008, high school students who did not apply for higher education was 30%, 35% got a study place in higher education (and 30% of those – a place at a university), while another third did not get a place in higher education. The possibilities vary considerably depending on the field of study and the university region. For example, in arts, the acceptance rate is less than 1%, in biology - 10%. In sciences and engineering - there is a question if they can fill in the study places since there are not enough good candidates (Interview data).

As noted in the admissions information of the national website, due to the limited number of study placements available annually within any given degree programme the procedure of student selection can be quite competitive, and sometimes even a good candidate may eventually find that he or she is not among those admitted. Even the central admissions website warns the students and their parents about the competition. As noted by the expert, the number of applicants per given year is 3 times higher than the number of matriculating high school students during that year.

The Finnish student selection system has an appeals system. Students may appeal to the faculty if they have a complaint about the admissions to a specific department. If this does not work, then they have a right to go to court. Most of appeal cases happen in the highly competitive subjects, such as biology, medicine, law (Interview data).

Student drop out rates have been slowly decreasing in the Finnish higher education system in the 1990s and the beginning of 2000 and currently make up around 10% of student population. There is a problem to estimate real drop-outs among Finnish students since students work, they stop studying for some time and come back. The above estimate is the aggregate level taking into account of students who have not registered for a particular year. There is no real concept of a drop-out in Finland, since a student once he/she got a study place has an endless right to study (graduate or die) (Interview data). This may be

changing from 2012, when the Amendment to the Higher Education Law 2005 will be enacted and time to graduation will be limited to 5+2.

Nominal study time is 5 years, medial time to degree is 6 years (BA and MA). The problem with the duration of studies is student employment. Half of students in Finland work along their studies, so practically they study part-time. In the view of the Finnish expert, students need to work since the student loan is not sufficient for living. Moreover, students increasingly do not want to take up loan, this is especially true in the uncertain economic times (Interview data).

Stakeholder views

In the view of the university admissions expert, the current common application system for recent high school graduates and for mature students blocks out the young students. The bottleneck is so high, that in some study programmes like e.g. Law, a prospective student cannot expect to enter the university without previous serious preparation and tutoring beyond the high school coursework (Interview data). Another problem related to the admissions is that the high competition for study places scares recent high school graduates from applying. They do not apply since they know they are not ready due to the increasingly high requirements.

The National Student union criticizes the governmental policy since in their view emphasizing the results of high school matriculation do not show motivation of the students to pursue particular studies. In general, even the specific exams at universities do not show motivation. Further, students criticize the elaborate tutoring system. Tutoring is not available in the remote geographical areas and in less popular and less competitive subjects. However, the biggest complaint from the student unions is that it takes 3 years to get into a university study programme. Those candidates who apply after 2 and 3 years and finally get into a programme take the place of recent high school graduates. The final criticism on behalf of unions is that professional unions, such as doctors and lawyers make the models how many graduates their profession needs in the future years and students think there is conflict of interest here. The professional associations are not interested in increasing competition in their field, thus they keep the number of graduates demand low in the proposals to the Ministry. Finally, students are against ranking the programme choices in the application forms on the admissions internet platform as this will restrain student choice in the final stage of admissions which takes place 6 months later (and during that time the preferences may change). The National Student Union holds a position that students should have a right to select the programme from a range of programmes from which he'/she got accepted as it works today. Students also favour interviews and other procedures in certain disciplines, such as teacher training, which help to ascertain the motivation of the student and the fit between the programme and the student.

However, the National Student Union agrees with the proposals of the ministry to reform the national admissions platform. Currently the number of programme choices is very high. The policy target of reducing the number of programme choices by 2013 is welcomed by the students. Finally, students agree that study counselling in high schools should be strengthened.

6.4 Conclusions

The Finnish case study has shown that the "soft" student selection mechanisms such as interviews have been favoured by students and by universities in Finland. Although it is a time consuming effort for the academic staff at universities, the procedure helps to determine the suitability of a student for a particular program, student's motivation as well as if the personality of a student is in line with the future profession.

It is difficult to relate the student selection mechanisms with the outputs in the Finnish case, since drop-outs are not easily traceable. Moreover, Finnish students mostly work alongside their studies, thus their time to degree is traditionally longer, and that is not necessarily related to the lack of motivation or other similar factors.

7 Germany

7.1 Executive Summary

In Germany, the ***Abitur*** or another equivalent school-leaving certificate serves as the main entrance criterion when seeking access to (public) higher education. Applicants wishing to study at colleges of arts and music must furthermore provide proof of artistic ability, which is usually determined by an aptitude test. Ever since 2009, the right to apply has also been granted to those persons who have successfully completed vocational training and have acquired three years of experience in their occupation (Eurydice, 2010, p. 6). Nation-wide admission restrictions apply for those study programs where the number of applications surpasses the number of available study places. Some of these limited places are awarded by the Service Agency hochschulSTART (the former Central University Admissions Service- Zentralstelle für die Vergabe von Studienplätzen – ZVS), while others are granted directly by the universities. Whenever a study program faces excess demand, hochschulSTART applies the so-called 20-60-20 rule: 20 % of study places are allocated to the best graduates ("Abiturbestenquote"), 20 % of places are granted according to the waiting period between sitting the ***Abitur*** and applying ("Wartezeitquote") and 60% of study places are distributed by the HEIs themselves ("Hochschulquote"). In latter case, application data are forwarded to the respective HEIs. Universities select students by means of using the final examination grade as the sole entrance criterion or by combining it with other selection criteria such as weighted individual scores, extra-curricular activities, interviews etc. German higher education institutions are furthermore required to accept 2% of so-called "Härtefälle" (hardship cases or disadvantaged students) who are granted preferential treatment.

German universities may also have local admission restrictions in place for courses that do not form part of the national admission procedure. Prospective students therefore tend to apply at several universities, being convinced that multiple applications increase their prospects of being admitted. In case of local restrictions, the higher education institution is thus solely responsible for admission.

Although local admission procedures promise a better matching between student and study program, the trade-off effect are higher administrative costs and considerable delays in the allocation of study places. In her dissertation, the PhD researcher Täger (2010) contends that the weaknesses of the system must amongst other things be sought in the insufficient cooperation between secondary schools and tertiary education institutions.

Germany's first-time graduation rate looks rather low in comparison to the OECD average (23% versus 39%). It must be noted, however, that Germany features a sophisticated vocational training system on the upper secondary/ tertiary level which attracts a great

share of study-eligible persons. It is therefore thinkable that the output of university graduates would probably be higher if there were less alternatives in the vocational education sector.

7.2 Higher Education in Germany

The responsibility for the German education system lies primarily with the states (***Länder***), while the federal government plays only a minor role. Children between three and six years of age may voluntarily attend ***Kindergarten*** (nursery school); thereafter, school attendance is rendered compulsory. The length of obligatory education (usually 11-12 years) varies, given that Germany's federal structure with the freedom to decide on its own education policies.

Access to higher education forms part of the federal law of the states[46]. In all sixteen ***Bundesländer,*** students wishing to enter university in Germany must, as a general rule, hold the ***Abitur*** or ***Fachabitur*** certification (see also 2.1). High school diplomas received from states outside of Germany (such as American or Canadian high school diplomas) are, in many cases, not considered equivalent to an ***Abitur***, but are treated as a ***Realschulabschluss*** and consequently do not entitle the holder to seek admission into higher education.

The tertiary sector encompasses institutions of higher education (HEIs) and other establishments that offer study programs preparing the studentship for the entry into a profession. The list of different types of institutions is long; it includes amongst other things private and public universities (comprehensive, technical, pedagogical and theological), universities of applied sciences (***Fachhochschulen***), ***Berufsakademien***[47], ***Fachhochulen*** for Public Administration as well as colleges of art- and music (Eurydice, 2010). The subsequent analysis, however, will mainly focus on public universities.

Most universities and universities of applied sciences receive state funding. The maximum amount of tuition fees is determined by the respective state governments. In 2010, six[48] of the 16 states of Germany charged tuition fees at state-funded universities, while in 11 states, tuition was provided free of charge[49]. As the introduction of tuition fees was considered to run counter to the intention of policy makers to increase the participation rate of economically disadvantaged students, many of the universities planning to

[46] The federal laws typically regulate intake capacities and the regulation of admission numbers at public universities of the respective federal state. They also contain regulations on selection procedures that public universities have to comply with to ensure equal access to higher education (e.g. specification of hardship cases, see also 2.1.2). The law only counts for those study programs where no nationwide numerus clausus restrictions apply.

[47] ***Berufsakademien*** combine academic training at a ***Studienakademie*** with practical in-company professional training (Eurydice, 2010)

[48] North Rhine Westphalia currently charges tuition fees, but the state has recently decided to abolish these fees from fall semester 2011/12 onwards.

[49] http://de.wikipedia.org/wiki/Studiengeb%C3%BChren_in_Deutschland. Retrieved from the World-Wide Web on November 17, 2010.

introduce tuition fees announced their intention to use part of the refunded money for the creation of scholarship programs.

7.3 Selection Mechanisms in Germany

7.3.1 Description of Selection in Germany

As was argued above, the ***Abitur*** entitles the holder to admission to all subjects and subject areas at all higher education institutions. The ***Zeugnis der Fachgebundenen Hochschulreife*** enables the holder to study particular subjects at a university or equivalent higher education institution. Admission to studies at colleges of art and music generally requires an artistic aptitude test in addition to the ***Zeugnis der Allgemeinen Hochschulreife***. A yet different type of school leaving certificate is the ***Fachhochschulreife*** or the ***Allgemeine/Fachgebundene Hochschulreife***, which entitles the degree holder to study at a ***Fachhochschule*** or ***Berufsakademie*** (Eurydice, 2010)**.** In some cases, universities and ***Fachhochschulen*** have special admission procedures in place to identify course-related aptitudes (see also below).

In all ***Länder,*** vocationally qualified applicants may seek admission to tertiary education without a higher education qualification. In March 2009, the ***Länder*** resolved standard preconditions under which master craftsmen, technicians, people with vocational qualifications in a commercial or financial occupation and people with similar qualifications are entitled to apply for higher education upon the successful completion of vocational training and three years of experience in their occupation (Eurydice, 2010, p. 6).

German universities are popular study destination for both national as well as international students. It hence does not come as surprise that the number of “admission-free” study programs is constantly decreasing. Interested candidates are therefore encouraged to check whether their preferred study program has a local or nationwide ***numerus clausus*** restriction in place. Access to nationwide restricted study programs is administered by the service agency HochschulSTART, also known as the former Central University Admissions Service (Zentralstelle für die Vergabe von Studienplätzen – ZVS), while German universities take care of regulating access to locally restricted programs. For a long time, admission to latter programs was also administered by the former ZVS. However, when rising participation in higher education started driving up the number of local NC programs, it came out that the ZVS could not life up to the Herculean task of administering all locally restricted study programs. It was hence suggested to reform the existing allocation system by means of letting universities participate more actively in the selection of their students.

Admission restrictions

Nationwide admission restrictions

Study programs currently being subject to nationwide admissions restrictions are biology, medicine, pharmacy, psychology and dentistry[50]. As was mentioned above, the allocation of study places in latter study programs are administered by hochulSTART.de which officially replaced the ZVS in May 2010. Ever since that date, the former ZVS acts as "foundation for higher education admission" and exclusively operates under the new label HochschulSTART.

HochschulSTART operates according to the following procedure: Whenever demand for a study program exceeds supply, the agency applies the so-called 20-60-20 rule: 20 % of study places are allocated to the best graduates ("Abiturbestenquote") and 20 % of places are granted according to the waiting period between sitting the ***Abitur*** and applying ("Wartezeitquote"). The remaining 60% of the study places are allocated at the level of institutions of higher education according to the results of a selection procedure of the individual university. Latter selects students by means of using the final examination grade as the sole entrance criterion or by combining it with other selection criteria[51] such as:

- Professional training: An individual who has successfully completed an apprenticeship may increase his/ her chances to be admitted to an HE-degree program if the vocational training he/ she has completed is content-wise related to the study subject. For instance, a nurse wishing to study medicine receives a bonus that amounts to a slight improvement of the average degree of the ***Abitur***
- Weighted individual scores: If an applicant can successfully demonstrate that s/he has good scores in a subject being content-wise related to her/his study choice, s/he might be given preferential treatment even if the overall ***Abitur*** grade points out to weak overall achievements. Acknowledging that most NC-subjects require a good knowledge of the natural sciences, high scores in mathematics, biology, physics and/or chemistry increase the admission chances of applying candidates
- Extra-curricular activities: Proven engagement in extra-curricular activities such as the participation in the physics competition ***Jugend Forscht*** (young researchers) is another factor that increases the study prospects of applicants. Also here, there should be a content-wise relation to the preferred study program

Furthermore, a number of process-related selection criteria are applied in specific cases that can be summarized as follows:

- Selection interview: In a selection interview, the applicant needs to respond to questions put forward by a commission or by a single person. Candidates will often be asked to give a presentation on a relevant topic as part of the interview, which is typically indicated in the invitation letter to the interview. As the administrative effort is rather

[50] See DAAD (2010). Admission at a glance. Retrieved from the World Wide Web on December 2, 2010 on http://www.daad.de/deutschland/wege-durchs-studium/zulassung/06160.en.html.

[51] All selection criteria listed on this page were retrieved from an newspaper article in DIE ZEIT ONLINE by Marion Ottenschlaeger (2009).

high, selection interviews are usually only conducted in specific study subjects that admit a limited number of people.
- Letter of motivation: The letter of motivation sheds light into the applicant's motivation for applying for a particular study subject. The letter should also refer to the different skills the potential candidate has and what s/he intends to do with these skills upon the successful completion of the study program.

The average Abitur grade is the most important criterion in the selection procedure, that is the school leaving grade must be taken into consideration while the other criteria can be applied optionally unless stated differently in the corresponding law of the ***land***. If one or several other criteria are additionally applied, the average grade must be given major weight in the selection decision. The ranking of applicants, which is necessary for the decision on admission, can, for example, be structured 60% by average grade and 40% by test result or 40% by average grade, 30% by test result and 30% by the results of an interview (BMF, 2007).

The interview, which is possible within the framework of selection by institutions of higher education, is to provide information on the motivation for and identification with the selected study course and the desired occupation as well as to prevent mismatching. Its purpose is therefore not the ascertainment of a general or specific scholastic aptitude. An interview of usually 30 minutes is not suitable for obtaining valid results in this area. The general scholastic aptitude is determined by the school leaving examination and must therefore be given major influence in the selection process (BMF, 2007).

Local admission restrictions

With regards to local restrictions, the responsibility for the admission of applicants lies solely with the higher education institutions. Latter typically allocate study places according to the so-called ***hochschuleigene Auswahlverfahren***[52]. Given that the federal law enables universities to formulate their own individual selection policy, admission criteria may vary considerably across HEIs and also across study programs within a single university. Candidates being interested in a locally restricted program at a particular university are therefore well-advised to carefully study the programme's admission criteria[53] before handing in their applications.

Some generalizations can, however, be made about local admission criteria. As is the case of nationwide restrictions, ***hochschuleigene Auswahlverfahren*** usually put the greatest emphasis on the average grade of school leaving certificate. At the same time, the student has the chance to "upgrade" his/ her final result by providing other types of evidence that s/he qualifies for the chosen study programme. The kind of additional criteria applied correspond to the ones described in the nationwide admission restrictions above. That is, even if a student did not reach a good result in the average Abitur grade, s/he might still be

[52] The term ***hochschuleigene Auswahlverfahren*** implies that the higher education institution itself may determine the selection procedure.

[53] Admission criteria can be looked up in the statutes of the respective university.

admitted if the statute of the university allows for grading up his/her final result by, e.g. weighted individual grades of the school leaving certificate.

If a candidate withdraws his/ her application for a study program, the clearing procedure applies. Those candidates are contacted whose application has been refused in the first selection round. As for those study places that still remain unoccupied, a ballot is organized which is also open to those candidates that neither participated in the main- nor in the clearing procedure.

Multiple applications are the downside of the current allocation system. Whereas students may see the advantage of multiple applications in increasing their admission chances, they do not only boost administration costs, but also result in considerable delays in the final allocation of study places. The major problem here is that the allocation system itself explicitly allows for multiple applications and thus incentivizes students to hand in as many applications as possible.

Although the new role of the former ZVS as a service agency also implies that the higher education institutions themselves may charge it (i.e. hochschulSTART) with allocating study places according to the so-called ***service procedure***, only a very limited number of HEIs make use of this right. If more HEIS were willing to "outsource" the administration of student selection to hochschulSTART, the likelihood of multiple applications would probably be much lower[54].

In an effort to lower the likelihood of multiple applications, the German ***Bund, Länder*** and universities have agreed to equip HochschulSTART with new software to ensure that all applications are centrally synchronized. At the heart of the new system will be a database that connects the study preferences of applicants with the selection decisions of the higher education institutions. The new, dialogue-oriented procedure intends to create an active role for candidates during the entire allocation process. With the help of a web-based technique, the applicant can follow the application process via internet. Where applicable, he or she can react on study offers and make an informed choice. Multiple applications are still allowable, but multiple admissions are not possible anymore[55].

The system is still in a developmental phase and will not be finished before the beginning of the winter semester 2011. However, even this date is in question, given that the problem of finance has not been solved yet. The federal government has already invested 15 million into the project and is not willing to spend more; the ***Länder*** want the universities to pay while latter point out to their chronic underfunding. The uneasiness of German higher education institutions to co-finance the software must also be attributed to the fact that over the last years, many of them have invested large amounts of money into their

[54] See http://www.studis-online.de/StudInfo/zvs-numerus-clausus.php. Retrieved from the World Wide Web on November 22, 2010.

[55] See http://www.uni-flensburg.de/fileadmin/databox/abtStudierende/ZulSt/Erstinfo_HS_Start.pdf for more information how the allocation procedure could look like (information only available in German). Retrieved from the World Wide Web on January 25, 2010.

administrative structure to carry out selection by themselves. It is therefore highly probable that the application chaos will ***at least*** continue in the short run (Himmelrath, 2011).

Exceptions

At least 2 percent of the students at any university must constitute so-called "Härtefälle" cases (hardship cases or disadvantaged students). These people are granted preferential treatment as far as admission is concerned. A student may be counted as a hardship case if 1) he or she suffers from an severe illness or disability or if 2) he or she is socially disadvantaged (or from a disadvantaged family) or if 3) he or she is of partial German ancestry born outside of Germany ("Spätaussiedler") and attended a university in the country of origin. Other conditions such a special social or family circumstances may also qualify a student as a hardship case[56].
With exception of the hardship cases, universities may not discriminate against or grant preferential treatment to persons on basis of race, ethnic group, gender, or social class.

7.3.2 Experiences with Selection in Germany

Quantitative development of people eligible for HE studies and first year students in Germany

Participation in HE in Germany increased between 1950 and 2007 from 117.000 to 1.9 million (Täger, 2010). The excessive growth in the 1970s let to the duplication of student numbers, but also in the subsequent years, participation in higher education was continuously on the rise. Täger (2010, pp. 74-75) contends that the 1990s brought about changes in three respects: to begin with, the fall of the Berlin Wall and the subsequent reunification of the two Germanies implied that about 134.000 students from East Germany became integrated in the united HE system. Secondly, the total number of students exceeds ever since the 1990s the number of participants in vocational education programs, thereby underscoring the lasting popularity of Higher Education and its outstanding role in the knowledge society. The third trend was a slow decrease in student figures after the rapid expansion of higher education in the 1970s. Ever since the new millennium, however, student numbers are again on the rise.

The number of persons being eligible for higher education has doubled ever since the 1980s and has continuously increased over the last years; in 2008, it amounted to more than 440.000 (HIS, 2010, p. 118). Out of all persons being entitled to study, about three quarters makes use of this right. It is worth pointing out, however, that the growth in the number of first-year students is caused by the increase on the number of study-eligible persons and not by a greater readiness to do university studies (HIS, 2010, p. 118). Women represent more than half of all study-eligible persons; they are, however, more reluctant to participate in higher education than their male colleagues (HIS, 2010).

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[56] See, for instance, Universität Flensburg: ***der Härtefallantrag***. Available at: http://www.uni-flensburg.de/fileadmin/databox/abtStudierende/ZulSt/Info_Haertefall.pdf. Retrieved from the world wide web on November 17, 2010.

Development of first-year participation rate

The participation rate of first-year students increased from 2006 to 2009 by 23% up to 422.700, even topping the peak of 2003. The greatest share of first- year students is enrolled at universities of applied sciences, where the participation rate since 2006 has increased by 48,200 students. At universities, the number of newly registered students since 2006 amounted to 29.600.

The boost in first-year participation in higher education can be attributed to several factors: to start with, a look at Germany's demography reveals that the total number of 18-21 year-olds has once more increased over the last years (since 2000, participation rose by four percent). Besides, the general rise in participation in education explains why more and more people gain admittance to tertiary studies[57]. It also needs to be taken into consideration that since the falls semester 2008/9, the ***Berufsakademien*** (vocational academies) Baden-Württemberg were granted the status of a university of applied sciences. Last but not least, three countries (Saxony-Anhalt 2007; Mecklenburg-West Pomerania 2008; Saarland 2009) hosted double graduation cohorts (***doppelter Abiturjahrgang***).

In light of these developments, the participation rate of first-year students surpassed the desired OECD target of 40% (in 2009, the first-year participation rate in higher education amounted to 43%). The increase of this quota points out to the fact that Germany is following an international trend, even if this trend occurs on a lower level as is observed in several other countries. Against this backdrop, it is important to mention that this figure incorporates the so-called ***Bildungsausländer***, that is students who have obtained their HE qualifying degree abroad. As for those who graduated from the German Education system, the participation rate amounted to 34 % (HIS, 2010, pp. 121-122).

[57] From 2000 to 2008, the share of persons being entitled to HE studies increased by 8% (HIS, 2010, pp. 121-122)

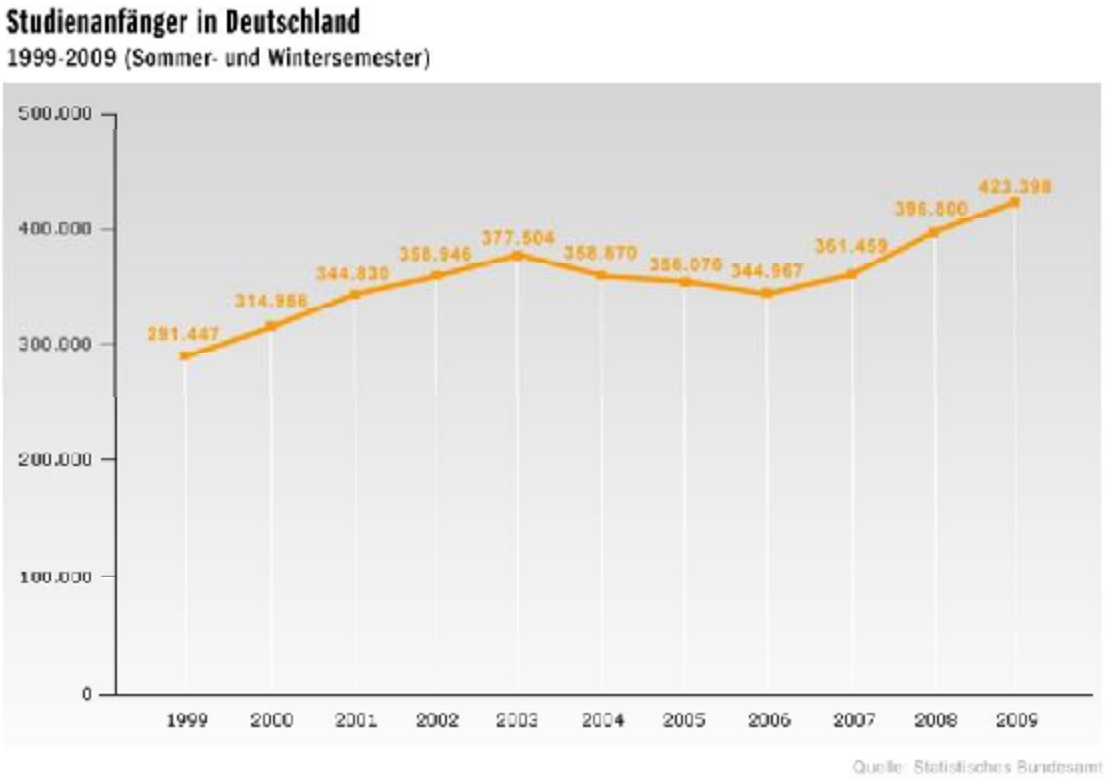

Chart 7.1: First-year participation rate in Germany (1999-2009). Source: German Federal Office of Statistics

Development of student drop-outs

The drop-out rate provides insights into the share of people in a relevant cohort that discontinue their higher education studies and leave the university[58]. In 2008, the drop-out rate was 24%. In bachelor programs, it amounted to 25%, so the hopes of policy makers that the introduction of the BaMa structure would drive up completion rates have not been fulfilled yet (HIS, 2010, p. 128).[59]

The HIS drop-out study (see also Table in the Annex 1) furthermore indicates that the volume of drop-outs also differs according to discipline. As for 2006, the highest drop-outs can be observed in mathematics/ natural sciences (28%), linguistics/ cultural sciences (27%), economics (27%) and engineering (25%). By contrast, a high rate of study success is most likely to be witnessed in the medical subjects (5%), where restrictive entrance criteria apply. A similar picture emerges in the agricultural sciences, forest sciences, nutrition sciences (7%), teaching and (science of) arts (12%) (HIS, 2010).

[58] HIS stresses that the drop-out rate explicitly excludes those people that either switch the study program or the university.

[59] Against this backdrop, it is important to recall one argument made by BaMa- advocates that the introduction of the BaMa- system would encourage the timely completion of studies without major study interruptions. Amongst others, it was argued that freshly enrolled bachelor students could at least in principle obtain work experience after only three years without having to interrupt their studies in the process.

Drop-outs are mainly explained by underperformances, insufficient financial resources and lacking study motivation. As far as Bachelor study programs are concerned, the drop-out decision is usually taken in the third semester and hence occurs at a far earlier stage than in other degree programs[60]. According to the Higher Education Information Service (HIS) (2010, p. 128), drop-outs in Bachelor programs is caused by excessive demands, achievement- and motivational problems. Lack of financial resources only plays a minor role here.

Table 7.1: decisive reasons for study drop-outs 2008 and 2000 according to type of education and type of degree (in %).

Decisive reason	Total	University	University of applied sciences	Bachelor	Traditional degrees	Traditional degrees
	2008					2000
	in %					
Excessive demands, achievement problems	20	19	21	25	17	12
Financial problems	19	17	27	14	22	18
Lacking study motivation	18	20	10	23	15	16
Insufficient study conditions	12	13	9	14	10	8
Failed examinations	11	10	13	8	12	8
Professional re-orientations	10	11	8	8	10	19
Family problems	7	7	9	5	8	11
Disease	4	4	3	3	5	5

Source: HIS student drop-out survey 2008

First-time graduation rates

The ***Erstabsolventenquote*** (henceforward called first-time graduation rate) shows the percentage of the population in the typical age cohort for tertiary education that successfully completes a university study. Ever since 2001, the number of first time graduations has increased by more than 50% up to 260.000 graduates in 2008. This development is in line with the dramatic increase of first-year students in the mid- 1990s.

[60] "Other degree programs" refer to traditional German degrees such as ***Diplom/Magiste***r and the ***Staatsexamen*** (state examination). In the course of the Bologna reforms, both ***Diplom*** and ***Magister*** were replaced by the master degree. Students, having enrolled themselves in either of these two programs before the system was changed, still receive the traditional degree upon the successful completion of their study or let it be "converted" into a master degree.

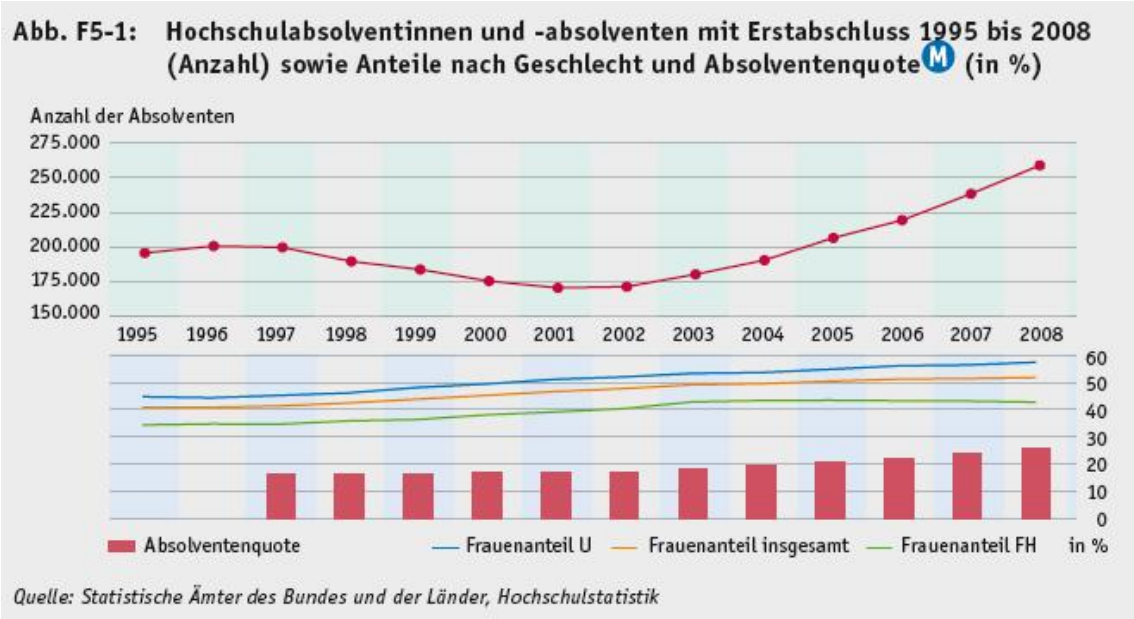

Chart 7.2: First-time graduation rates (1995-2008) according to sex (in %). Source: Statistical offices of the federation and the states, HE statistics

Germany's features a relatively low graduation rate of 23% (2008) as compared to OECD average (39%). Due to an increase in the number of first-year students and lower drop-outs, the rate could be increased in the medium term. Although it may seem that Germany features less graduates from an age cohort than other countries in spite of rising participation rates and first time graduations (HIS, 2010, p. 131), this figure must be interpreted in the light of national differences in higher education- and vocational systems. As the first-time graduation rates refers to completed university studies only, it goes without saying that those degrees being obtained in the field of higher vocational education and training (Tertiary B level) are excluded from this category. If no line was drawn between university- and vocational degrees, the German rate of first-time graduates would be much higher.

Together with Austria and Switzerland, Germany constitutes an exceptional case in the sense that all three countries feature a sophisticated vocational training system that attracts a considerable number of people with the formal entitlement to university studies. Although total participation in university studies is on the rise, German universities still face "competition" from the dual education system where vocational training in a certain profession is combined with education. This also explains why Switzerland and Germany seem to "lack" behind in international comparison as far as the first-time graduation rate is concerned.

7.3.3 Problems with admittance

The juridical codification of the right of HEIs to choose their student population has contributed to the erosion of the ***Abitur*** as the general entitlement to higher education

studies (Täger, 2010). Specific selection procedures and aptitude tests shall help universities to increase the match between abilities and expectations of applicants and the subject-specific requirements and to decrease drop-outs. Nevertheless, the average grade of the ***Abitur*** continues to play a major role in the selection process. Results from the judgment of professional and personal abilities are only taken as additional criteria for making a final choice whether to admit a certain candidate or not.

Even if admission procedures as determined by the HEIs themselves promise a greater matching for the relevant study subjects and thus a greater likelihood for the student to succeed, they (i.e. admission procedures) usually imply considerable operating expenses for both administration and scientific staff. The greater complexity of the admission process becomes particularly evident in the multitude of multiple applications (***Mehrfachbewerbungen***) which in turn cause considerable delays as far as the allocation- and acceptance of study places is concerned. Täger (2010, p. 71) claims that the weaknesses of the transition from secondary to tertiary education can amongst other things be attributed to the insufficient cooperation between secondary schools and tertiary education institutions. She argues that on the one hand, the ***Abitur*** has experienced a qualitative upgrading due to the introduction of obligatory core subjects and a tendency to standardized, centralized exit examinations; on the other hand, the creeping devaluation of the ***Abitur*** as major entrance entitlement to HE can be observed in the rising introduction of aptitude tests for specific study programs. This circumstance implies that the HEI has gained control over the determination of necessary abilities and requirements for study eligibility of single study subjects and therefore over HE access in general.

It can hence be concluded that the German HE admittance system follows in the footsteps of the Anglo-Saxon countries, where admittance is made conditional on the successful accomplishment of professional and personal aptitude tests (Täger, 2010, p. 73).

7.4 Conclusions

Until the conversion of the Central University Administration Office (ZVS) into a service agency, the allocation of study places in locally restricted programs followed strictly defined bureaucratic procedures that did not leave too much steering scope to the HEIs themselves. Ever since the organizational reform of the former ZVS, universities are considerably more autonomous in developing their own admission guidelines and defining selection criteria. However, the organizational disempowerment of the ZVS and its reorientation as a service agency did not always proceed smoothly due to the conflicting interests of the federal states and of the higher education institutions.

The autonomization of the German HEIS in selecting (part of) their student population has stimulated differentiation in admission procedures, thereby posing a serious challenge to the imperative of the equality of higher education institutions. Also in Germany, the application of selection instruments gives rise to hope that the matching between the applicant's expectations on the one hand and the skill requirements of the desired study program on the other hand can significantly be increased. Selection, the argument goes, increases the chances of study success, drives up graduation rates and minimizes study

duration. At the same time, selection as a policy tool is meant to contribute to the rising awareness of applicants that access is not granted unconditionally and that candidates must make a conscious and deeply motivated choice when applying for a particular study subject. More and more German higher education institutions have come to appreciate these advantages and have started to rely to an increasing extent on selection instruments when deciding on access. There are, however, jurisdictional limits to the autonomy of HEIS in deciding on access: the universities' discretion in entirely choosing their own student population is restricted by the entitlement to a study place that is written down in constitutional law and is hence legally contestable[61]. As a consequence, universities have "only" been granted a 60% autonomy as far as access to nation-wide restricted study programs is concerned (Täger, 2010, pp. 181-183).

[61] This goes both for local and national admission restrictions.

8 Japan

8.1 Executive Summary

In Japan, providers of tertiary education include universities, junior colleges and colleges of technology. However, with over 80%, private institutions are the majority and have played a crucial role in increasing access to tertiary education in the country. Universities and junior colleges are autonomous in setting their own admission procedures. To access national and public universities, applicants must go through a double screening: the National Centre Test (NCT) and the entrance exams created and administered by each institution. The NCT was developed by the Ministry of Education in the 1970s to give universities a common starting reference point to assess their applicants and is a requirement for access to public higher education. Yet, it has been largely adopted also by private providers (which, however, are more likely to employ also additional screening procedures such as references). The key debate in Japan concerns entry examinations, their value and true purpose. Competition in these exams is so strong that the expression "examination hell" has become a common quote in Japanese society. In fact, failure to be admitted at the preferred institution is so common that many applicants re-attempt the exam a second time after one or more years (a practice known as the Rōnin status)

High school recommendations play an (increasingly) important role too. There are two types of recommendation, including an "open" recommendation (can be used by all high schools) and a "certified" recommendation (can be used by high schools that individual universities choose to certify). Overall, it appears that Japan's higher education is neatly becoming stratified into three groups of universities—the highly selective, the mildly competitive and so-called "F-Rank" (i.e. free-pass).

8.2 Higher Education in Japan

With almost 127 million inhabitants in 2010, Japan is the 10th most populated country on the planet. 98.5% of the population is ethnic Japanese thus its population is very homogeneous. Japan has a negative annual population growth rate of -.242% (World Factbook 2011).

Japanese modern higher education was inaugurated with the 1887 opening of the University of Tokyo (later Tokyo Imperial University) by the then Meiji government. Other imperial universities were subsequently established in major Japanese cities. All were comprehensive universities organised on the continental European (Germanic) model. At the same time other institutions, both public and private, were founded at central and local

level. A major reorganization of Japanese higher education took place after World War II, particularly in the 1960s and early 1970s, when expansion was most impressive. It was at that time that private universities began to flourish (having become today the overall majority of the country's provision, see below). Until March 2004, National Universities were a part of the national government and directly operated by the latter. After 2004, by acquiring the status of ***National University Corporations***, they were given a legal personality and became more autonomous from the government—a reform regarded by many as one of the most significant of Japan's university system since the Meiji era (Oba, 2005).

Today, Japan's higher education begins after 12 years of schooling, six years of which are secondary education (three years of lower secondary and three years of upper secondary). Providers of tertiary education include universities, junior colleges and colleges of technology. Universities offer Professional Degrees (2-year), Bachelor degrees (4-years), Master degrees (2-year), and Doctorates (5-years); junior colleges offer 2-year Associate Degrees; and colleges of technology provide specialized training lasting five years. However, since students may apply to colleges of technology upon completion of compulsory education at age 15 (i.e. after lower secondary schooling), the data presented henceforth will not encompass these institutions in "higher education"[62].

[62] Despite the Japanese Ministry's definition by which they fall under the realm of "higher education"

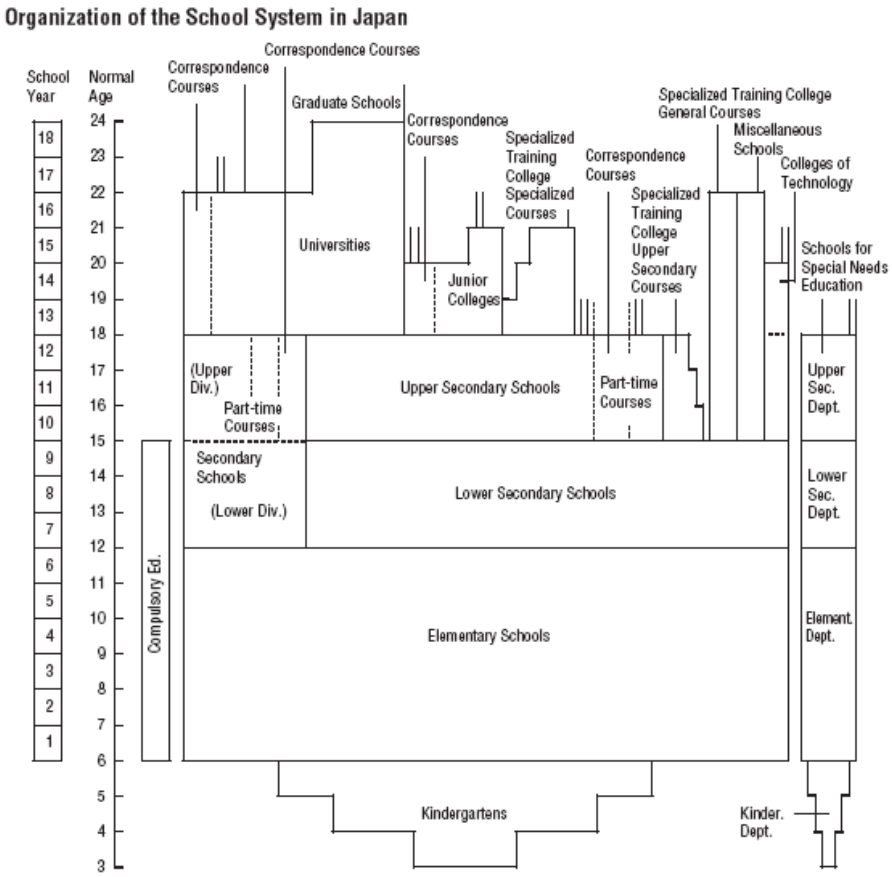

Chart 8.1: The Japanese Education System. Source: MEXT, 2011

In Japan there are both public and private tertiary providers, however private institutions are prevalent. Public universities can be national or local, depending on what entity establishes them. Private institutions are founded by educational corporations (Ministry of Education Culture, Sports, Science and Technology (MEXT), 2011). Private institutions have been increasing in absolute and relative terms over the past five decades. As of 2008, over 80% of all higher education institutions (i.e. Universities and Junior Colleges) are private (see chart 8.2 and 8.3).

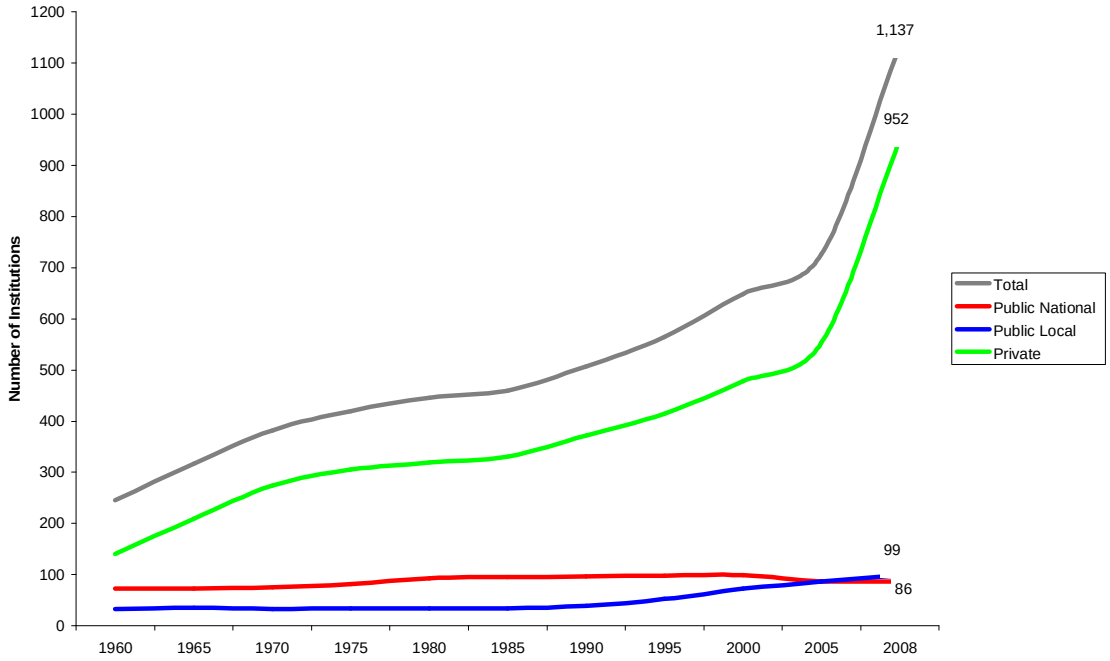

Chart 8.2: Universities and Junior Colleges in Japan by Public/Private Status (1960-2008)—Trend. Source MEXT, 2011 (data for 2008 from MEXT Pamphlet "Higher Education in Japan")

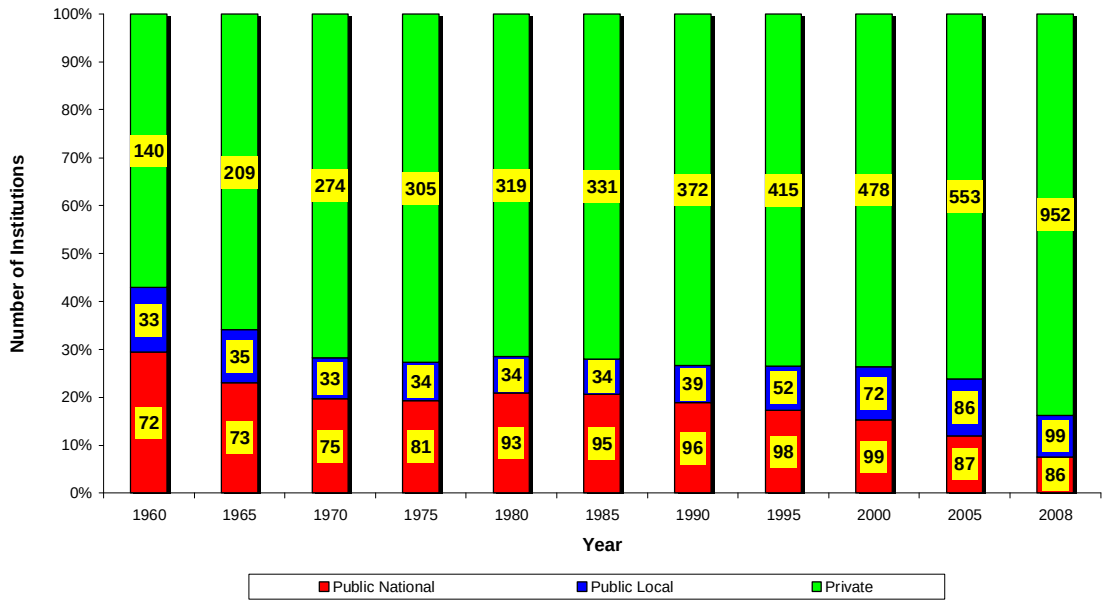

Chart 8.3: Universities and Junior Colleges in Japan by Public/Private Status (1960-2008)—Relative contribution to total number of institutions (in yellow = number of institutions). Source MEXT, 2011 (data for 2008 from MEXT Pamphlet "Higher Education in Japan")

The private sector has largely contributed to Japan's massification of higher education (Oba, 2005). Chart 8.4 below shows national participation in higher education from 1960 onwards, and juxtaposes this information to the percentage of students in private institutions in 2005 and 2008. It is apparent that private the provision of higher education gives a thrust to the nation's overall participation.

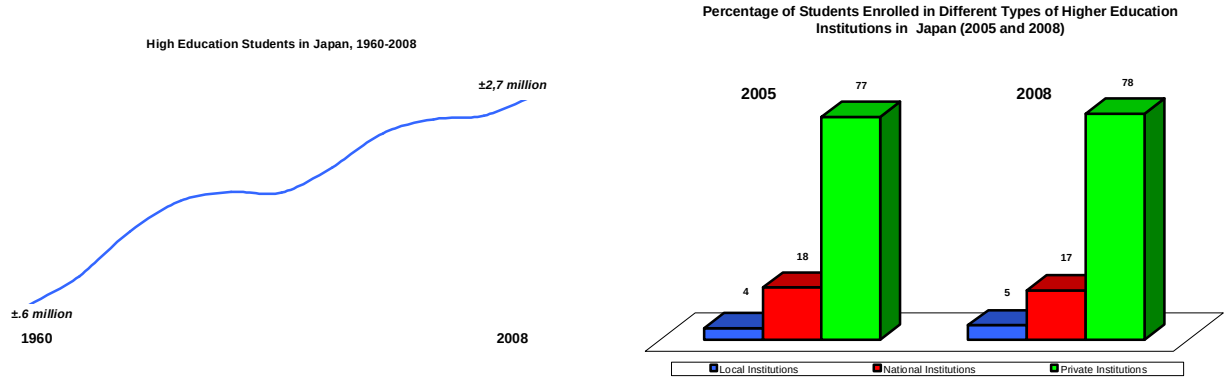

Chart 8.4: Higher education students in Japan 1960-2008, and proportion per type of institution in 2005 and 2008. Source MEXT (data for 2008 from MEXT Pamphlet "Higher Education in Japan")

8.3 Selection Mechanisms in Japan

8.3.1 Admission to Japanese Higher Education

Japan is known to be very selective in its admissions processes. These are based by and large on entry examination, and competition is so strong that the expression "examination hell" has become a common quote amongst Japanese students. Universities and Junior Colleges are autonomous in setting their own admission procedures. In principle, they may choose to focus on grades, (short-) essays, interviews, practical skills, etc. In general, higher education admission policy increasingly strives for the diversification of selection processes and instruments—a trend also meant to respond to an increasingly diverse secondary level programmes, which make it harder to assess a student's academic ability with a single achievement test. The National Council on Educational Reform (***Rinjikyoikushingikai***) established in 1984 by Prime Minister Nakasone to promote a full-scale revision of the nation's educational system called ***inter alia*** for more, and more diverse students in Japan's tertiary education (Oba, 2005). The government has since continued to promote actively a policy of "diversification" in university admissions (Poole, 2003).

Admission to national and other public universities follows a common path, which differs from private universities (Takagi, 2010)[63]. To access national and public universities, applicants must go through a double screening:

- First they must pass the National Centre Test (NCT) designed by the National Centre for University Entrance Examinations (NCUEE)
- Next, applicants must go through entrance exams created and administered by each institution

The NCT was developed by the Ministry of Education in the 1970s to give universities a common starting reference point to assess their applicants. The NCUEE is made up of hundreds of professors from national, local, and private universities. The test is conducted throughout the country in cooperation with participating universities during the month of January, prior to high school graduation (which take place in March). In 2008, over 540,000 applicants took the test[64]. Almost 80% were final-year high school students and 20% were those who had previously graduated from high school (***Ibid***). The NCT is meant to measure basic academic achievement of university applicants across different subject areas upon the completion of high school. However, universities use the test results according to their own criteria to judge the ability and aptitude of applicants to receive higher education. Thus the NCT is used in various ways based on the purposes of each university.

Examples of uses different institutions can make of this test include, ***inter alia*** (Takagi, 2010, p. 18)[65]:

- Adopt tests in all subject areas and subjects to assess applicants‘ general basic academic ability
- Adopt tests in specific subject areas or subjects to select entrants for a part of the quota
- Use applicants’ profile forms from their high schools and the results of the NCT as the primary examination. The universities conduct interviews with those who passed it

After the NCT, students may take entrance examinations administered by each university. High school teachers use the NCT score to advise their students about which university entrance examinations they should take based on their probability of acceptance. The advisory process is very important in Japan—a high school teacher's reputation is at stake if too many of their students fail to pass the university entrance examinations (Poole, 2003).

University-specific examinations normally involve multiple-choice, short-answer, and long essay questions. Students take an exam in more than one subject, depending on the field of

[63] Much of this section owes to Takagi (2010) “A Critical Analysis of English Language Entrance Examinations at Japanese Universities”, submitted to the University of Exeter as a thesis for the degree of Doctor of Education in TESOL, March 2010, and available at http://eric.exeter.ac.uk/exeter/bitstream/10036/117893/1/TakagiA.pdf. The dissertation contains a wealth of references, mostly in Japanese

[64] In January 2011, applicants were reportedly over 560,000, according to Japan Higher Education Outlook, a website. See: http://japanheo.blogspot.com/2011/01/japans-national-center-exams-15-16.html

[65] Takagi refers to the NCUEE leaflet (2007, p.7). This leaflet is in Japanese only, hence the information presented here is taken from Takagi’s document

study they intend to major in. For selected applicants, other methods of screening, such as interviews and essays, are applied. The students are screened based on the results of both the NCT and an exam administered by each university. Students usually have two chances to apply for admittance to universities. Selections are typically an exclusive work of university professors.

Unlike public universities, which are bound to taking the NCT into account, private providers may employ different screening procedures. They typically offer several means of entry in addition to the NCT. For example, they might opt for recommendations, special policies and exams for returnees, and automatic admissions for students who attended feeder high schools. However, although various screening systems exist, admission by a one-shot examination is still the major method most universities employ. In addition to that, many private universities also use the NCT. In 2008, 467 private universities used the NCT. In other words, private providers have taken up government reforms that were meant for public institutions.

Admissions via recommendation are an alternative system that tries to compensate over-reliance on aggregate test results. Universities may offer placement to students who have earned sufficient overall academic grades in high school. Takagi:

> […] in many cases, graduates from non-elite academic high schools tend to choose entry by recommendation because they can manage to enter fourth-grade universities. Under this system, the students are evaluated separately from their test-taking peers. The students chosen by high schools do not need to take the entrance exam tests […]. Their admission is decided based on recommendations from high school advisors, supplemented by GPA, a submitted essay, and/or an interview with the applicant (Mulvey, 2001).

The high school recommendation system typically includes an interview with the candidate and the submission of essay. Each university decides autonomously what skills ought to be tested. Generally, however, the system should test motivation toward learning at university and minimum literacy which is necessary for learning. The recommendation system is meant to empower students whose high school GPA would not enable them to apply through the "regular" system; however academic achievement is not a negligible factor in the process, even net of the testing requirement (interview data).

Moreover, the Japanese recommendations system is sophisticated, including two types of recommendation. ***Kobo Suisen*** is an "open" recommendation that can be used by all high schools. ***Shiteikou Suisen*** is a "certified" recommendation that can be used only by high schools that individual universities choose to certify based on admitted student performance. In other words, if the proportion of "Shiteikou Suisen students" with low grades or who drop out during their first year is too high according to standards set by the university, certification to their high schools will be withdrawn (interview data). It is noteworthy that while chances to be admitted are higher through recommendation than

through the tests, once accepted students must accept the place and pay the expensive admission fees and tuition (Takagi, 2010).

The issue of selection and how to diversify it has been a topic of debate for years. In general, "soft mechanisms" that transcend the regular paths are increasingly widespread. While in the 1960s, most university students would access university through the central entrance examination, today many university students take alternative routes. It is suggested that of those who choose alternative routes, about 40% are accepted through the recommendation path and about 10% through the Admission Office admission track, known as "A.O. admission" (interview data)[66]. Moreover, the types of admissions are skewed in the sense that élite universities tend to adopt entrance examination more than mass universities (e.g. Osaka University is a good example of this, interview data).

The focus on examination results has led to what is commonly called "examination hell". Over the years, the Ministry has endorsed more diversified selection mechanisms that can "[…] reflect universities' aims and characteristics and those of their faculties, as well as the characteristics of specialized fields, and by evaluating applicants on the basis of a wide range of abilities, aptitudes, and other attributes" (MEXT, 1995)

Thus, it is possible to distinguish between three types of admission (Heine et al, 2006, pp. 70-73):

- Admission according to general selection procedure (i.e. NCT)
- Admittance on recommendation
- A.O. Admission, which includes an motivational essay, but not a recommendation letter

8.3.2 Debates and Experiences with Selection in Japan

As mentioned earlier in this report, Japan's higher education is very selective. Indeed, it is said that the admission process is almost a "[…] societal filtering mechanism to create a class structure where otherwise none purportedly exists" (Poole, 2003)[67]. While over the years, the Japanese government has increasingly supported "diversification" of selection mechanisms, insisting applicants should be selected using an assortment of methods beyond the examination (e.g. recommendations) to date the prevalence of the testing system has not exactly come under siege.

[66] This information from the interview points out that students and universities tend to increasingly use also alternative routes, which may supplement traditional admission procedures (i.e. the "one-shot" entry exam). However, studies such as Takagi, suggest that the majority are still chosen through the "one-shot" entry exam

[67] This statement suggests that in Japan, as elsewhere, higher education can be used to maintain social stratification where, in principle, none any longer exists. The argument is in line with classic studies on expansion in tertiary education and how it may affect inequality in educational (and thus social) opportunities.). Classic literature on the topic (e.g. Bourdieu, Blossfeld, Shavit) looks at how the educational system contributes to the persistence and legitimization of modern societies' need for social inequality, which can no longer rely entirely on inherited status

It is, thus, not surprising that the key discussions revolve around the issue of entry examinations, their value and true purpose. The public opinion (i.e. mainly parents) is vocal against the strictness and use of national exams. A key issue at stake is that that the most sought élite institutions (so-called "first tier universities", see below) still rely heavily on the national test, which based on numerous subjects (Amano and Poole, 2005). The entrance examination hype is such that it is commonly branded "examination hell" by parents and students alike. Failure to be admitted at the preferred institution is so common that many a student re-attempts the exam a second time under the ***Rōnin status***[68] after one or more years, and possibly after attending a private preparatory school (Takagi, 2010).

Amano and Poole (2005) suggest that, today, Japanese universities are starting to be neatly separated into three groups, namely (a) highly selective, (b) mildly competitive and non-competitive (popularly called "F-rank institutions"). Still, Japanese society seems to place more importance on the name of the school from which one graduates (referred to as "branding" or ***gakkooreki***) than on simply possessing a university qualification (Poole, 2003), a fact that might help explain why Junior Colleges are less coveted than universities (see Chart 8.5, below). Gakkooreki might steer application towards more prestigious institutions even at the cost of applying under the Rōnin status.

The Chart shows advancements to higher education[69] as percentage of the 18-year old cohort and as percentage of high school graduates[70] from 1985 to 2005. It appears that (a) access to university education is increasing over time while access to Junior Colleges is diminishing and (b) Junior Colleges are less sought by the eligible cohorts.

Indeed, the Japanese Society attaches much importance to prestige in higher education because many people and employers believe that passing prestigious university's entrance examination is a good index of competency. In other words, the Japanese selection system is said to supply students with a way to "climb the socio-economical ladder" (interview data).

[68] Literally, a samurai without a master, but the same Japanese word is used for the students who prepare individually after a first failure at the entrance examination (see e.g., Takagi, 2010, p. 21)

[69] Higher education includes universities and Junior Colleges. Japanese statistics show very strong participation rates (almost 80% in 2006, see MEXT, 2006). However, the data usually include Colleges of Technology (which are not really "higher education" as generally understood, but rather "upper secondary") in "higher education".

[70] This distinction might appear spurious and is not explained on the MEXT website. However, the differences are not very big, and they might include those who, though not being Japanese high school graduates, none the less are eligible for Japanese higher education (e.g. international students, or graduates from abroad whom have seen their qualification recognized).

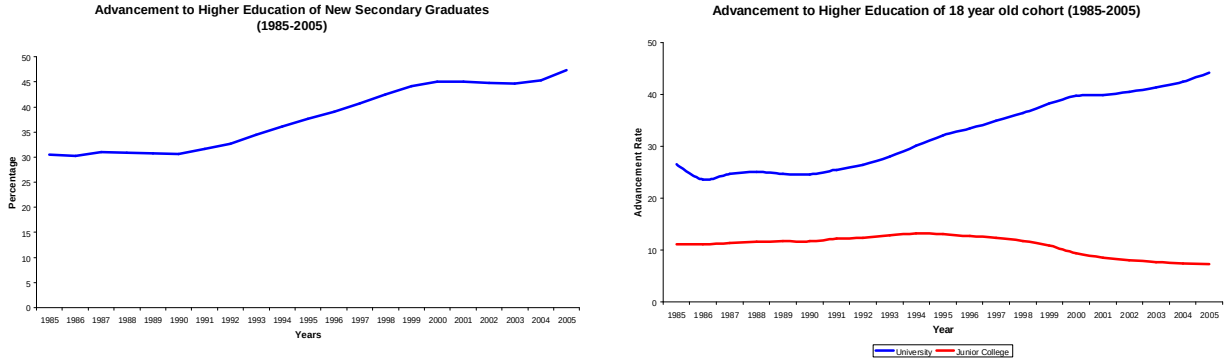

Chart 8.5: Advancement to higher education (University plus Junior Colleges) students in Japan as percentage of high school graduates (1985-2005) and as a percentage of the 18-year old age cohort (1955-2005). Source MEXT

Charts 8.6 and 8.7 are taken from OECD's Education at a Glance 2010. They show that, overall, Japan performs well in graduation rates. Graduation rates in Type-A tertiary education at 39.4% is slightly over the OECD average (37.7%). Japan's graduation rates in Type-B tertiary education (27.2%) are significantly higher than the OECD average (8.3%)[71].

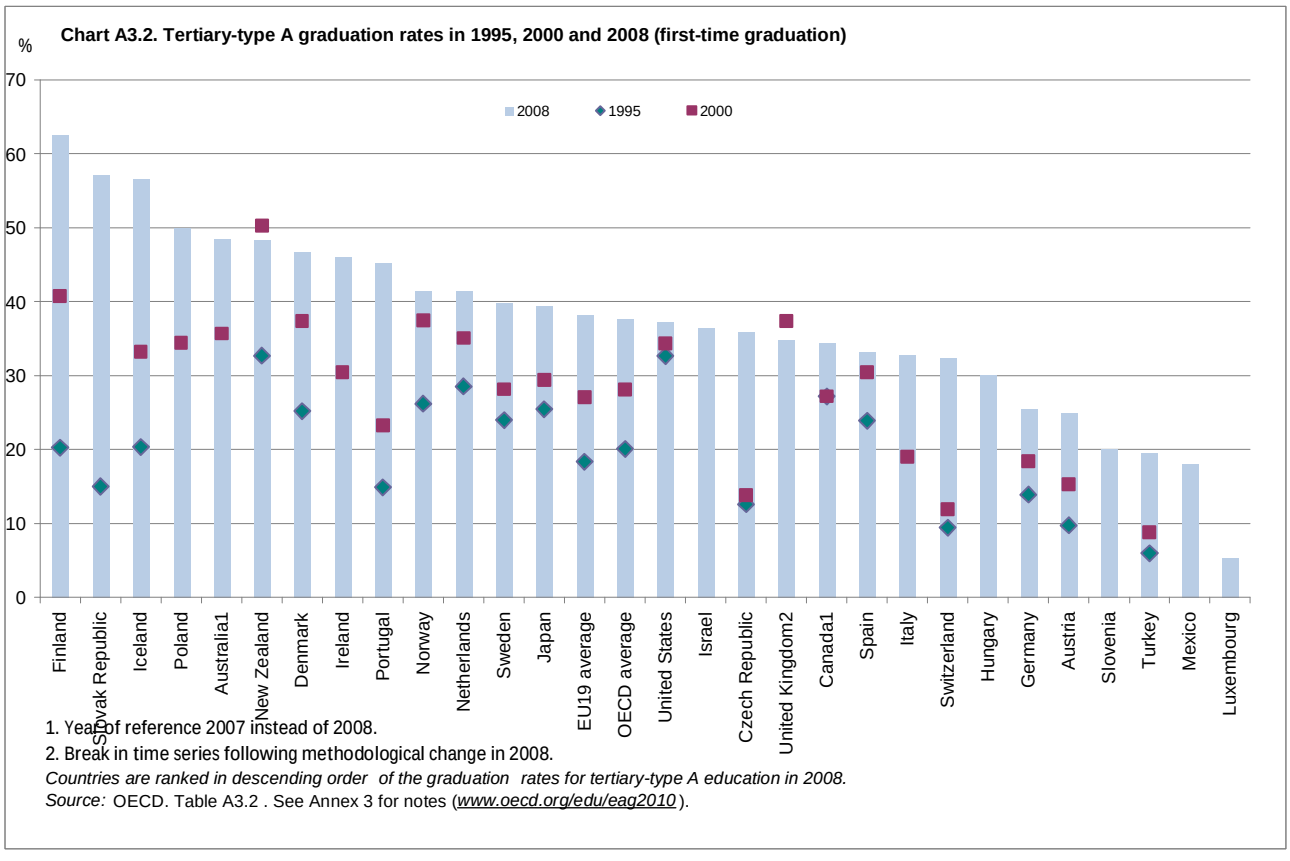

Chart 8.6: Graduation Rates in OECD countries in 1995, 2000, and 2008 (tertiary education type-A). Source: OECD, 2010 (Education at a Glance)

[71] Tertiary education as classified in IESCED, 5A and 5B

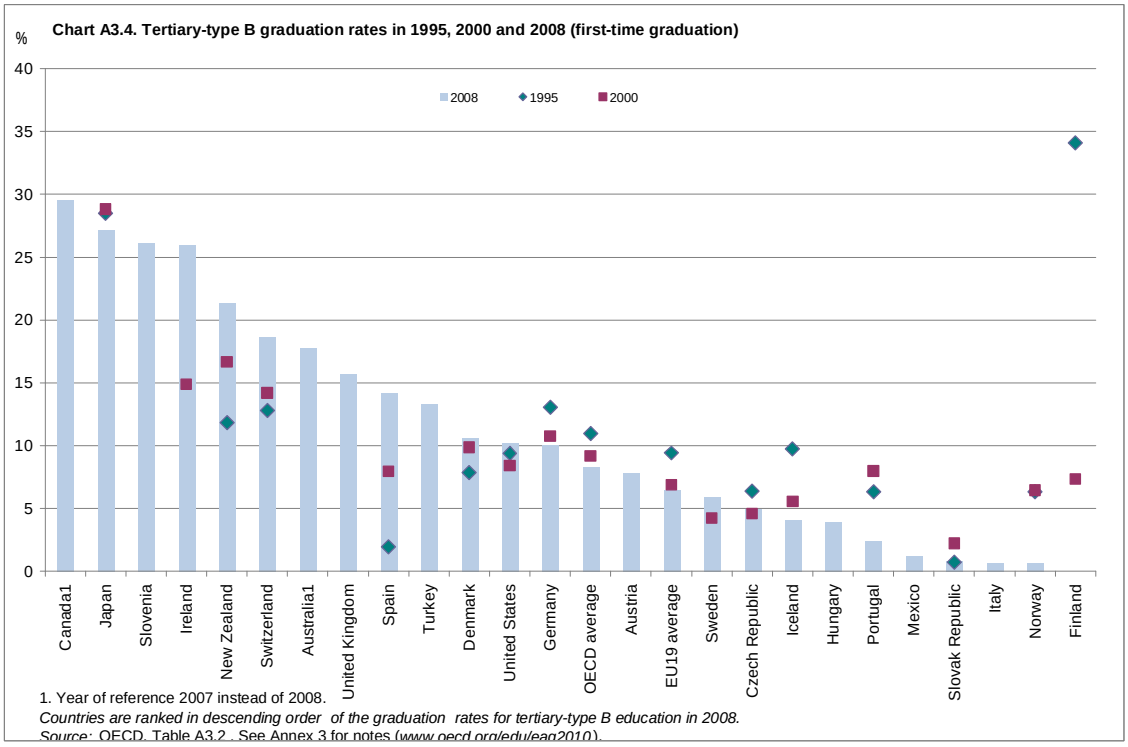

Chart 8.7: Graduation Rates in OECD countries in 1995, 2000, and 2008 (tertiary education type-B). Source: OECD, 2010 (Education at a Glance)

8.4 Conclusions

This section provides some thoughts on how Japan's selection mechanisms, as currently enacted, might affect matching and whether they might be applicable to the Netherlands[72].

First, it must be noted that the higher education system in Japan is extremely hierarchical. As mentioned above, institutions can clearly be categorized according to their level of selectivity. Selection procedures mirror this reality. Admittedly, the Japanese selection system does not help students make the best choice. The admission tests are based on multiple subjects, and thus universities are structured hierarchically by ***average academic scores of students who can be admitted through entrance examinations***. This leads many high school students to apply to "passable"[73] universities and courses rather than "desired" (interview data). Perhaps Takagi's (2010) statement "the examination hell is motivated by the hierarchical rankings of universities" is a good summary of this. Like in the case of Australia, the ***aggregate*** nature of the information provided by admission examinations seems to be the main weakness because it does not uncover students' subject-specific

[72] The information reported here is largely based on the interview data since little on this matter is mentioned in the literature

[73] The word "passable" is meant here as the highest possible choice for the student, based on his/her scores. It is not meant as "just good enough" or "decent" as the word might suggest

strengths or weaknesses. In fact, many (especially private) institutions are lowering the number of subjects on the entrance examination (Poole, 2003, p. 159)

Secondly, while there has been a burgeoning in the use of "soft" selection mechanisms (e.g. recommendations, A.O. admission), these are feared to be simply an easy way in for lower grade students who wish to avoid the tensions inherent in entrance examinations (interview data). The discourse in Japan is, thus, shifting from looking purely at selection to paying more attention to so-called "articulation". While the nuances are hard to convey, the underlying problem that is being pointed out here is that the transition from secondary to tertiary education goes beyond a test's numerical score, but involves educational issues that need more qualitative-type information (e.g. through recommendations)

Third, Japan's certified recommendation system mentioned in the main text above is interesting because it incentivizes high school teachers to provide recommendations which can maximise the probability of student success. It is fair to assume that such recommendations will be encompassing and are likely to take into account a student's predisposition and ability[74].

[74] However, it should be recalled that the system of "certified recommendation" is based on high schools' fear of being excluded from the "certified" list of high schools if too many of their recommended students underperform. This list is compiled by individual universities but, as mentioned earlier, universities are themselves subject to a "prestige hierarchy". In other words, it seems (to the author of this report) that the Shiteikou Suisen is very much context and culturally related. This should thus be kept into account when drawing lessons from Japanese practices

9 Sweden

9.1 Executive Summary

Higher education in Sweden has a unitary structure where most of higher education and research is carried out at the state institutions. The institutions vary greatly in size and degree of specialisation. The Swedish higher education system has been expanding during the past two decades. The structure of the education programmes is quite peculiar in Sweden. Besides the regular study programmes, the universities offer a wide range of freestanding, self-contained courses. The so called "25/4"rule and fixing the percentage of study places for adult applicants resulted in a marked increase of the number of the 'mature students' with varying degrees of life and vocational experience. As the result of the expansion, in 2006 half of all applicants were offered places in higher education programmes. The out crowding of younger applicants due to such policies and a large variety of admissions criteria has become a serious policy concern in the past years. As a result admissions requirements were changed to increase the number of recent school leavers before the age 25 by giving less weight to work experience and allowing the upper-secondary students to take national test. As seen from the current debates on the fairness and discrimination – the quota systems regarding gender and international student quotas have been in focus. The main complaints have come from students who were discriminated.

9.2 Higher Education in Sweden

Higher education in Sweden is provided at 14 state universities, 23 state university colleges and 15 private higher education institutions. Three of them, the Chalmers University of Technology, the Stockholm School of Economics and the Jönköping University Foundation are entitled to award third-cycle qualifications. The system can be characterized as a unitary higher education system.

Most of higher education and research is carried out at the state institutions. The main difference between universities and university colleges is that universities provide a broader range of courses and that they provide post-graduate programmes within one or more areas. The institutions vary greatly in size and degree of specialisation.

Historically the Swedish higher education was divided into four sectors: universities, university colleges, institutes and vocations schools. The Higher Education Act in 1977 merged the four sectors into one unified higher education system, which meat that all the institutions were administered by the same Ministry of Education and Science. In addition, all aspects of curriculum planning were overseen by one central body, the National

Swedish Board of Universities and Colleges. At that time detailed admissions requirements and ***numerus clausus*** for undergraduate education were adopted. Most of disciplines thus have special requirements in respect to previously acquired knowledge in specific subjects (Stromholm, 1996, p. 11).

Higher education institutions in Sweden enjoy high degree autonomy from the state as stipulated in the Higher Education Act of 1993. This means that the institutions have oversight over their own resources, organizational design, and management. Further in 1993, the above mentioned National Swedish Board of Universities and Colleges was abolished and the National Agency for Higher Education, the Office of the University Chancellor and a Board of Appeal for Higher Education were established. This means that universities got more freedom to design their own study programs and could offer students greater program choice.

Further, the Higher Education Bill 2004 changed the structure of education programmes in higher education institutions from a two-cycle to a three-cycle system as well as introduced the new higher education credit system from 2007 onwards. This system applies to all higher education institutions.

The structure of the education programmes is quite peculiar in Sweden. Besides the regular study programmes, the universities offer a wide range of freestanding, self-contained courses. There are many options available for people who wish to educate themselves, or obtain further professional training. There is a wide range of distance education programmes, largely in this freestanding course format.

The Swedish higher education system has been expanding. The increase of student numbers has been steady from 275.800 students in 1999 to 340.049 in 2003, then it slightly dropped to 320.036 in 2006, and started to increase again up to 360.993 in 2009. This latest increase in 2009 has taken place mainly at the first and second-cycle levels. The relevant age groups were at their peak in this year as noted by the Higher Education Report 2010, and at the same time, the economic recession impeded entry into the labour market. The record high level of entrants was reached – 94 000 in 2008/09 – which is an increase of 8% in comparison with the previous academic year. Out of these 70 000 were Swedish entrants and 24000 – incoming students from other countries. Student mobility figures show a steadily increasing number of incoming foreign students (through the EU and bilateral programmes) (Swedish National Agency for Higher Education 2010).

9.3 Selection Mechanisms in Sweden

9.3.1 Description and History of Selection in Sweden

Currently the selection of students in Sweden is carried out by the higher education institutions and administered centrally through the pooled admissions system University studies in Sweden: www.studera.nu. Since the beginning of the study year 1993/94, all

institutions may determine the number of students to be admitted and competence requirements. Entry requirements are general or specific. Applicants to first-cycle education must satisfy the general admission requirements, which are the same for all courses and programmes. General eligibility is attained by completing one of several forms of secondary school, or reached the age of 25 and have at least 4 years of work experience at least on a part-time basis. In addition, all students are required to have achieved proficiency in both Swedish and English at the level of the second-year upper secondary school student.

General entry requirements also apply to second and third-cycle courses and programmes, e.g. in the form of a required first level qualification. To ensure that students benefit from their studies, many courses and programmes also have additional, specific requirements, in the form of grades or other qualifications.

Since for almost all study subjects, the number of applicants exceeds the number of available places, a selection procedure is necessary. Apart from courses and programmes that lead to a qualification in the fine, applied and performing arts, virtually the same selection criteria are used in selecting students to all first-cycle courses and programmes. Applicants are ranked in accordance with a rating, based on final school grades or the results of the Swedish Scholastic Aptitude Test, SSAT. The development and implementation of this examination instrument is done by the National Agency for Higher Education – the public authority which overseas the higher education institutions in Sweden. At least one-third of the admissions must be based on final school grades, and at least one third on the basis of results of the SSAT. The SSAT is usually organized twice a year by all higher education institutions and costs SEK 350 and is valid for five years. SSAT fulfils the role of standardized special requirements. These relate to the knowledge attained in one or several courses in the upper secondary school or to corresponding proficiency. For professional degrees there are standardized requirements in place determined by the National Agency for Higher Education (Eurydice, 2009).

In addition to school certificates and the National Scholastic Aptitude test, some study programmes such as medicine, arts or scholastic professions require their students to participate in special intake tests. The work experience and previous education count as well.

During the student selection procedure if too many applicants' qualifications are equally good, the selection may be based on gender in order to obtain more even gender representation. If a selection based on gender is not possible, a selection based on specific tests may be used. As noted by OECD report (2008), in Sweden special selection provisions for under-represented groups are imposed on public HEIs for under-represented gender (Santiago ***et al.*** 2008, p. 56).Thus, gender quotas are used since 2003 and currently international student quotas are being implemented.

Universities and university colleges have the right to decide on criteria for selection for up to 10% of the places in education programmes for new students. The institutions may apply different set of selection criteria or allocate places differently for selection in specific programmes upon approval from the Swedish National Agency for Higher Education.

Criteria may include students' grades from schools, prior coursework completed, writing samples, interviews and specially-designed admissions tests. For single-subject courses, students apply directly to the institution they would like to attend. For other programmes, the applications are administered electronically and centrally through the National Admissions Office for Higher Education (see www.studera.nu).

Although each higher education institution determines the number of study places in difference subjects, the government determines the number of study places by setting a ceiling on the total allocation of state funds based on the number of students. If the ceiling is exceeded, the institution will not receive funding for all their students. The government also determines the goals of the number of degrees in a limited number of programmes. For example, for the period of 2005-2008, the goal for the number of degrees was determined in engineering, nursing and teaching.

Historical development

From 1977 until 1993 ***numerus clausus*** existed for all university studies at Swedish universities. In 1993 the government decentralized admissions decisions. For the first time, higher education institutions were free to determine their own selection criteria, or to coordinate their efforts with other institutions through a central agency. At the same time, the institutions were granted the authority to determine the number of students they will enrol as well. Although indirectly limited by the use of formula-based enrolment driven forecasts, institutions were still free to accept more students that the number of governmental financed places provided they could guarantee quality.

Special admissions' regulations for 'mature students' who are older than 25 were first introduced in 1970. The logic behind was to increase educational opportunities for the generations of students who had not been able to profit from the expansion of the upper secondary school system. By establishing the so called "25/4"rule and fixing the percentage of study places for adult applicants the government made sure that higher education system is inclusive even in the context of the overall structural changes of the higher education sector. The result of such policy was a marked increase of the number of the 'mature students' with varying degrees of life and vocational experience. However, the aggregate number of students in the overall higher education system was only marginally fluctuating.

Still, the expansion of student numbers in 1990s created some tension due the less than commensurate growth in the physical capacity to accommodate them by higher education institutions. In the early 1990s approximately half of all applicants were offered places in higher education programmes. However, by 1998 the ratio dropped considerably, to slightly more than 40%. In 2006, the percentage of accepted applicants was back to 55% (Swedish National Agency for Higher Education 2010).

Policies on student selection

The national admission regulations are stipulated in the Higher Education Act, the Higher Education Ordinance and the regulations issued by the Swedish National Agency for Higher Education. The detailed national regulations mainly apply to the admission of university entrants, i. e. to first-cycle courses and programmes. There are also regulations for admission to second and third-cycle courses and programmes but they are less comprehensive.

In 2001 the Open Higher Education Bill was passed which addressed the issues of access, lifelong learning, vocation-oriented programs and degrees, ICT in higher education as well as steering and governance. The primary goal of the Bill was to broaden recruitment and open new paths to higher education. Targets were established to have 50% of each age cohort studying in higher education before the age of 25. To broaden the recruitment, the Higher Education Act was amended to establish a recruitment commission whose primary task would be to stimulate recruitment activities at universities and university colleges. HEIs were requested to draw up action plans for broadening recruitment and develop preparatory courses for incoming students who do not meet admissions criteria for specific university programs. The flexibility to develop and implement new admission processes for up to 10% was also foreseen in this bill.

As noted in the CHEPS Monitor report (Deen 2007), competition for study places has increased and resulted in the out crowding of younger applicants by 'mature students'. The resulting concerns over the growing imbalance resulted in adjusting admission requirements to also promote the growth of recent high school graduates. The government has set a new target to increase the number of high school graduates enrolling before the age of 25 up to 50%. Since the 1990s the government aimed that work experience as a criterion would receive less weight and has allowed upper-secondary students also to take the SSAT. Although the numbers of new entrants to higher education older than 25 continued to grow throughout the 1990s, this happened at a much slower rate. The increase was mainly in the number of females between the ages of 25 and 35 (Sweden Statistics 2001).

9.3.2 Experiences with Selection in Sweden

The student expansion has been fluctuating in Swedish higher education due to both economic and demographic reasons as discussed above. An important development which has received a lot of attention among the policy makers is participation in higher education.

Sweden introduced alternative pathways into tertiary education with the objective of increasing the diversity of the student population. Student can also enter tertiary education with no secondary-school leaving certificate but through results in the Swedish Scholastic Assessment Test.

The main trend in terms of the student diversity can be seen in terms of the upper-secondary school leavers entering higher education vis-à-vis the 'mature students', those

above 25. Due to the special legislation mentioned above, the balance between these two student groups has been shifting more towards the 'mature students' over the years out crowding the younger students.

Another important trend has been the use of gender balance criteria which is currently debated in Sweden as the formal discussion is launched by the National Agency for Higher Education to abolish the rule of gender balance. The general trend has been towards the balance in participation taking into account both genders. For example, women represented 57% of the applicants in the autumn of 2009, and 43% were men. The corresponding figures in 2008 were 59% and 41% respectively. However, if we look at the gender balance among the higher education entrants in different disciplines then we see differences according to the study programme. For instance, from the new entrants in 2006/07 in technical sciences – 1 328 were women and 18 43 men. While in the same year the entrants into humanities were 5818 women and 3707 men (The National Agency for Higher Education, 2010).

Finally, a steady increase in international student numbers can be seen in the Swedish higher education system. From the national statistics we see that the number of foreign entrants has been steadily increasing over the years from 7 121 in 1999 to 16 754 in 2009 (HE Statistics 2010). The outgoing mobility has not seen such a drastic increase over the ten year period. Notably, the increase is from 6 513 in 1999 to 7 329 outgoing Swedish students in 2009. As reported by the Swedish National Agency for Higher Education, there was a substantial increase (45%) in the number of applications for the international master's programme. The number of applicants in the admissions round for international courses and programmes (primarily first-cycle education) was three times greater than in 2008.

The acceptance rate in Sweden very much depends on how big is the overall pool of applicants in a particular year, and the demand and popularity of a particular discipline and programme in a particular year. As noted by Prof. Lundell from Lund University, the demand fluctuates between 4 and 5 students per study place depending on the discipline. At present the competition is still slightly higher among the recent school graduates. If the applicant is not satisfied with the admission results and process, he/she may appeal to the University Admissions Board. If this appeal process is not satisfactory, the student may go to the National Admissions Appeal Board (Interview data).

Stakeholder experiences

Since the student selection instruments are different in their characteristics, opinions are divided on the issue of which instrument is the most suitable. Some are in favour of using the school grades, while others propose standardised tests or other forms of assessments (SOU 2004). Researchers discuss if the acceptable level of the validity of the selection instruments is enough good criterion for determining which instrument to use (Wikström 2005). As argued by Fagerlind and Stromquist (2004) even if the predictive validity is high, it does not necessarily mean that the instrument is fair. Furthermore, if the system is open for strategies (and in the Swedish case – the availability of two instruments at the same time allows for strategies), "clever" students will find these openings and may be successful when admitted to higher education.

As seen from the current debates on the fairness and discrimination – the quota systems regarding gender and international student quotas have been in focus. The main complaints have come from students who were discriminated.

Gender equality programme

Currently the Higher Education and Research Minister Krantz has opened a debate in order to stop the gender quotas for admission to higher education institutions. The Swedish government plans to submit a proposal for consultation which would remove gender-based affirmative action in place since 2003. The recent cases of women taking universities to court for discrimination since men were given priority admission sparked this debate. In the case of gender discrimination – there were two prominent cases when female students were denied acceptance to the competitive program due to the gender quota used by universities. For example, in 2008 the University of Lund was facing a lawsuit from 31 women for discrimination since the university gave priority to men in admitting them to the psychology programme. This problem is mainly apparent in the disciplines of dentistry, veterinary science, medicine, psychology.

According to the Minister Krantz: "The current regulations yield a totally unfair result. Last years it was almost only women, 95%, who had worked hard to get into their dream programme but who did not get in because of their gender." (Jonasson, 2010). Since more female than male applicants had top marks, the consequence has been that men have been given priority due to a clause in Sweden's HE laws which say that gender quotas should be used to choose between applicants of otherwise equal merit. Obviously this regulation had an uneven effect since for programmes dominated by men, the system does not work in the same way because there are overall fewer applicants for those disciplines.

International student admissions

Another recent outcry in admissions policies is related to the international admission quotas. The international student quota policy aiming to help international students in fact hinders their admission as noted by Politiken newspaper. The new quota system divides all applicants into two groups – Swedish and international. This means that international students are not evaluated only based on their qualifications.

Since the government allows from this academic year 2010 the Swedish students can have a higher grade if they have taken advanced courses prior to the admission to university. Thus, in order for international students to be able to compete, a new international student admission quota system was introduced. Under the new system, places at the university are allocated according to how many international applicants are there for each individual subject. Subjects that attract larger numbers of international applicants will be able to accept a proportionally large number of overseas applicants. The international students have been complaining and the universities in Sweden have responded. For example, Lund university created a special committee to review all programmes which did not get any international students. "It requires extra work for our local admissions department, but the important thing is that it gives greater fairness in the assessment of qualifications," said Mr.

Lundell, the President of the University Admissions Board at Lund University. They have reviewed 75 cases of international students who were denied admission due to the quota system. The government officials have reacted to this debate. The Swedish National Agency for Higher Education concludes that this system will reduce the number of international students in Sweden. They have investigated the consequences of the quota system for the disciplines of medicine and psychology and they concluded that the new admission rules may be against European and Nordic agreements. Leif Strandberg from Swedish National Agency for Higher Education has remarked: “It is not in accordance with international agreements to have a special quota. It is not a fair way to treat applicants.” The Minister for Higher Education and Research, Tobias Krantz has called for an investigation of the quota system. (Ellis, 2010)

University admissions is an important topic in the policy debates in Sweden. As noted in the interviews, the change of system in 2006 under the Conservative government led to prioritizing qualifications rather than work experience. The changes made in the system where high school students can retake the high school exams to improve the grades has led to inflation of grades and this is not a welcome development for universities. Further, discontinuing extra credit for work experience may impede the selection of good students in specific fields, such as nursing for example. Matching of students with the programmes is not easily achieved.

9.4 Conclusions

The quota system used in Sweden and controversies around them show that policy makers should be careful before applying quotas for specific type of students, either age wise, or nationality wise, or gender wise. The bottlenecks for high school graduates in Sweden show how the differentiation in admission criteria between different groups of students (in this case recent high school graduates versus mature students) may lead to overcrowding of certain groups which may eventually lead to problems in the labour market.

10 Switzerland

10.1 Executive Summary

In Switzerland, the higher education institution itself assumes responsibility for the student selection process. As regards the determination of study eligibility, Switzerland has a classical entitlement system (Pechar, 2005). The certificate qualifying for entrance into higher education is the matura (maturité, maturità). Given that foreign diplomas entitling to higher education are not always considered as equivalent to the matura, the applying candidate can additionally be required to prove his/her ability in a Swiss or Cantonal aptitude test. The University of Fribourg organizes entrance examinations twice per year for those applicants whose school-leaving certificate has not been deemed equivalent or who face specific requirements posed the university to which they applied. To participate in the entrance examinations, students must not only provide proof of mastering the language of the desired study program, but they must also be conditionally admitted to it.

An alternative to the entrance examinations in Fribourg are the tests carried out at the Eidgenössischen Technischen Hochschulen (ETH/EPF). Their entrance examination draws on the Matura and is partly recognized by other universities as well.

Medicine, dentistry and veterinary sciences have numerus clausus restrictions in place. In the medical sciences where latter circumstance applies, admittance is therefore only granted upon the successful participation in an aptitude test prepared by the Rector's Conference of the Swiss universities. For all other study programs, an open-access policy applies[75].

Switzerland's study success rate (70%) is just within OECD average. There are, however, differences as far as the sex of the relevant population is concerned: the "female" success rate is slightly below that of male graduates.

In 2009, 27 % of the relevant age cohort graduated for the first time from higher education. However, this rather low graduation rate (the OECD average was 39% in 2007) must be seen in the light that a relatively large amount of matura holders accept tertiary education offers at the Tertiary B Level.

[75] Tests are carried out in cooperation with the Centre for Test Development and Diagnosis (ZTD)

10.2 Higher Education in Switzerland

Higher education in Switzerland features a dual system. At the Tertiary A level, there are two types of higher education institutes, namely the traditional universities including the cantonal universities and the federal institutes of technology, where instruction is centred on basic research. In addition, there are many options in the field of higher vocational education and training (Tertiary B level) with the practically oriented certificate and diploma exams and courses at the colleges of higher vocational education and training (SER & OPET, 2006).

Professionally-oriented studies are offered at the nine universities of applied sciences ("Fachhochschulen", "hautes écoles specialisees", Scuole Universitarie Professionali") and at the fourteen universities of teacher education. Higher education in music, theatre, design, and fine arts is provided in the universities of applied sciences. All three types of universities have implemented the Bologna declaration (Amherd & Tafani, 2010, p. 6).

While the Swiss Constitution guarantees autonomy to the country's 26 cantons in the area of education, the Federal Government and cantons share responsibilities on higher education and on the tertiary level. The Confederation is in charge of both advanced vocational training and the universities of applied sciences. Besides, it has jurisdiction over the two Federal Institutes of Technology and regulates and promotes research through the Swiss National Science Foundation (FNS). Each one of the ten university cantons is responsible for its cantonal university. Cantonal universities are financially supported through the Confederation and from those cantons which do not have their own university[76].

Due to the generous financial support received from the federal and cantonal governments, the amount of tuition fees is relatively low[77]. Although Swiss universities are allowed to charge additional tuition fees from foreign students, less than half of them do[78] (Amherd & Tafani, 2010).

[76] See http://www.swissuniversity.ch/system-swiss-education.htm. Accessed November 18, 2010

[77] In 2010/11, tuition fees ranged from 1000 CHF (University of Geneva) to 4000 CHF (University of Italian Switzerland)

[78] In 2010/11 additional tuition fees for foreign students amounted in a rather modest increase of the national tuition fee (between 200 and 550 CHF), with the exception of the University of Italian Switzerland that charged twice the national fee from foreign students (4000 CHF)

10.3 Selection Mechanisms in Switzerland

10.3.1 Description of Selection in Switzerland

In Switzerland, the higher education institution itself assumes responsibility for the student selection process[79]. There is, in other words, no central admission office, but the universities may decide themselves whom to admit or reject[80]. The main and most important document for university entry is the Swiss Matura (or other equivalent foreign school-leaving certificates). Although the number of university graduates is continuously on the rise each year, all study programs that do not have capacity restrictions (see also 2.2.1) are open to students with a valid maturity certificate or another certificate qualifying for university entrance (CRUS, 2010, p. 18). As far as the determination of study eligibility is concerned, Switzerland has hence a classical entitlement system (Pechar, 2005, p. 55).

As for those study programs where no NC- restrictions holds, an open-access policy is in place. Although it may seem that such a policy does not really fit into an age where participation in higher education is drastically expanding, the Austrian higher education researcher Hans Pechar (2005, p. 56) stresses that the relative openness of the system must be seen on in the light of a relatively low Matura graduation rate of less than 20 % (BFS, 2010)[81] . Against this backdrop, it is worth mentioning that Pechar compared the percentage of Swiss maturity holders to the percentage of Austrian graduates with an equivalent school-leaving diploma, which was about 40% in 2005. This means that in Austria, there are about twice as much people in the relevant age cohort completing secondary education with the highest school-leaving certificate as compared to Switzerland[82].

One of the reasons why Swiss universities do not see any particular need to reform their entitlement system has to do with the fact that the matura is still considered as the most crucial selection instrument regarding access into tertiary education. The low percentage of graduates completing secondary education with a school leaving certificate qualifying for higher education is thus seen as a confirmation of the effectiveness of maturity examination. If the percentage of graduates would be higher and more people would also apply for university studies, there might be more pressure on Swiss universities to reform

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[79] As Swiss universities operate under cantonal- and the federal technical universities under federal law, the regulations of the respective university are legally binding. The list is annually revised. For an overview on the current admission requirements of Swiss universities:, see http://www.crus.ch/information-programme/anerkennung-swiss-enic/zulassung/zulassung-in-der-schweiz/schweizerische-ausweise.html. Accessed January 25, 2011.

[80] EMAJAS (2009). Hochschulzugang mit Ausländischer Vorbildung. Available at: http://www.aso.ch/files/downloads/download_03715060012526761 07.pdf. Accessed November 18, 2010

[81] This figure just refers to the so-called "gymnasiale Maturität", that is the type of school leaving certificate which is granted upon the successful completion of secondary school. Maturity can also be obtained by vocational training ("Berufsmaturität"). The total share of maturity holders much higher (about 33% in 2010)

[82] The Netherlands resemble much more the Swiss situation: according to the Dutch Central Bureau of Statistics (2010, p. 52), 18.8 % of the relevant age cohort graduated from secondary school with the highest achievable school-leaving certificate

the access system. Besides, attractive study options in the field of higher vocational education and training account for the fact that the demand for university studies among study-eligible persons is lower than in countries where the vocational education sector is rather small.

The fact that Swiss universities hardly engage in student selection as far as study programs without capacity restrictions are concerned does not mean that they are indifferent about creating the right match between applicants and choice of study program. Almost all HEIs offer advisory services for secondary school students to help them choose a study programme and get started with their studies. In an effort to reduce student drop-outs in the first phase of university studies, the ETH Zurich furthermore obliges all students to participate in a general examination at the end of their first year. The test can only be repeated once; in the event of failure, the student is required to discontinue his/ her study.

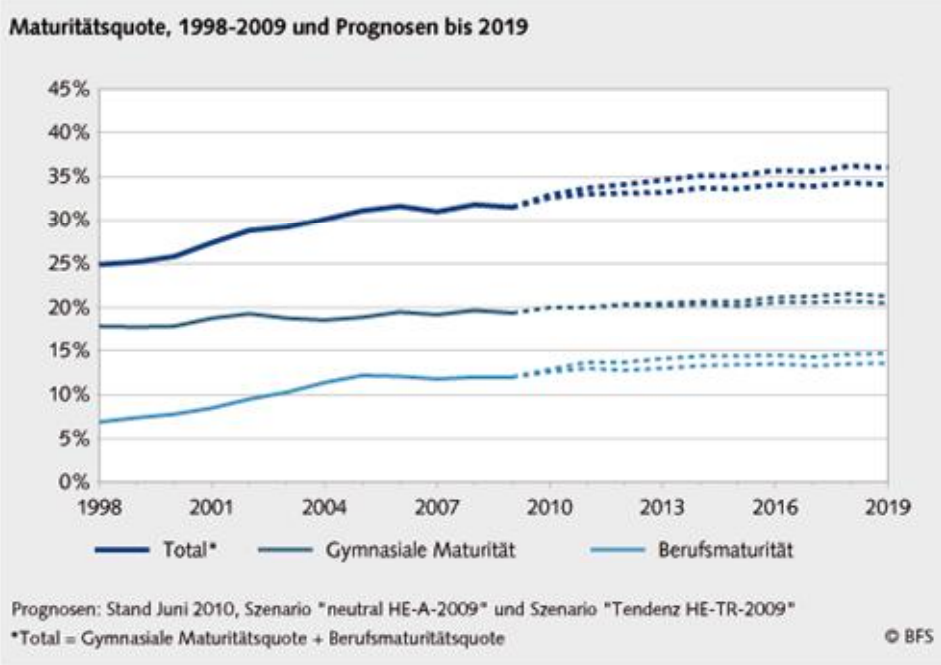

Chart 10.1: Matura graduation rate according to Gender, 1980-2009 and forecasts until 2019. Source: Swiss Federal Office of Statistics (BFS), 2010

University Admittance with a foreign diploma

In order to be admitted to a Swiss university, the applicant needs to prove that his/ her school leaving certificate is equivalent to the Swiss matura. The Rectors' Conference of the Swiss Universities (CRUS) sets out some general rules on the aspects that will be looked at when deciding on the equality of a foreign diploma[83]:

A foreign school-leaving certificate must, as far as study subject, number of hours and duration of study are concerned, be equivalent to the Swiss Matura, namely it has to:

[83] See also http://www.crus.ch/information-programme/anerkennung-swiss-enic/zulassung/zulassung-in-der-schweiz/auslaendische-ausweise.html. Retrieved from the World Wide Web on January 27, 2011.

- Represent the highest degree of school-leaving certificate that can be obtained in the issuing country
- Entitle the holder to participation in higher education in the issuing country
- Be obtained in an unabbreviated course of studies that is usually organized as a class
- Have any of the following foci: classical- or modern languages, humanities and social sciences, mathematics-natural sciences
- Be of general-education.

A foreign school-leaving certificate is considered to be of general education if the following six study subjects are covered in the last three years in school according to the following list[84]:

1. First language (mother tongue)
2. Second language
3. Mathematics
4. Natural sciences (biology, chemistry or physics)
5. Humanities and social sciences (geography, history or law/ economics)
6. Optional subject (subject from category 2,4, or 5)

A Swiss university may require the candidate to prove that

- The study program that the s/he would like to study is also offered in the issuing country and that the admission conditions are not stricter than in Switzerland
- A study place has been allocated there
- S/he has not previously been excluded from study for failed examinations or for other reasons

There may be instances when a foreign school-leaving certificate does not fulfil one or several of the above-stated conditions. If this is the case, the applicant must undertake a Swiss or cantonal aptitude test.

In Fribourg, VKHS (Preparatory Courses for University Studies in Switzerland) organizes aptitude tests twice per year (June and August/ September) for those applicants whose foreign certificates are not fully recognized or who have to comply with additional skill requirements posed by the university to which they applied. VHKS also offers a University Preparatory Course (UPC) for the central entrance examination. In order to be admitted into such a course, the candidate must provide sufficient proof of mastering the language in which the study will be conducted (German, French or Italian). Besides, s/he must be conditionally admitted to a Swiss university. The UPC lasts from September to June of the following year and costs CHF 5200 (Amherd & Tafani, 2010).

[84] The list can be consulted online at http://www.crus.ch/information-programme/anerkennung-swiss-enic/zulassung/zulassung-in-der-schweiz/auslaendische-ausweise.html?L=0Freundliche%20Gr%20%20%D0%A0%EF%BF%BD%D0%A0%E2%80%A0%3F%3F%20%3F%20sse . Retrieved from the World Wide Web on January 20, 2011.

Candidates whose school-leaving certificate is not fully accepted may also apply for the entrance examinations at the ***Eidgenoessischen Technischen Hochschulen*** (ETH/EPF). The test corresponds to the coverage of the ***Matura*** and is partly recognized by other universities as well.

The University of St. Gallen only accepts a limited number of foreign applicants (the university restricts the total percentage of foreign students to 25%) that are all required to participate in an entrance examination. Foreign nationals who hold recognized Swiss maturity certificate are exempted from this examination requirement.

Finally, the University of Lausanne is the only university offering a two semester- course that prepares students for the entrance examination (EMAJAS, 2009).

NC-admission restrictions

Numerus clausus restrictions hold in the medical sciences where only a limited number of study places are available. The total capacity of all Swiss universities can be looked up program-wise on the homepage of CRUS[85]. Candidates seeking admission into medical programs are required to take an aptitude test prepared by CRUS, whereas the test results will play a crucial role in the intra-university selection process. Since Swiss universities have only very limited capacities to train students in medicine, veterinary sciences and dentistry, access is usually denied to foreign applicants that reside outside Switzerland[86].

10.3.2 Experiences with Selection in Switzerland

Quantitative development of first-year entrance rate into HE

This indicator shows the share of first-year enrolment in Swiss higher education (tertiary A and B level) in relation to the rest of the relevant age cohort. From 1997 to 2009, the entrance quota into university education increased by 13 % up to a share of 36.2%[87]. The remarkable increase in participation is mainly due to the integration of the universities of teacher education and universities of applied sciences into the higher education system. This is why entrance into universities of applied sciences (abbreviation: FH) increased between 1997 and 2009 by 13 %. By contrast, first-year enrolment in university education (abbreviation: HU) remained relatively stable with an increase of 3%. According to the forecast, entrance into higher education will increase until the year 2011 and will then

[85] For more detailed information on student selection in the medical sciences, see www.crus.ch.

[86] The Swiss University Conference of 12 October 2006 has issued a list on recommendations on the admission of foreigners to the study of medicine. Applicants may seek equal treatment with Swiss nationals if they comply with the requirements set out in the list. For more information, see: http://www.crus.ch/information-programme/anmeldung-zum-medizinstudium/vd/zulassung-auslaendischer-studienanwaerterinnen-und-anwaerter.html#Empfehlung. Retrieved from the World Wide Web on January 20, 2011.

[87] The Swiss Federal Office of Statistics does not differentiate between national and international students. It is very likely, however, that international students have been included into the calculations as well, considering that otherwise, the rate of first year enrolments into higher education would be higher than the rate of maturity holders

stabilize. The sum of the FH and HU entrance rates are slightly higher than the global higher education entrance rate, given that those persons are excluded from the calculation that chanced the type of higher education institution after having initiated a study.

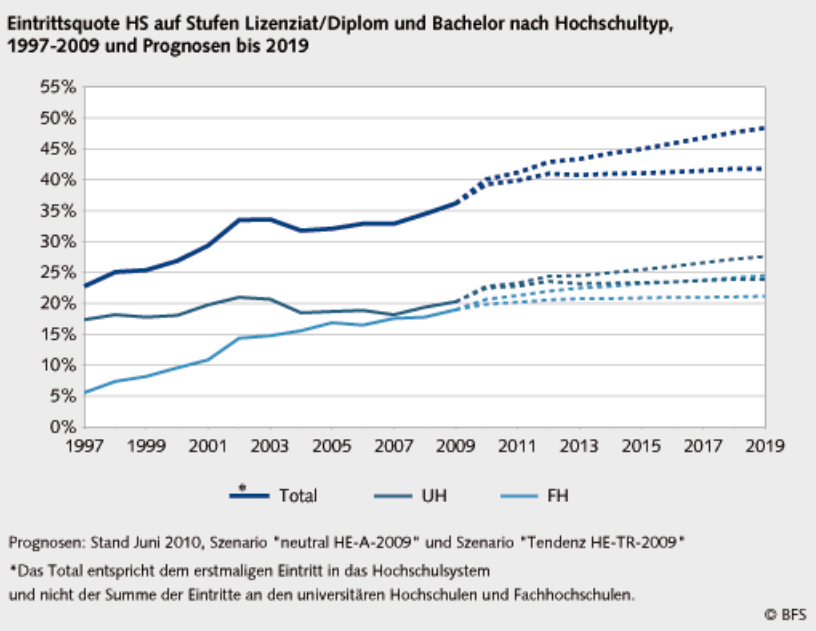

Chart 10.2: First-year entrance share into higher education according to type of higher education institution. Source: Swiss Federal Office of Statistics (BFS), 2010

Development of initial participation rates

The Swiss Federal Office of Statistics provides the latest provisional initial participation rates at Swiss higher education institutions alongside a historical time series. The rate of students entering for the first time a higher education institution (“first-year participation”) was 20.3 % in 2009. The graph shows that over the last years, first-year participation rates slowly but steadily increased. Between 2001 and 2003, there are much higher values –a phenomenon that can be explained by the double graduation cohorts seeking access into higher education at that time. In the year 2000, female participation in HE was for the first time higher than male participation and has increased ever since- a trend which is likely to continue in the near future.

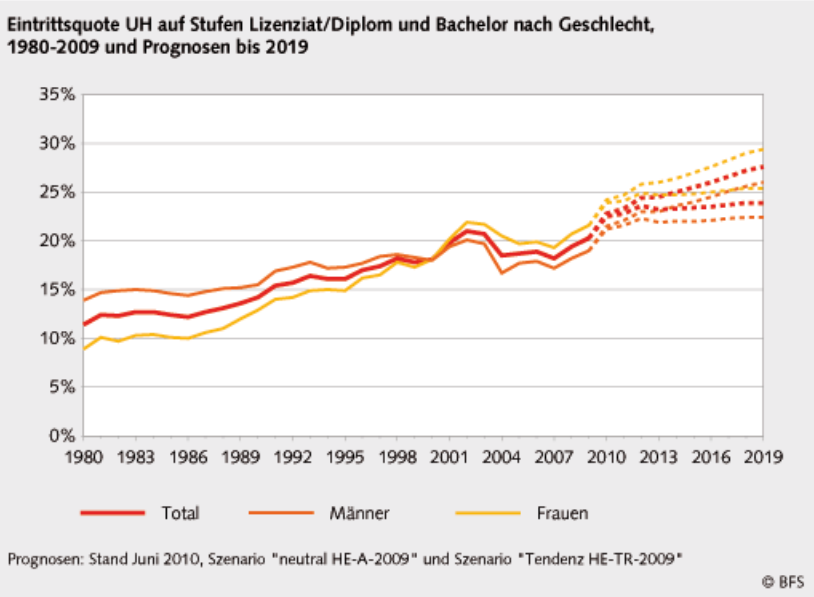

Chart 10.3: First-year participation rate[88] on levels Licentiate/ Diploma and Bachelor[89] according to gender, 1980-2009 and forecasts until 2019. Source: Swiss Federal Office of Statistics (BFS), 2010

Development of student drop-outs

Study success a crucial issue for the universities' efficacy evaluation and funding. Nevertheless, high drop-outs are not to be equated with the insufficient quality of the higher education system, as there can be a multitude of reasons why students give up their study.

The table in Annex 2 shows the share of students that accessed higher education in a particular year at a Swiss university and that graduated within a time span of ten years. The analysis of different cohorts highlights a rather stable study success rate of 70%. While in the freshman cohorts of the early 1980s, about 10% more men than women successfully completed their studies, this gap has almost closed (less than 2 % in 1999). The "female" success rate is therefore only slightly below the share of male graduates. Women do not necessarily study longer than men, but they are more likely to drop out. One reason for this could be that women are more likely to enrol themselves in the humanities and social sciences which constitute study programs being characterized by relatively high drop-outs.

[88] First year participation rate refers to the amount of students that enter a higher education institution for the first time

[89] The introduction of the Bologna reform has caused the federal statistical office to modify its definition of entries. Before Bologna, no difference was made as regards the type of degree program that students had enrolled themselves in (Licentiate/ Diploma). Ever since the switch to the BaMa structure, only those students are considered "new" that participate in bachelor programs. The implication of this changed definition was a slight decrease in the participation rate (BFS, 2010)

The low study success rate in the humanities and social sciences stands out from the other disciplines. In addition to a relatively high drop-out rate, the share of students who need more than 10 years to graduate is larger than in other study programs. This also explains why drop outs are rather high at the University Zurich and Fribourg, given their strong humanities and social sciences orientation.

First-time graduation rates

The first-time graduation rate sheds light into the share of young academics of the relevant age cohort that graduate for the first time from higher education. As such, it offers an important point of reference about the additional highly qualified workforce being ready to join the labour market.

According to the Swiss Federal Statistical Office, the introduction of Bachelor programs at universities will have a decisive impact on the university graduation rate. Given that the Bachelor has shorter study duration as compared to the traditional degree programs, the number of graduates considerably increased until 2008. From 2009 onwards, however, it will go down again.

Swiss ***Fachhochschulen*** (universities of applied sciences) have also experienced a steady rise in graduates over the last few years. In contrast to the universities, however, the growth in first-time graduation rates will continue due to the incorporation of the former ***höhere Fachhochschulen*** into the ***Fachhochschul***-system.

In 2009, the share of people graduating from higher education was 27 %. Although this graduation rate is more than ten percentage points under OECD average (39% in 2007), it must mainly be attributed to the fact that a relatively large amount of tertiary education offers need to be sought outside the higher education institutions (BFS, 2010).

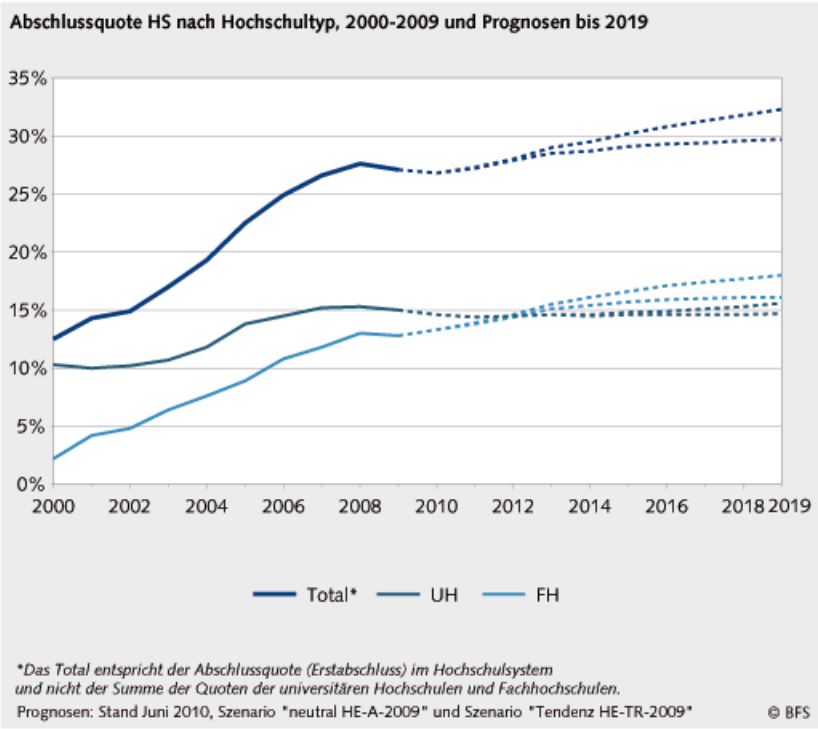

Chart 10.4: First time graduation rate by type of higher education institution; 2000-2009 and 2019 forecast. Source: Swiss Federal Office of Statistics (BFS), 2010

10.3.3 Problems with admittance

Although Switzerland's study drop-out figure is in line with the OECD average of 2005 (OECD, 2009, p. 63), Pechar noted in 2005 that some actors were thinking about improving access to higher education in terms of improving student success (and hence not student selection). The ETH Zürich, for instance, carried out a pilot project to evaluate the choice of study of 1st year applicants. Evaluation tools included amongst other things entrance interviews, and also here, the prior goal of these interviews was not selection, but rather the motivation for and the identification with the selected study course as well as well as the ascertainment of a general or specific scholastic aptitude. The prior project goal was therefore not selection as such, but the improvement of matching between the student and his/ her chosen study program.

10.4 Conclusions

Switzerland constitutes an exceptional case as far as access to higher education is concerned. What surprises most about this case is that in comparison to many other countries where selection is also a means to regulate excessive demand for higher education, Swiss universities still have for most of their study programs a classical entitlement system in place. Nevertheless, the "relative unimportance" of student selection becomes comprehensible when re-considering admission in the light of the following two factors: to begin with, the relative openness of the system must be interpreted against the

background of a relatively low ***Matura*** graduation[90] rate. Secondly, even out of those graduates being entitled to study at a higher education institution, only about 20% opt to study at a university. Latter phenomenon, however, should not be attributed to the study unwillingness of Swiss graduates, but is explained by the fact that Switzerland features a wide education offer at the tertiary B level that "absorbs" a considerable share of the relevant age cohort (about 19%).

[90] Please recall that this figure refers to the so-called "gymnasiale Maturität", that is the type of maturity which is granted upon the successful completion of secondary school.

Annex 1: Study Drop-outs for German Students

Study drop-outs for German Students in their first study program 1999, 2002, 2004, 2006 and 2008 according to type of HEI, subject group, study area and type of degrees (in %)

Type of HEI Subject group Study area Type of degree	Study drop-out quota												
	Total					men[1)]				women[1)]			
	1999	2002	2004	2006	2008[2)]	1999	2002	2004	2006	1999	2002	2004	2006
	in %												
Total	23	25	22	21	24	25	27	25	26	20	23	18	15
Universities	24	26	24	20	/	26	29	27	25	23	24	21	16
Universities of applied sciences	20	22	17	22	/	23	24	22	26	13	18	10	14
According to type of degree													
Diplom/Magister	/	/	/	26	27	/	/	/	/	/	/	/	/
Staatsexamen	/	/	/	7	10	/	/	/	/	/	/	/	/
Bachelor	/	/	/	30	25	/	/	/	/	/	/	/	/
Bachelor University	/	/	/	25	/	/	/	/	34	/	/	/	19
Bachelor university of applied sciences	/	/	/	39	/	/	/	/	42	/	/	/	35
Universities													
linguistics-, cultural sciences, sports	33	35	32	27	/	38	39	37	35	31	34	30	24
linguistics-, cultural sciences	41	45	43	32	/	/	/	/	/	/	/	/	/
Pedagogy, sport	28	23	16	20	/	/	/	/	/	/	/	/	/
Law, economics, social sciences	30	28	26	19	/	28	30	29	24	31	26	23	14

Social sciences	42	36	27	10	/	/	/	/	/	/	/	/	/
Law	27	16	12	9	/	/	/	/	/	/	/	/	/
Economics	31	32	31	27	/	/	/	/	/	/	/	/	/
Mathematics, natural sciences	23	26	28	28	/	27	28	30	31	18	23	24	24
Mathematics	12	26	23	31	/	/	/	/	/	/	/	/	/
Informatics	37	38	39	32	/	/	/	/	/	/	/	/	/
Physics, Geo sciences	26	30	36	36	/	/	/	/	/	/	/	/	/
Chemistry	23	33	24	31	/	/	/	/	/	/	/	/	/
Pharmacy	17	12	12	6	/	/	/	/	/	/	/	/	/
Biology	15	15	19	15	/	/	/	/	/	/	/	/	/
Geography	36	19	17	15	/	/	/	/	/	/	/	/	/
Medicine	8	11	8	5	/	7	11	7	3	8	12	8	6
Human medicine	8	10	9	5	/	/	/	/	/	/	/	/	/
dentistry-, veterinary medicine	8	16	2	3	/	/	/	/	/	/	/	/	/
Agricultural sciences-, forestry, nutrition sciences	21	29	14	7	/	16	34	24	14	26	26	7	2
Engineering	26	30	28	25	/	27	30	27	28	19	28	31	16
Mechanical engineering	25	34	30	34	/	/	/	/	/	/	/	/	/
Electrical engineering	23	33	33	33	/	/	/	/	/	/	/	/	/
Civil engineering	35	30	22	16	/	/	/	/	/	/	/	/	
Arts	30	26	21	12	/	27	30	22	17	32	23	21	10
Teaching	14	12	13	8	/	18	19	20	8	12	9	10	8
Universities of applied sciences	/												
Economics, welfare	16	25	16	19	/	21	29	20	28	12	21	11	13
Welfare	6	20	16	13	/	/	/	/	/	/	/	/	/
Economics	25	27	17	24	/	/	/	/	/	/	/	/	/
Mathematics, natural sciences	34	40	31	26	/	34	38	31	25	34	49	33	32
Informatics	36	39	29	25	/	/	/	/	/	/	/	/	/

Agricultural sciences-, forestry, nutrition sciences	25	18	2	12	/	26	13	1	16	24	23	2	9
Engineering	21	20	21	26	/	23	21	24	28	14	11	9	19
Mechanical engineering	25	21	25	32	/	/	/	/	/	/	/	/	/
Electrical engineering	20	32	31	36	/	/	/	/	/	/	/	/	/
Civil engineering	24	20	23	14	/	/	/	/	/	/	/	/	/

*Calculation method according to HIS, without foreign students and without students in their second study
1) Gender information is only available for study groups
2) Drop- out quotas for 2008 exclusively relate to the cohorts beginning their first study in 2000 until 2007
Source: HIS study drop outs (2010)

Annex 2: Study Success in Switzerland

Duration of study and drop-out rate in Swiss higher education according to sex, cohorts 1983-1999 in %

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Drop-out rate	29,5	29,3	28,5	27,2	27,0	26,9	26,5	27,8	26,8	28,4	28,4	27,8	27,4	27,6	27,2	27,5	26,1
Men	25,6	25,6	24,4	23,8	23,9	23,7	24,0	24,1	24,0	26,4	26,2	25,5	25,3	25,8	26,6	26,5	25,5
Women	36,2	35,3	35,5	32,9	32,1	31,7	30,2	32,7	30,5	30,9	31,4	30,6	29,9	29,8	28,0	28,5	26,8
Rate of study duration	5,7	5,0	4,8	5,1	4,9	4,5	4,4	4,1	3,9	3,9	4,1	4,3	4,3	4,2	3,7	3,6	3,4
Men	5,2	4,5	4,5	4,7	4,8	4,2	4,1	3,7	3,3	3,6	3,9	4,2	4,2	3,9	3,4	3,7	3,3
Women	6,6	5,8	5,3	5,8	5,2	5,1	4,9	4,5	4,7	4,2	4,3	4,4	4,5	4,4	4,0	3,6	3,5
Study success rate	64,8	65,7	66,7	67,7	68,0	68,6	69,0	68,1	69,3	67,7	67,5	67,9	68,3	68,2	69,1	68,9	70,5
Men	69,3	69,9	71,1	71,6	71,4	72,1	72,0	72,2	72,7	69,9	69,9	70,3	70,5	70,3	70,0	69,8	71,2
Women	57,2	58,9	59,2	61,3	62,7	63,2	64,9	62,8	64,8	64,8	64,3	65,1	65,5	65,9	68,0	67,9	69,8

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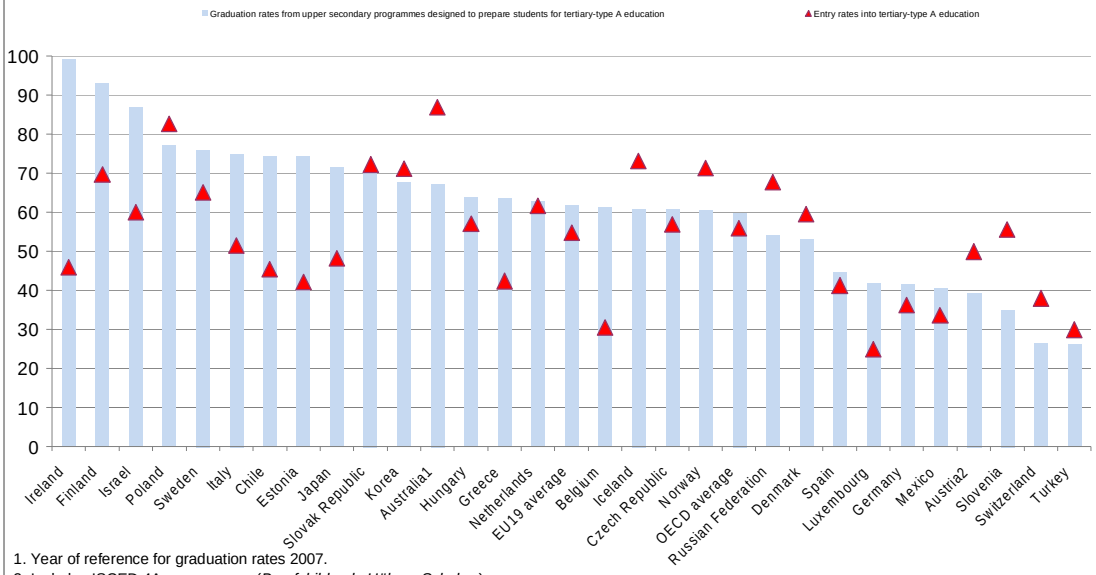
Annex 3: Basic Data for Countries Covered in the Report

The Charts below are taken from the OECD's "Education at a Glance 2010: OECD Indicators" (© OECD 2010). They show access and graduation rates in tertiary education (both type-A and type-B) in OECD countries (including the Netherlands and the 9 countries covered in this report[91]). They show also access rates for students graduating from different secondary types of schools. The full OECD indicators can be found at: http://www.oecd-ilibrary.org/education/education-at-a-glance-2010_eag-2010-en.

Chart A2.2. Access to tertiary-type A education for upper secondary graduates (2008)



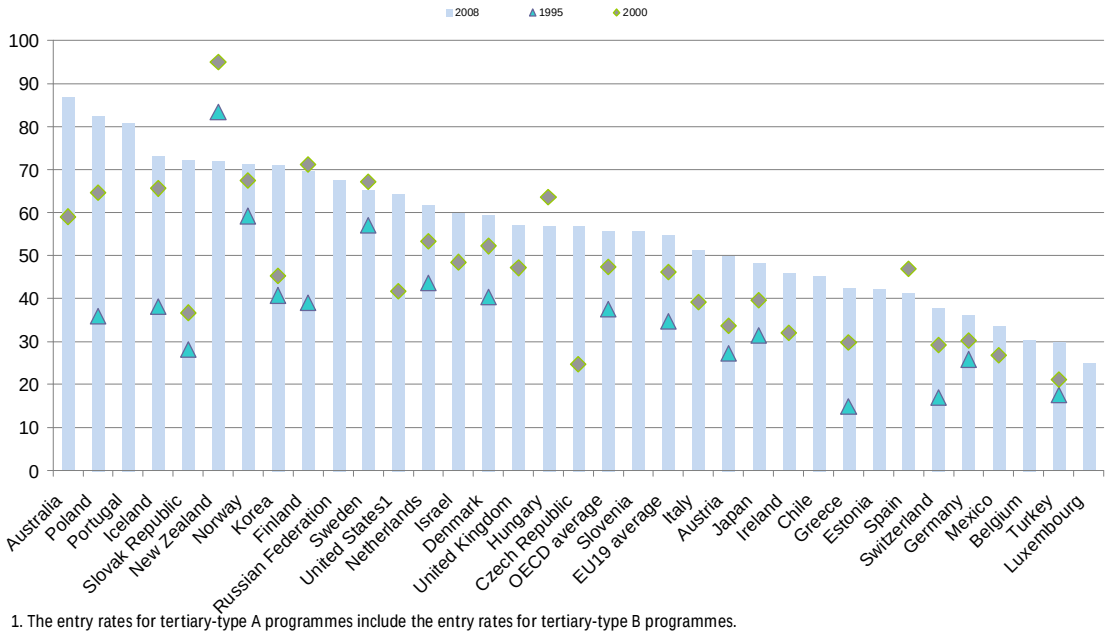
1. Year of reference for graduation rates 2007.
2. Includes ISCED 4A programmes (*Berufsbildende Höhere Schulen*).

Countries are ranked in descending order of graduation rates from upper secondary programmes designed to prepare students for tertiary-type A education in 2008.

Source: OECD. Tables A2.1 and A2.3. See Annex 3 for notes *(www.oecd.org/edu/eag2010)*.

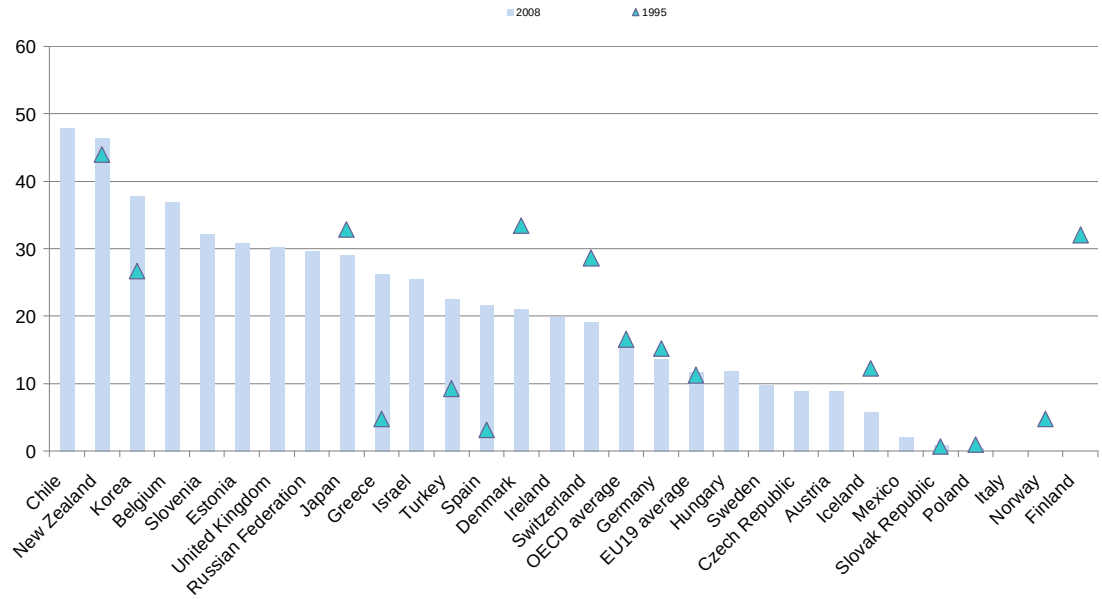
[91] However, this data does not provide information on California and England as independent systems (the data covers the U.S. and the U.K.). Reader should refer to the relevant chapters for more information

Chart A2.3. Entry rates into tertiary-type A education (1995, 2000 and 2008)



1. The entry rates for tertiary-type A programmes include the entry rates for tertiary-type B programmes.
Countries are ranked in descending order of entry rates for tertiary-type A education in 2008.
Source: OECD. Table A2.4. See Annex 3 for notes (*www.oecd.org/edu/eag2010*) .

Chart A2.4. Entry rates into tertiary-type B education (1995, 2008)

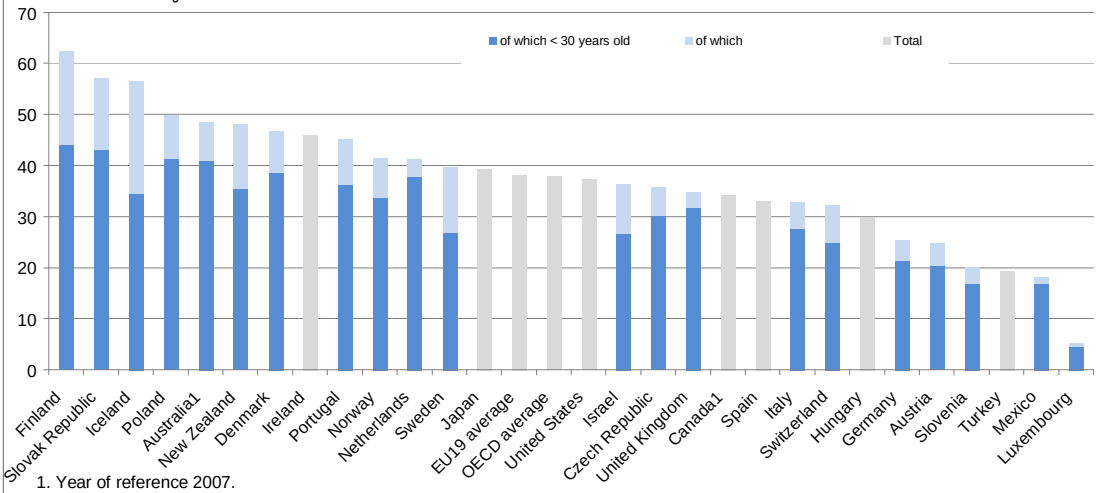


Countries are ranked in descending order of entry rates for tertiary-type B education in 2008.
Source : OECD. Table A2.4. See Annex 3 for notes (*www.oecd.org/edu/eag2010*).

Chart A3.1. Tertiary-type A graduation rates in 2008 (first-time graduation)

The chart shows the estimated percentage of a 2008 age cohort that will complete, for the first time, tertiary-type A education (based on current patterns of graduation); it also indicates how many young adults complete tertiary-type A education outside of the typical age of graduation.

Based on current patterns of graduation, on average 38% of an age cohort in 2008 is estimated to complete tertiary-type A education in the 26 OECD countries with comparable data. The proportion of students who complete tertiary-type A education outside the typical age of graduation is high in Finland, Iceland, New Zealand, Sweden and the partner country Israel, where graduation rates for students aged over 30 account for one-quarter or more of the total graduation rate.

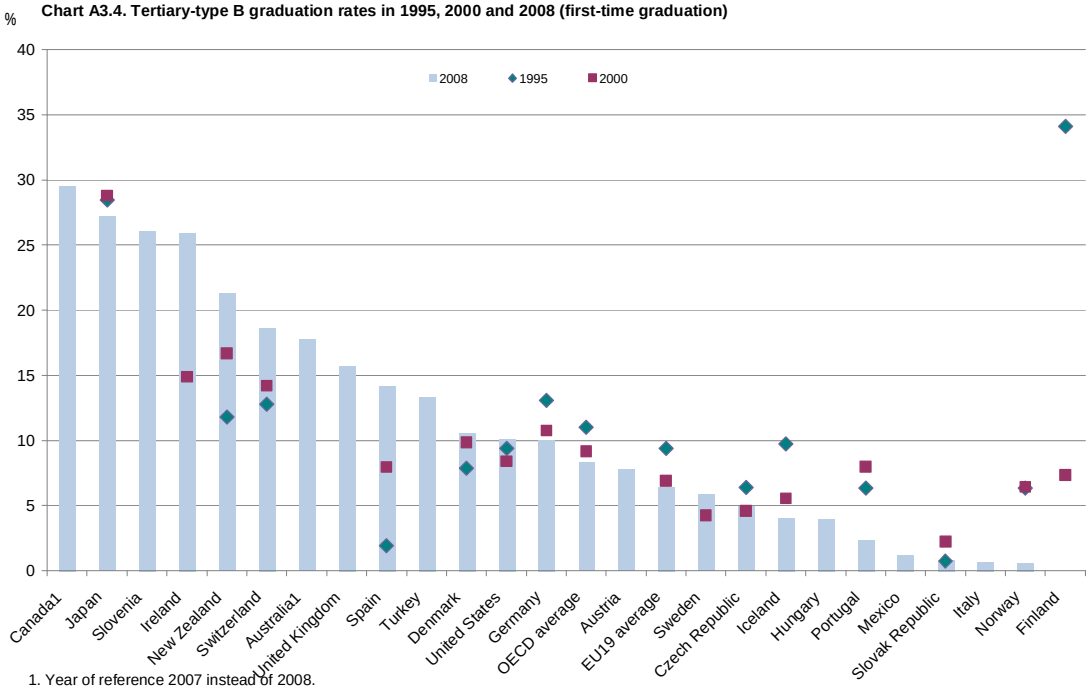


1. Year of reference 2007.

Countries are ranked in descending order of the graduation rates for tertiary-type A education in 2008.

Source: OECD. Table A3.1. See Annex 3 for notes (*www.oecd.org/edu/eag2010*).

Chart A3.4. Tertiary-type B graduation rates in 1995, 2000 and 2008 (first-time graduation)



1. Year of reference 2007 instead of 2008.

Countries are ranked in descending order of the graduation rates for tertiary-type B education in 2008.

Source: OECD. Table A3.2. See Annex 3 for notes (*www.oecd.org/edu/eag2010*).

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