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The Effect of Rankings on Student Choice and Institutional Selection¹

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Widening access and selective excellence

A dominant trend in higher education over the last centuries has been expanding participation. Initially, this was viewed as part of the organic growth of the middle class. Universities were initially attended by a small intellectual or social elite and their role was teaching universal knowledge. By the early 19th century Europe, under the influence of the scientific revolution, they became the training ground for professionals. The US Land Grant University, developed slightly later under the 1862 Morrill Act, was probably the first "mass" higher education institution; focused on teaching agriculture, science, and engineering as a response to the industrial revolution, it sought to meet the needs of a changing social class structure rather than simply concentrate on the historic core of classical studies. The American Graduate School of the early 20th century played a similar role for the next generation of scholar-researchers. The Great Depression of the 1930s and the post-WW2 era in Europe provided the impetus for rapid change and further expansion - new institutional models, notably community colleges in the US and fachhochschulen, institutes of technology and polytechnics, etc. in Europe and elsewhere, catered for a wider range of socio-economic and learner groups, educational requirements and new careers in "technical, semi-professional, and managerial occupations" (Trow, 1974, 146). Similar trends are apparent around the world.

In more recent decades, policy emphasis changed from the "priority given to 'inherited merit' in the admission process through a commitment to formal equality, towards the application of some modes of affirmative action for selected underrepresented groups" (Clancy and Goastellec, 2007, 136). In other words, in contrast in earlier decades when growing participation was arguably an unplanned by-product of expansion and massification (Parry, 2006), the priority today is to widen access to include "disadvantaged" groups hitherto outside the higher education net due to socio-economic, race, ethnic, age, gender or life circumstances. This has occurred in line with recognition of a strong correlation between educational attainment and contribution to social and economic prosperity. The OECD (2009) calculates that people who complete a university degree can look forward to significantly greater gross earnings premium over his/her lifetime compared with someone who only completes secondary school. People who complete a high-school education also tend to enjoy better health than those who quit at the minimum leaving age. And people with university degrees are more interested in politics and more trusting of other people. There are public and private benefits.

¹ Thanks to Eva Egron-Polak, Michael Bastedo and the Editors for very helpful suggestions.

Accordingly, access to higher education has changed from being a privilege of birth or talent or both (elite phase) to a right for those requiring certain qualifications (mass phase) to being an obligation for the vast majority of society and occupations (universal phase) (see Table 1 below). These "phases" are ideal types, and may occur in tandem at the institutional level or represent sequential stages at the system level. The important point, however, is that as participation expanded, socio-economic diversity has failed to materialise in the same proportion (Douthat, 2005; O'Connell et al, 2006; Gallacher, 2006; Adnett and Slack, 2007). According to Clancy (2006, 141; Vincent-Lancrin, 2008, 72), despite individual initiatives, "the more universal pattern is that the lower the prestige of the higher education institution, the less selective are the admission criteria" or, conversely, more prestigious universities operate more selective admissions policies. Indeed, despite government policy favouring widening access, selectivity has become an increasingly important brand differentiator for many HEIs in a globally competitive marketplace.

Table 1: Elite to Mass to Universal Participation

| | Elite | Mass | Universal |
|--------------|------------------------|---------------------------|--------------------------|
| % age | 0-15% | 16-50% | Over 50% |
| population | | | |
| Attitudes to | Privilege of birth or | Right for those requiring | Obligation for the |
| access | talent or both | certain qualifications | skilled working, middle |
| | | | and upper classes |
| Functions of | Shaping mind and | Transmission of skills; | Adaptation of "whole |
| higher | character of ruling | preparation for broader | population" to rapid |
| education | class; preparation for | range of technical elite | social and technological |
| | elite roles | roles | change |

Source: Adapted from Brennan, 2004, and Trow, 1974.

These trends have accelerated in recent decades under the influence of, and obsession with, global rankings. Using a variety of indicators to compare academic performance, rankings have, regardless of criticism (Hazelkorn, 2011; Rauhvargers, 2011), become a basic litmus test of quality and reputation. Their focus on world-class excellence has helped promulgate a singular model of "world-class university" as the panacea for success in the global economy. This has pushed up the status premium of elite universities, their hosting nations, and graduates from those institutions.

This is occurring at the same time that access to talent has become a major challenge for national strategies based on growing knowledge-intensive industries. Yet, many countries face demographic pressures. While the world population may be increasing, the population of more developed regions is dependent on net migration. In 2005, young people represented 13.7% of the population in developed countries but their share is expected to fall to 10.5% by 2050 (Bremner et al., 2009, 2, 6). Recruiting international students has therefore become a necessary feature of national and institutional policy and target for national trade missions. In turn, international students have become frequent users of global rankings because of their lack of local intelligence. This focus on talent also accounts, in part, for the priority given to widening participation.

As the cost of providing post-secondary education to meet societal demand rises exponentially, governments are faced with profound choices. This is especially acute in the aftermath of the global financial crisis 2008 when many public budgets are facing deficits.

Accordingly, many governments and HEIs are drawing simplistic connections between excellence and exclusiveness — with implications for participation in higher education and student choice. Thus, notwithstanding the broad trend towards universal access, counteracting tendencies are leading to more highly stratified systems.

This chapter looks at the tensions between these different agendas, and how rankings are attenuating the tension between egalitarianism and excellence through the behavior of how aspiring students choose and institutions select. Part I draws on international experience to examine how students choose, and the role that rankings play in the selection process; part ii, looks at the process from the institutional perspective and in particular focuses on the extent to which universities are becoming aggressively more selective in order to boost prestige and rank. Finally, part iii, asks what effect rankings are having on broader policy objectives of widening participation, and whether strategies of selective excellence² are intensifying reputational and social stratification.

Student Choice and Rankings³

As participation rates rise, the profile of students attending higher education has become more diverse. While some people "know from an early age that they will pursue higher education, for others the decision to attend college is not so obvious" (Brewer et al, 2002, 52). Students consider a range of issues when making choosing a college and university; this includes, for example, price and cost, course or programme, location, quality of facilities, social life and academic reputation (Bergerson, 2010). Over the years, students have adopted a stronger consumerist approach, assessing their choice of an institution and educational programmes as an opportunity-cost or the value-added. James et al. (1999, 75–76, 71) concluded that students seek to "maximise the payoff from their academic results in a largely reputational market" in "which the implicit ranking of institutional prestige is closely associated with entry scores". But students are not a homogeneous group; while ability, ambition and socioeconomic status influence choice, most "students do not possess perfect information about the stream of costs and benefits" of attending a particular institution rather than another (Brewer et al, 2002, 54; Dill and Soo, 2004).

Undergraduate students usually attend a local university using a combination of local intelligence from peers and family, local rankings, college guides or entry scores, depending upon family or financial circumstances and/or availability of institutional or subject choice. Internationally mobile undergraduate students are a more varied cohort, choosing to study abroad because of the absence of choice or opportunity at home or to enhance their educational experience as part of an exchange programme. In the latter case, decisions are likely to be made on the basis of institutional partnerships, while in the former, choices are influenced by family or institutional connections, ease of residency and/or future employment and career opportunities. Graduate students are most keenly attuned to the perceived after-sale value of their qualifications, and are likely to use rankings to inform their choice, especially if that choice is outside the country. This is especially true for international graduate students, who are a growing and strategically important percentage of students worldwide (Guruz, 2008, 161–235). They comprise almost half the international

² This term was first used by Barrow, 1996, to discussion mission differentiation and rationalisation of US higher education during the 1990s. This paper develops the concept with respect to student selection and institutional stratification as an outcome of the reputation race.

³ For a fuller discussion of these issues, see Hazelkorn, 2011, chapter 4.

students in the US, UK and Australia, and approximately one-third in France and Japan (Guruz, 2008, 172, 199). For them, reputational factors are a significant factor in their decision-making, and as such, these students have become the primary target audience and user of rankings.

Increasing participation rates, higher tuition costs and value-for-money concerns have helped transform decision-making into a more complex process for students. At the same time, the rise of the internet and new forms of communication have revolutionised access to information, stimulating growth in publications marketed under the generic title of university guide. College guides emerged to meet the growing demand for information (Hunter, 1995, 5-9). Many were published under a generic Good University Guide title and were widely used by domestic undergraduate students. Today, this kind of information is increasingly available on-line, e.g. RealUni.com, the Push Guide, Springboard, the Times Good University Guides, Apply2Uni. The rankings produced by US News & World Report Best Colleges (USNWR) were an early mover in the US domestic market, responding in the 1980s to the need for more information and greater mobility by undergraduate students. Over the last decade, the number and type of rankings has grown exponentially, satisfying a "public demand for transparency and information that institutions and government have not been able to meet on their own" (Usher and Savino, 2006, 38; Dill and Soo, 2004; Hazelkorn, 2012). As the Swedish National Agency for Higher Education said: because "students invest both time and money in their education...it is important for potential students to have access to comprehensive and relevant information about higher education before they choose" (HSV, 2009, 6).

Today, there are national ranking in more than 50 countries, and 10 global rankings – some more influential than others. In addition, there are discipline-based rankings, primarily focused on professional subjects such as medicine, law and business. Table 3 provides an overview of the breadth of rankings currently available worldwide. The choice of indicators and the weights (or percentages) given to each vary from one ranking to the next, but broadly all claim to provide information about the overall quality and performance of the university or programme of study. Global rankings are controversial because they focus primarily on research which is usually seen to be less relevant for undergraduate students. Nonetheless, in the absence of alternative international comparable information, rankings are now widely used by a variety of stakeholders, including students.

Student reaction in 2010 is discernibly different than the latter part of 20th or early years of this century when rankings existed principally in the US; national context is also important. In some countries, national accreditation or quality agencies can set a framework for understanding higher education quality, in others national and/or global rankings dominate while in others student mobility within the country or to study abroad can be significant. The widespread availability, accessibility and publicity given to electronic media and rankings have had a big influence on students and student choice (McManus-Howard, 2002, 114, 107–108).

Table 3. Examples of Rankings by Unit of Analysis and Scope

| | Institutional | Discipline/Sub- Categories | Specialist |
|---------------|---|---|--|
| International | Leiden Ranking – Centre for Science and Technology Studies (CWTS) (Netherlands) Performance Ranking of Scientific Papers for Research Universities [HEEACT] (Taiwan) Professional Ranking of World Universities (France) SCImago Institutional Rankings Academic Ranking of World Universities [ARWU] (China) QS Top University (UK) THE Thomson Reuters World University Rankings (UK) U-Multirank (European Commission) Webometrics (Spain) | Business Week MBA Economist Intelligence World MBA Rankings Financial Times MBA Wall Street Journal MBA | University Systems Ranking. Citizens and Society in the Age of Knowledge (Lisbon Council) National System Strength Rankings (QS) Green Metric World University Ranking (Universitas Indonesia) |
| National | Chamber of Commerce and Industry (Sweden) CHE- HochschulRanking (Germany) Elsevier Guide: De beste studies (Netherlands) Forbes College Rankings (US) Good University Guide (Australia) Google College Rankings (Various) Guangdong Institute | Asiaweek MBA School Rankings (2000) Brian Leiter's Law School Rankings (US) Dataquest (India) India Today (India) Le Nouvel Observateur (France) Mint (India) Outlook (India) Sharif Magazine (Iran) | Saviors of Our Cities (US) Washington Monthly College Guide (US) Washington Monthly Ranking of Community Colleges (US) |

| | of Management Science (China) • Guardian University Guide (UK) • La Republica (Italy) • Macleans On Campus (Canada) • National Accreditation Centre Rankings (Kazakhstan) • Netbig (China) • OHEC (Thailand) • Perspektywy (Poland) • Petersons College Rankings (US & Canada) • Princeton Review (US) • Sunday Times (Ireland) • Times Higher Education University Guide (UK) • University Rankings (Ukraine) • U-rank (Sweden) • USNWR College Rankings (US) • Washington Monthly (US) • Wuhan University Research Centre for Science Evaluation (China) | Toplawschools.com (US) Undergraduate American universities rankings for international students (US) USNWR Top Med Schools (US) WPROST MBA (Poland) | |
|----------|--|---|--|
| Regional | AsiaWeek – Asia's Best Universities (HongKong) CHE Excellence Ranking Graduate Programmes Ranking Iberoamericano (Pan Hispanic) | | |

Source: Adapted from Hazelkorn, 2011

While there is some variation between different studies, US analysis (Hossler and Foley, 1995; McDonough et al., 1998; Monks and Ehrenberg, 1999; Ehrenberg, 2005; Griffith and

Rask, 2007) shows rankings are especially important for high ability and second generation students, the latter from Asian (or non-US citizens) backgrounds wanting a doctoral, medical, or law degree. Spies (1978) similarly argued that above average students tend to make choices based on non-financial factors, such as reputation; these students are likely to attend higher ranked colleges even those ranked higher by just a few places. As many high-ranked institutions charge high tuition fees, this suggests high achievers are less price-sensitive or make a strong cost-benefit assessment taking account of anticipated labour market return from such qualifications.

Students using rankings are more likely to be concerned about a college's academic reputation (91%) and a school's social reputation (41%) (McDonough et al., 1998). Likewise, as distance increases so do the proportion of students placing weight on rankings (McManus-Howard, 2002, 111); similarly, students attending private universities are more likely to use rankings. This pattern is reproduced in other countries. Stella and Woodhouse (2006) also found that students from upper middle-class and upper-class families in the UK (1999), US (1999), Chile (2002) and India (2004) were most likely to avail of guides or rankings. James et al. (1999, x) similarly found Australian applicants to "research" universities were "more strongly influenced by research reputation, institutional image and prestige, and the on-campus social and cultural life than the others". In contrast, low-income and first-in-family students are least likely to consider rankings important, because they are likely to enrol in lower status or other non-selective institutions which are not usually ranked (Clarke, 2007, 39). No significant gender differences were noted.

Students taking professional-focused programmes are more likely to use rankings in contrast to students on traditional academic programmes. US students pursuing engineering, business or science programmes, which are among the most attractive fields of study for international students (IIE, 2007), are more likely to refer to rankings than arts, humanities or social science students (HERI, 2007). This correlation is replicated in a UK study, which found "positive impact [for] home and particularly overseas mechanical engineering students but weaker and inconsistent links with nursing and architecture. There is some positive association between rankings and computer science and chemistry especially "when a university rank rises than when it falls" (Roberts and Thompson, 2007, 26).

International students are especially receptive to rankings. A 2008 UK study found that overseas students, especially engineering students, were interested in quality rankings (Soo and Elliot, 2008, 14). Roughly one third of international students to Sweden in 2007 and 2008 used rankings as a vital source of information; this was especially true for Asian and Latin American students (HSV, 2009, 39). Similarly, Chinese, Japanese and Korean students enrolled on graduate programmes were heavily influenced by Canada's reputation for high quality education; the findings were particularly significant for engineering and business students (Chen, 2007, 771). While postgraduate students are more concerned about institutional position than undergraduate students, both rate institutional reputation very valuable for career opportunities (i-graduate, 2010).

That reputational characteristics, such as rankings, influence student choice in explicit and implicit ways has often been explained as being symptomatic of a particular culture. However, this practice is both widespread and growing; academic reputation is now seen to be the "most relevant student-choice factor" (Simões and Soares, 2010, 385). Attendance at select(ive) universities and colleges is seen to "confer extra economic advantages to

students, in the form of higher early career earnings and higher probabilities of being admitted to the best graduate and professional schools" (Ehrenberg, 2004; Clarke, 2007; Hossler et al, 1989), and indirect benefits, e.g. connections to elites and future decision makers, membership of "the right" social and golf clubs and schools, etc. An Irish journalist asked if "it [was] just inertia or snobbery that makes Google hire principally from Trinity [College Dublin], UCC [University College Cork] and UCD [University College Dublin]?"(Keenan, 2010). A similar experience was recorded in Germany; rankings are said to provide a "valuable tool for many companies both in the field of recruiting and research" (Employer organization, Germany). US law firms regularly use *USNWR* to "determine the threshold for interviews" (Espeland and Sauder, 2007, 19). A UK study similarly found 25% of graduate recruiters interviewed "cited league tables as their main source of information about quality and standards" (HEFCE, 2006, 80, 87–92; Shepherd, 2005), with one UK job applicant being told she must "hold a degree from a *THE-QS* top 100 university ranked at number 33 or higher (sic)" (Hazelkorn, 2011, 148).

Institutional Selection

In addition to bringing revenue, students can add to the prestige of an institution; according to Brewer et al (2002, 60) prestige-seeking institutions often "place more value on a student's potential contribution to prestige than it does on that student's direct contribution to revenues". Student selectively has become a key ingredient of the so-called reputation race (Lucido and Thacker, 2011). As the traditional student market declines relative to non-traditional student groups and as competition for high-achieving and internationally mobile students intensifies, universities worldwide have adopted more professional and aggressive approaches to student recruitment and selection – euphemistically called "enrolment management" (Quirk, 2005). Many have refocused or revised admissions policies and procedures, and expanded marketing and publicity activities into year-round professional offices with rapidly expanding budgets and staff. An Australian Vice-chancellor of a pre-1900 research-intensive university commented:

...given the importance of the international market, the university will be spending more time and money on marketing overseas, especially aimed at postgraduate students. They will be sending teams to the various student recruitment fairs in a way which they have not done before (Hazelkorn, 2011, 104).

Given the mounting evidence that rankings can influence student choice, it's not surprising that rankings are an important ingredient of this strategy.

According to a 2006 survey of university presidents worldwide, almost 50% used their rank for publicity purposes, and 63% said they were particularly advantageous for student recruitment (Hazelkorn, 2011, 104). In all cases, HE leaders admit highlighting (positive) results on their webpage, in speeches, at new faculty or student orientation or international meetings. This compares favourably with a recent survey by the US National Association for College Admissions Counselling (NACAC, 2010, 2-3) which found 62 per cent of its members spent at least some time discussing rankings with high school students and their families, with 16.5% making a copy of rankings available for students' use. This emphasis on rankings is not surprising given the evidence that students can be and are strongly influenced by them. Using rankings to publicise or entice students from more diverse geographical, social, demographic, racial or international backgrounds is an effective and arguably essential way

to expand the potential customer base; reliance on a "narrow segment of the student market is risky" even for the most prestigious universities (Brewer, 2002, 62).

Accordingly, universities in all parts of the world have been adjusting admissions policies to enhance the selectivity of their student entry cohort. This is because many rankings – both national and global – use student entry data as a proxy for student achievement on the basic assumption that a roughly similar range of performance can be expected throughout their higher education career. Conversely, college entry scores, preparatory examinations or secondary school scores as well as the applicant rejection rates have been shown to affect reputation and prestige (Sweitzer and Volkwein, 2009) as students and their parents assume higher entry requirements or the level of selectivity into a university or onto a programme of study is equivalent to better academic quality. Institutions gain prestige if they can be more selective.

Studies have repeatedly shown a strong correlation between institutional reputation, rankings and student application behaviour (Monks and Ehrenberg, 1999, 10; Ehrenberg, 2001, 26). According to Bastedo and Bowman (2010, 177), "assessments of reputation are substantially influenced by (a) overall rankings, (b) tier [reputational] level, and (c) changes in tier level". Slight changes in an institution's rank can "cause perceptible ebbs and flows in the number and quality of applicants" (Dichev, 2001, 238; Sauder and Lancaster, 2006, 116), especially by international students. Bowman and Bastedo (2009, 18) argue that media reportage of rankings - especially when the results of rankings are placed on the "front page" - can also exert a powerful effect on admissions: "being labelled as a 'top-tier' institution carries substantial weight, much more so than moving up a single spot within the top tier" (Meredith, 2004). An institution whose rank improves receives more applicants and, with the number of student places remaining constant, can accept a smaller percentage of applicants and hence increase its selectivity, whereas a less favourable rank might force an institution to accept a greater percentage of applicants. The resulting entering class is of lower quality, as measured by its average entry scores (Monks and Ehrenberg, 1999, 10). The circle repeats itself, leading to a downward spiral in terms of ranking position.

HEIs have also sought to influence the number of applicants it receives through aggressive publicity or marketing efforts while still retaining the same number of available places; in this way the actual percentage of students accepted, known as the selectivity index, rises (Corley and Gioia, 2000, 325–326; Hoover, 2010; Mahoney, 2006).

The algorithm used by *U.S. News* puts a heavy emphasis on college grade-point averages and Law School Admission Test scores. Together, those two numbers determine about 22 percent of a school's ranking....In short, students' academic credentials determine close to a quarter of a school's rank — the largest factor that schools can directly control (Segal, 2011).

HEIs may also limit class or cohort size because "a larger class means dipping further down in a school's applicant pool and thereby reducing average student quality" (Winston, 2000, 10). Others might admit students on a probationary or part-time basis or establish associated colleges so that these students' relatively lower entry scores will not be included in official data returns (Ehrenberg, 2001, 7). Institutions with lower entry scores are often seen as reducing their appeal to high achieving students, in turn affecting overall student

quality. Chapman University, California, is an interesting albeit not unique example of this phenomenon.

In less than 20 years, Chapman has come to top the "selectivity rank" among master's level institutions in the West, according to *U.S. News*. The minimum SAT score is now 1050. It has 45 endowed chairs. The endowment has grown from \$20-million to \$250-million. When *U.S. News* expanded the universe of colleges it ranks in 1993 by adding regional institutions, Chapman was in the second quartile of all such institutions in the West, and its academic reputation was ranked 90th among its 112 peers. It now [2007] ranks 11th over all among master's level institutions in the West, and its academic reputation is tied for 14th highest in that group (Farrell and van der Werf, 2007).

Another US study found that between 1989 and 2007, the share of entering freshmen with SAT verbal scores above 700 rose from 33% to 78% at Yale University, from 24 to 67% at Stanford University, from 9 to 54% at the University of Pennsylvania, and from 18 to 68% at the University of Chicago (Schmidt, 2008). This translates into lower acceptance rates: "Stanford, for example, received 34,348 applications and accepted only 7.07% of those applicants. The rate was 26 percent a quarter-century ago and 62 percent 50 years ago (sic) (Editor, 2011; Steinberg, 2011). While there has been a significant expansion in participation rates in the interim, the change in the selectivity index suggests more is going on than simply more applications.

Examples are not confined to the US, with evidence suggesting the practice is widespread even in open recruitment environments, such as operate in many European countries. In these circumstances, universities have less autonomy with respect to setting individual entry criteria or selecting students, however, it is possible to affect student entry by adjusting supply and demand, e.g. offering fewer places and thereby restricting access to a smaller number of applicants. According to Roberts and Thompson (2007, 5), there can be a strong correlation of 0.8 between rankings and the relative admissions quality of students, to the extent that "highly ranked universities get better students". Universities which improve their rank by ten or more places are likely to experience a rise in the academic quality of students admitted in the following cycle. University prestige is also a key influencing factor in Japan; 25% of Japanese universities admit to using selectivity criteria in order to boost their chances of achieving "top level" status in national rankings (Yonezawa et al., 2009, 133; Turner et al., 2000, 402).

At the graduate level there is less secrecy because the entry criteria are more likely to be assessed on an individual basis and related to the prospective programme of study. It is not uncommon for HEIs to use the ranking of the undergraduate institution as the basis to assess the applicant's suitability, especially for international students. Private and for-profit institutions can more easily adapt their practices than public institutions, which are for obvious reasons open to scrutiny. In the US there has been criticism of the use of standardised tests, such as the SAT, as failing to recognise the diversity of student abilities; in response, many smaller, mostly liberal arts, colleges have decided to abandon their use as the determining factor. The question is whether that decision is based more on a desire to recognise a variety of talents and widen access or to make the admission process more opaque (Hazelkorn, 2011, 61; see also Robinson and Monks, 2002; McDermott, 2008; Palmer et al, 2011).

Tuition fees can play a similar role similar; they can provide a signal of selectivity on the basis that a higher fee is often perceived as being correlated with better quality. Bowman and Bastedo (2009, 434) claim that "colleges have increased tuition substantially in their efforts to become elite institutions", because "lowering one's tuition relative to one's competitors may be perceived as signalling lower quality". The debate in the UK over what is known as "top-up" or differentiated fees is a case in point; the government set a ceiling of €9,000 but ultimately the majority of universities sanctioned this fee level as a way of positioning themselves via-a-vis competitors and ensure world-class credentials (BBC, 2011). Universities may seek to affect "less visible price discounts", e.g. grants, scholarships or loans, "in an attempt to attract additional students from their declining applicant pool" (Monks and Ehrenberg, 1999, 49). In these instances, financial aid is used "strategically" as a means of attracting high-calibre students; the effect is to skew the allocation of financial aid away from students with the greatest need to using merit aid to "purchase talent" (Quirk, 2005; Lovett, 2005; Brewer et al, 2002, 63) - running counter to progressive funding/taxation models. The aforementioned UK tuition policy has been deliberately structured to encourage a bidding war amongst the most elite universities for the most able students who look to benefit from "special deals" (Grimston, 2011; Morgan, 2011).

For students, the downside is being attracted to a university because of the largesse of its merit scholarship only to find the university offered more scholarships than it planned to renew the following year. Merit scholarship programmes can help universities buy "smarter students to enhance their cachet and rise in the rankings" (Segal, 2011) but there can also be a snag. As universities seek to offer an "appealing product" they need to either raise their tuition fees and/or have access to additional revenue sources such as philanthropy and endowment income, to pay for enhanced facilities (Tapper and Filippakou, 2009, 61). As tuition costs rise, students also begin to weigh up the added value and may opt to trade prestige for cost by choosing to attend a public or lower fee institution (Brewer et al., 2001, 64-66; Reisz, 2011) – in the process becoming more consumerist and demanding.

Does a low or falling ranking decrease student demand? A Canadian study found that "smaller, primarily undergraduate institutions suffer from a low placing in the annual national university rankings but larger universities do not" (Drewes and Michael, 2006, 783). Roberts and Thompson (2007, 5) suggest that other factors, such as institutional performance relative to peers, may be at play; for example, the performance of local and direct competitors may have a great impact depending upon how each institution performs. They also suggest a low rank can encourage institutions to take action to positively affect their entry level; UK universities which fell by ten places or more "managed to increase the grade average of their *next* intake" (author's emphasis). Because student selectivity is often a consequence of supply and demand factors, institutions can influence student entry scores by reducing the total number of students accepted or sub-dividing programmes into a small niche-programmes each with smaller student intake.

Does selective excellence widen inequality?

The intensification of competition between nations and their universities for a piece of the global marketplace has accelerated the battle for (top) talent. This trend has been reinforced by the strong correlation between higher qualifications and career opportunities/lifestyle and the creation of a single global higher education market which has eased and encouraged international talent mobility. While the boundary between elite and non-elite universities was heretofore known amongst a few people, today, this is no longer

the case. In the era of massification and globalised information, the privileges associated with elite credentials are now widely acknowledged. Yet, people's access to what are called "positional goods", such as elite credentials, remains restricted and is "determined in accord not with absolute but relative real income" (Hirsch, 1997, 6). This has heightened the advantages associated with such degrees, widening the gap between winners and losers. In the process, gate-keeper status has been conferred on elite educational institutions because they are perceived as having the capability to boost one's status relative to others. This is especially acute as competition for the best jobs and careers strengthens, and even people with advanced qualifications "struggle to achieve the trappings of the middle classes" (Brown et al, 2011, 11). Rather than being innocent victims, universities and their faculty have become active participants in the construction of a hierarchically differentiated status system (Bastedo and Bowman, 2011, 10).

While the US has had lengthier exposure to the stratification of higher education and its products (Barrow, 1996), international experience is catching up - fast.

We're very selective, but we need to become even more selective...Our SAT's are rising, but not as fast as I'd like....We're going to build a new student center, upgrade the dorms, and use the rest to attract some faculty and student stars...That's what our competitors are doing. We can't afford not to (Quoted in Reich, 2000).

Those who are looking at their institution on an international scale are fully aware of the potential of these ratings, rankings, evaluations to attract students, to attract faculty and so on and it is also commented in the newspapers, in comments in the media and so on (Professor of Chemistry, public post-1945 research regional university, Germany) (Quoted in Hazelkorn, 2011, 145).

Higher education has always been competitive, but "rankings make perceptions of prestige and quality explicit" (Freid, 2005, 17, 89). Indicators commonly measure the quality of students: entry level, acceptance/selectivity ratio, completion/graduation rates and employability of graduates; quality of faculty and PhD students; research capacity and infrastructure; quality of facilities; and alumni contributions, which, in turn, influence an institution's financial resources, per-student expenditures, faculty/student ratios, faculty compensations, etc. This methodology benefits older well-endowed and/or private universities compared with newer public institutions (Hazelkorn, 2011, 81).

As the demand for higher education continues to grow in response to demographic and policy initiatives aimed at widening access it does not necessarily correspond with decreasing inequality (Vincent-Lancrin, 2008, 71-76). In fact, evidence suggests the "best" universities are the worst at widening participation (see Editorial, 2011). The discussion above illustrates how universities are adopting practices which arguably accentuate a socially-uniform student cohort on the back of competitive and comparative processes, such as rankings, which reward institutions becoming more elite. In addition to changes in admissions policies, some universities are either abandoning access programmes or establishing associate colleges so those graduation rates do not affect the overall outcome. To balance tensions between being a mass or publicly-funded university with greater prestige, some universities in the US and Europe are creating small honours or liberal arts colleges within the larger institution (Brewer et al 2002, 65; van der Wende, 2011). For

example, the new College of Humanities, at University College London, aims to "appeal to really discriminating students" (Burrows, 2011) and rival Oxford and Cambridge. This also enables institutions to be selective without having to provide the level of funding that might otherwise be expected (Brewer, 2002, 65-66).

Even governments are getting in on act. Because few countries can afford the estimated €2bn annually per institution required for a place among the world's top 20 without sacrificing other policy objectives, many governments are questioning their commitment to mass/universal higher education or asking whether their institutions are elite or selective enough. France, Germany, Russia, Spain, China, South Korea, Taiwan, Malaysia, Finland, India, Japan, Singapore, Vietnam and Latvia – among many other countries – have launched "excellence" initiatives to create what are euphemistically called "world-class universities". Individual US states (e.g. Texas and Kentucky) have also sought to build/boost flagship universities, elevating them to Tier One status, a reference to US News & World Report College Rankings. The aim is to encourage greater vertical or hierarchical (reputational) differentiation between institutions, with much greater distinction between research (elite) universities and teaching (mass) HEIs. This trend towards selective excellence is evident in other ways. The Danish (2010) and Dutch (2008) governments have raised immigration requirements to people with a qualification from the top-ranked universities (Beerkens, 2009; Henriksen and Jessen, 2010). Financial rating agencies, such as Moody's or Standards and Poors, also study application outcomes: "If an institution is not growing and improving selectivity, that would probably be more of a concern than it would have been a decade ago..." (Hoover, 2010). This is because selectivity is often used as an indicator of the capacity to attract wealthy high fee paying students or philanthropists/investors or to spawn wellplaced and influential graduates/alumni.

In these circumstances, student behaviour is rational and smart (Freid, 2005, 16). A US survey saw a 56.2% increase since 1995 amongst students who said rankings are "very important" when deciding where to go to college, with the greatest increase amongst students attending private universities and by Asian students (HERI, 2007). These results are replicated around the world, with the sharpest results for high achievers and internationally mobile graduate students. But all students are especially sensitive to the publicity surrounding rankings. While rankings may not be the primary source of information, they do inform opinion, and are often the hidden hand shaping perceptions of quality and reputation.

The reputation race is perverting policy objectives for widening access while staying close to the underpinning philosophy based on a vision of a meritocracy — that ability should supplant privilege. Yet, inequality can manifest itself in several ways and is often the "result of two combined influences, namely attainment at school and the decisions taken at each transitional point in education" (Vincent-Lancrin, 2009, 71). Tertiary entrance scores and secondary school performance correlate with socio-economic status (Palmer et al, 2011); Irish evidence shows students attending private secondary schools are most likely to attend the most prestigious university programmes (McGuire and Flynn, 2011).

This chapter has looked at an additional factor – how rankings correlate reputation with indicators that reinforce socio-economic privilege, using student entry levels (Hazelkorn, 2011, 59-62).

More and more schools define themselves as "selective" in an effort to boost their position and prestige, and fewer and fewer offer the kind of admissions process that provides real opportunities for poorer students. As a result, those disadvantaged students who do attend college are less and less likely to find themselves at four-year schools (Douthat, 2005).

The question is not whether opportunities for high-achieving students should be "eclipsed" to serve "the needs of an increasingly diverse student population" (Bastedo and Gumport, 2003, 355), but rather the extent to which rankings, wittingly or unwittingly, drive behaviour and reinforce social selectivity by institutional rank. Because of the emphasis on achieving "world-class" status, some governments and universities have told this author they worry the latter may not be elite enough or have too many students thereby threatening their status. Thus, the objective is to recruit "students who will be 'assets' in terms of maintaining and enhancing ... [a university's] position in the rankings" (Clarke, 2007, p. 38). The issue is not simply about widening access, per se, but rather the degree of increasing stratification within the system; in other words, not simply "access to what" but "who gets what".

Institutional hierarchy has tended to be ignored in discussions about widening access, "as if all institutions were equivalent and interchangeable, obscuring the fit between the social hierarchy of students and the producer hierarchy of institutions" (Marginson, 2004, 234; Schindler and Reimer, 2011). But, rankings are exposing that myth while promulgating deeper inequalities, arguably exchanging traditional inequalities based on birth and privilege for "new inequalities" based upon the assumptive status of a small elite group of "worldclass universities" and their graduates. Since there is "no absolute measure of competency...sufficient for success", performance is compared relative to other candidates (Bastedo and Jaquette, 2011, 320). And because, national status within the world-order has become a by-product of university rankings, government policy is balanced precariously between pursuit of excellence and pursuit of equity. At a time when the demand for higher education is rocketing, research suggests growing hierarchical differentiation and social stratification between privatised, selective, research, elite universities and public, recruiting, teaching, mass HEIs, educational systems – and their respective nations. The effect is to reward a "narrow band of students" (Lucido and Thacker, 2011, 2) attending a select few "world-class" or flagship universities rather than nurture all talent.

References

Adnett, N. and Slack, K. (2007) "Are There Economic Incentives for Non-Traditional Students to Enter HE? The Labour Market as a Barrier to Widening Participation", *Higher Education Quarterly*, 61:23-36.

Barrow, C. W. (1996) "The strategy of selective excellence: Redesigning higher education for global competition in a postindustrial society," *Higher Education*, 31(4):447-469.

Bastedo, M.N. and N.A. Bowman (2010) "The *U.S. News and World Repor*t College Rankings: Modelling Institutional Effects on Organizational Reputation", *American Journal of Education*, 116(2): 163–183.

Bastedo, M. N. and Gumport, P. J. (2003) "Access to what? Mission differentiation and academic stratification in U.S. public higher education", *Higher Education*, 46:341-359.

Bastedo, M. N. and Jaquette, O. (2011) "Running in Place: Low-Income Students and the Dynamics of Higher Education Stratification", *Educational Evaluation and Policy Analysis*, 33:318-339.

BBC (2011) "University tuition fees list", 20 July, Accessed 31 July 2011, from http://www.bbc.co.uk/news/education-12880840

Beerkens, E. (2009) "What if I Graduated from Amherst or ENS de Lyon ...", *Beerkens' Blog: Higher Education, Science and Innovation from a Global Perspective*, 6 January, Accessed 4 June 2010, from http://blog.beerkens.info/index.php/2009/01/what-if-i-graduated-from-amherst-or-ens-de-lyon/

Bergerson, A. A. (2010) "College Choice and Access to College: Moving Policy, Research and Practice to the 21st Century", ASHE Higher Education Report, 35(4).

Bowman, N.A. and M.N. Bastedo (2009) "Getting on the Front Page: Organisational Reputation, Status Signals and the Impact of *U.S. News and World Report* on Student Decisions", *Research in Higher Education*, 50(5): 415-436.

Bremner, J., C. Haub, M. Lee, M. Mather and E. Zuehlke (2009) *World Population Prospects: Key Findings From PRB's 2009 World Population Data Sheet*, Population Reference Bureau, United Nations Washington, DC, Accessed 26 April 2010, From http://www.Prb.Org/Pdf09/64.3highlights.Pdf

Brennan, John (2004) "The social role of the contemporary university: contradictions, boundaries and change", in *Ten Years On. Changing higher education in a changing world*, Open University, Milton Keynes: Centre for Higher Education Research and Information, 22-26. Accessed 30 July 2011, from http://www.open.ac.uk/cheri/documents/ten-years-on.pdf

Brewer, D. J., Gates, C., A. and Goldman, S. M. (2001) *In Pursuit Of Prestige; Strategy and Competition in U.S. Higher Education*, New Brunswick and London: Transaction Publishers.

Brown, P., Lauder, H. and Ashton, D. (2011) *The Global Auction,* Oxford and New York: Oxford University Press.

Chen, L.H. (2007) "Choosing Canadian Graduate Schools from Afar: East Asian Students' Perspectives", *Higher Education*, 54(5): 759–780.

Clancy, P. and Goastellec, G. L. (2007) "Exploring Access and Equity in Higher Education: Policy and Performance in a Comparative Perspective", *Higher Education Quarterly*, 61: 136-154.

Clarke, M. (2007) "The Impact of Higher Education Rankings on Student Access, Choice, and Opportunity", *College and University Ranking Systems – Global Perspectives American Challenges*, Washington, DC: Institute of Higher Education Policy, 35–49.

Corley, K.G. and D.A. Gioia (2000) "The Rankings Game: Managing Business School Reputation", *Corporate Reputation Review*, 3(4): 319–333.

Dichev, I. (2001) "News or Noise? Estimating the Noise in the U.S. News University Rankings", *Research in Higher Education*, 42(3): 237–266.

Dill D. and M. Soo (2004) Transparency and Quality in Higher Education Markets, *Markets in Higher Education*, 6: 61-85.

Douthat, R. (2005) "Does Meritocracy Work?", *The Atlantic Monthly*, November, Accessed 30 July 2011, From

Https://Facultystaff.Richmond.Edu/~Bmayes/Pdf/Meritocracy Bestclass\$Buy AM.Pdfhttps://Facultystaff.Richmond.Edu/~Bmayes/Pdf/Meritocracy Bestclass\$Buy AM.Pdf

Drewes, T. and M. Michael (2006) "How Do Students Choose a University? An Analysis of Applications to Universities in Ontario", *Canada Research in Higher Education*, 47(7).

Editor (2011) "Why You Were Rejected", *New York Times*, 31 March, Accessed 30 July 2011, from http://www.nytimes.com/roomfordebate/2011/03/31/the-college-acceptance-rate-racket

Editorial (2011) "Higher education: degrees of division", *The Guardian*; Accessed 3 December 2011, from http://www.guardian.co.uk/education/2011/oct/05/higher-education-degrees-division?newsfeed=true

Ehrenberg, R.G. (2001) "Reaching for the Brass Ring: How the *U.S. News & World Report* Rankings Shape the Competitive Environment in U.S. Higher Education", *The Review of Higher Education*, 226(2).

Ehrenberg, R.G. (2004) "Econometric Studies of Higher Education", *Journal of Econometrics*, 121: 19–37.

Ehrenberg, R.G. (2005) "Method or Madness? Inside the *U.S. News & World Report* College Rankings", Fall, *Journal of College Admission*.

Farrell, E. and M. van der Werf (2007) "Playing the Rankings Game", Chronicle of Higher Education, 25 May, Accessed 1 June 2010, from http://chronicle.com/article/Playing-the-Rankings-Game/4451

Freid, L. (2005) Reputation and Prestige in American Research Universities: An Exploration of the History of Rankings and the Increasing Importance of Student Selectivity in Perceptions of Quality in Higher Education, Dissertation in Higher Education Management, University of Pennsylvania.

Gallacher, J. (2006) "Widening Access or Differentiation and Stratification in Higher Education in Scotland", *Higher Education Quarterly*, 60(4): 349-369.

Griffith, A. and K. Rask (2007) "The Influence of the *US News and World Report* Collegiate Rankings on the Matriculation Decision of High-Ability Students: 1995–2004", *Economics of Education Review*, 26: 244–255.

Grimston, J. (2011) "Universities cut fees for top students", The Sunday Times, 31 July, 22.

Guruz, K. (2008) Higher Education and International Student Mobility in the Global Knowledge Economy, SUNY Press, Albany.

Hazelkorn, E. (2009) "Higher Education Rankings and the Global 'Battle for Talent'", in Bhandari, R. & Laughlin, S. (Ed.) *Higher Education on the Move: New Developments in Global Mobility*. New York, Institute of International Education.

Hazelkorn, E. (2011) *Rankings and the Reshaping of Higher Education: The Battle for World Class Excellence,* Houndmills, Basingstoke: Palgrave Macmillan.

Hazelkorn, E. (2012) "European 'transparency instruments': Driving the Modernisation of European Higher Education", in P. Scott, A. Curqj, L. Vlasceanu and L. Wilson (Eds.),

European Higher Education at the crossroads: between the Bologna Process and National Reforms, vol. 1, Dordrecht: Springer.

Henriksen, M. and C. K. Jessen (2010) "VKO i ny strid om pointsystem", Berlingske.

HERI (2007) "College Rankings and College Choice. How Important are College Rankings in Students' College Choice Process?", *Research Brief*, Higher Education Research Institute, UCLA, Accessed 14 July 2010, from http://www.heri.ucla.edu/PDFs/pubs/briefs/brief-081707-CollegeRankings.pdf

Hirsch, F. (1997) The Social Limits to Growth, London: Routledge and Kegan Paul.

Hoover, E. (2010) "Application Inflation", *Chronicle of Higher Education*, 5 November; Accessed 30 July 2011, from http://chronicle.com/article/Application-
http://chronicle.com/article/Application-
http://chronicle.com/article/Application-
http://chronicle.com/article/Application-
https://chronicle.com/article/Application-
<a href="https://chronicle.com/arti

Hossler, D. and E.M. Foley (1995) "Reducing the Noise in the College Choice Process: The Use of College Guidebooks and Ratings", in R.D. Walleri and M.K. Moss (Eds.) *Evaluating and Responding to College Guidebooks and Rankings*, San Francisco: Jossey-Bass Publishers, 21–30.

HSV (2009) Ranking of Universities and Higher Education Institutions for Student Information Purposes, Högskoleverket – the Swedish National Agency for Higher Education, Accessed 23 June 2010, from

http://www.hsv.se/aboutus/publications/reports/reports/2009/rankingofuniversitiesandhig hereducationinstitutionsforstudentinformationpurposes.5.3127d9ec12496ad89237ffe1255. html

Hunter, B. (1995) "College Guidebooks: Background and Development", in R.D. Walleri and M.K. Moss (Eds.) *Evaluating and Responding to College Guidebooks and Rankings*, San Francisco: Jossey-Bass Publishers, 5–12.

i-Graduate, International Graduate Insight Group, Accessed 23 June 2010, from http://www.i-graduate.org/

IIE (2007) "Table 16: International Students by Field of Study, 2005/06 and 2006/07", *Open Doors. Report on International Education Exchange*, New York: Institute of International Education, Accessed 13 April 2010, from http://opendoors.iienetwork.org/?p=113124

James, R., R. Baldwin and C. McInnis (1999) Which University? The Factors Influencing the Choices of Prospective Undergraduates, Department of Education, Training and Youth Affairs, Australia, Accessed 20 January 2010, from

http://www.dest.gov.au/archive/highered/eippubs/99-3/whichuni.pdf

Lovett, C. (2005) "Point of View: The Perils of Pursuing Prestige", *Chronicle of Higher Education*, 21 January.

Lucido, J. and Thacker, L. (2011) *The Case for Change in College Admissions,* USC Center for Enrolment Research, Policy, and Practice and The Education Conservancy, US; Accessed 3 December 2011, from

http://www.usc.edu/programs/cerpp/docs/CERPP ConferenceReport FINALforprint.pdf

Mahoney, J. L. (2006) "Perception of the Profession is a Cause for Concern", *Journal of College Admissions*, 170; Accessed 30 July 2011, from

http://www.nacacnet.org/CareerDevelopment/CareerOpportunites/Documents/perception.pdf

McDermott, A.B. (2008) "Surviving Without the SAT", Chronicle of Higher Education, 25 September, Accessed 27 March 2010, from http://chronicle.com/article/Surviving-Without-the-SAT/18874/

McDonough, P.M., A.L. Antonio, M. Walpole and L.X. Perez (1998) "College Rankings: Democratized College Knowledge for Whom?", *Research in Higher Education*, 39(5): 513–537.

McGuire, P. and S. Flynn (2011) "Glenstal and Gonzaga tops lists as private schools tighten grip," *The Irish Times*, 22 November 2011.

McManus-Howard, M. (2002) Student Use of Rankings in National Magazines in the College Decision-Making Process, EdD Thesis, University of Tennessee, Knoxville.

Marginson, S. (2004) "Competition and Markets in Higher Education: a 'glonacal' analysis", *Policy Futures in Education*, 2(2):175-244.

Meredith, M. (2004) "Why Do Universities Compete in the Ratings Game? An Empirical Analysis of the Effects of the *U.S. News & World Report* College Rankings", *Research in Higher Education*, 45(5): 443–461.

Monks, J. and R.G. Ehrenberg (1999) "The Impact of *U.S. News and World Report* College Rankings on Admissions Outcomes and Pricing Policies at Selective Private Institutions", *Working Paper Series*, Cambridge, MA: National Bureau of Economic Research.

Morgan, J. (2011) "AAB policy will hand more resources to the social elite", *Times Higher Education*; Accessed 3 December 2011, from

http://www.timeshighereducation.co.uk/story.asp?sectioncode=26&storycode=417017&c= <u>1</u>

NACAC (2010) How NACAC Members Use U.S. News & World Report Rankings, Second in a Three-Part Series, Arlington, VA: National Association for College Admissions Counselling.

O'Connell, P. J., McCoy, S. and Clancy, D. (2006) "Who Went to College? Socio-Economic Inequality in Entry to Higher Education in the Republic of Ireland in 2004", *Higher Education Quarterly*, 60: 312-332.

OECD (2009) Education at a Glance, Paris.

Palmer, N., E. Bexley and R. James (2011) "Selection and Participation in Higher Education. University selection in support of student success and diversity of participation", University of Melbourne, Australia: Centre for the Study of Higher Education.

Parry, G. (2006) "Policy-Participation Trajectories in English Higher Education", *Higher Education Quarterly*, 60: 392-412.

Quirk, M. (2005) "The Best Class Money Can Buy", The Atlantic Monthly, November; Accessed 30 July 2011, from

https://facultystaff.richmond.edu/~bmayes/pdf/Meritocracy_BestClass\$Buy_AM.pdf

Rauhvargers, A. (2011) *Global University Rankings and their Impact,* Brussels: European University Association.

Reich, R. B. (2000) "How Selective Colleges Heighten Inequality", *Chronicle of Higher Education*, September 15.

Reisz, M. (2011) "Fees hike may see students trade prestige for lower-priced courses", *Times Higher Education*, 28 April, Accessed 30 July from,

http://www.timeshighereducation.co.uk/story.asp?sectioncode=26&storycode=415964&c=1

Roberts, D. and L. Thompson (2007) *University League Tables and the Impact on Student Recruitment; Reputation Management for Universities, Working Paper Series*2, Leeds, Cambridge and Brisbane: The Knowledge Partnership.

Robinson, M. and J. Monks (2002) "Making SAT Scores Optional in Selective College Admissions: A Case Study", unpublished paper, Cambridge, MA: National Bureau of Economic Research Higher Education Working Group.

Sanders, C., A. Goddard and C. Davis (2002) "Top-up Fees Trigger Russell Rift", *Times Higher Education*, 1 November, Accessed 13 April 2010, from http://www.timeshighereducation.co.uk/story.asp?storyCode=172662§ioncode=26

Schindler, S. and D. Reimer (2011) "Differentiation and social selectivity in German higher education," *Higher Education*, 61:261-275.

Schmidt, P. (2008) "Elite Colleges' Scramble to Enrol High SAT Scorers May Undermine Diversity", *Chronicle of Higher Education*, 25 March.

Segal, D. (2011) "Law Students Lose the Grant Game as Schools Win", New York Times, 30 April.

Simões, Cláudia and Ana Maria Soares (2010) "Applying to higher education: information sources and choice factors", *Studies in Higher Education*, 35(4): 371-389.

Soo, K.T. and C. Elliott (2008) "Does Price Matter? Overseas Students in UK Higher Education", Lancaster University Management School Working Paper 2008/017, Accessed 27 March 2010, from http://eprints.lancs.ac.uk/27912/1/005738.Pdf

Spies, R.R. (1978) The Effect of Rising Costs on College Choice. A Study of the Application Decisions of High-Ability Students, Princeton, NJ: College Board Publication Orders.

Steinberg, J. (2011) "Stanford and Duke Accepted How Many? Colleges Report 2011 Admission Figures", *New York Times*, 30 March, Accessed 31 July 2011, from http://thechoice.blogs.nytimes.com/2011/03/30/admit-stats-2011/?ref=education

Sweitzer, K. and J.F. Volkwein (2009) "Prestige among Graduate and Professional Schools: Comparing the *US News*' Graduate School Reputation Ratings between Disciplines", *Research in Higher Education*, 50(813).

Tapper, T. and O. Filippakou (2009) "The World-Class League Tables and Sustaining of International Reputations in Higher Education", *Journal of Higher Education Policy and Management*, 31(1).

Trow, Martin (1974) "Problems of the Transition from Elite to Mass Higher Education", reprinted in Michael Burrage (Ed.), *Martin Trow. Twentieth-Century Higher Education: From Elite to Mass to Universal*, Baltimore, Johns Hopkins University Press.

Turner, D., B. Masateru and S. Koji (2000) "Setting Tuition Fees in Institutions of Higher Education: Supporting a Public Service or Charging What the Market Will Pay?", *Journal of Further and Higher Education*, 24(3).

Usher, A. and M. Savino (2006) *A World of Difference: A Global Survey of University League Tables*, Educational Policy Institute, Toronto, Accessed 19 January 2009, from http://www.educationalpolicy.org/pdf/world-of-difference-200602162.pdf

van der Wende, Marijk (2011) "The Emergence of Liberal Arts and Sciences Education in Europe: A Comparative Perspective," *Higher Education Policy*, 24(2): 233-254.

Vincent-Lancrin, Stephen (2008) "What is the Impact of Demography on Higher Education Systems? A Forward-looking Approach for OECD Countries", in CERI (Eds.) *Higher Education to 2030, Vol. 1. Demography*, OECD, Paris, 41-104.

Winston, G.C. (2000) "The Positional Arms Race in Higher Education", Discussion Paper 54, Williams Project on the Economics of Higher Education, Williams College, MA, Accessed 15 July 2010, from http://econpapers.repec.org/paper/wilwilehe/54.htm

Yonezawa, A., H. Akiba and D. Hirouchi (2009) "Japanese University Leaders' Perceptions of Internationalization: The Role of Government in Review and Support", *Journal of Studies in International Education*, 13(2).