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Striving for "World Class Excellence": Rankings and Emerging Societies[1]

Ellen Hazelkorn

<A>The Rankings World Order

Studies repeatedly show a strong correlation between educational attainment, social and economic health, and civic participation, for individuals and society (OECD, 2009). More critically, "In the new economy where knowledge is the source of wealth creation, human capital becomes as important as financial capital" (BIAC, 2008). For Castells (1996, p. 92), knowledge is stored primarily in a specialized form of human capital associated with universities and university-based research. Because innovation is the key to translating that knowledge into new products and services, nations increasingly compete on the basis of their knowledge and innovation systems—or, put more simply, on the performance and productivity of their higher education institutions (HEIs[1]). The correlation between economic and research performance is particularly strong in developing countries (Inglesi-Lotz and Pouris, 2012). As a result, higher education is not simply an "engine of development in the new world economy" (Castells, 1994, p. 14), but a beacon to attract capital, businesses, and talent. For emerging societies, the ability to retain talent is also critical (Kapur and McHale, 2005; Wildavsky, 2010). This intensification of competition between nations suggests why governments increasingly see investment in higher education and R&D as vital for ensuring sufficient indigenous talent and for providing the knowledge base essential for economic growth (Bernanke, 2011)—some with fewer and others with more enhanced resources. This also explains why global university rankings have assumed such significance, at a geopolitical level, in recent years.

The emergence of global rankings in 2003 has had a revolutionizing affect on perceptions of the world order. While different rankings purport to measure different aspects of higher education, "global competition is [primarily] vectored by research capacity" (Marginson, 2006, p. 1). Beginning with publication of *Academic Ranking of World Universities* (ARWU) in 20003, followed quickly by *Times Higher Education-QS* (THE-QS) *World Ranking* and *Webometrics* in 2004, and then many others (Box 14.1), rankings have highlighted and tracked shifts in the competitive strengths and weaknesses of nations through the performance of their HEIs. This is because rankings provide an ordinal listing or ordered sequencing of institutions, which in turn is interpreted as a league table of nations.

[1] The word university is used interchangeably with HEI for the purposes of this chapter.

Box 14.1 Most Important Global Rankings

- *Academic Ranking of World Universities* (ARWU) (Shanghai Jiao Tong University), 2003
- *Webometrics* (Spanish National Research Council), 2003
- *World University Ranking* (*Times Higher Education/QS*), 2004–2009
- *Performance Ranking of Scientific Papers for Research Universities* (HEEACT), 2007
- *Leiden Ranking* (Centre for Science & Technology Studies, U Leiden), 2008
- *SCImago Institutional Rankings* (2009)
- *Top University Rankings* (QS), 2010
- *World University Ranking* (Times Higher Education/Thomson Reuters [THE-TR]), 2010
- *U-Multirank* (European Commission) 2011

The impact of rankings has been felt worldwide (Hazelkorn, 2011), no less so than in emerging societies "because of the way that the gap in 'world-classness' between rich and poor nations was exposed" (Usher and Jarvey, 2010, p. 15). Established universities in the US and Europe have been the primary "winners." While Latin America, Africa, and the Middle East have managed to have a few universities among the top 500, performance is more limited within the top 100 and to a few specific rankings (Table 14.1); however, when measured against population size, smaller countries, notably Hong Kong and Singapore, do significantly better (Beerkens, 2007, 2008). Overall, Asian societies are showing signs of improvement but sub-Saharan African gains have been made only by historically white institutions from South Africa; within the Middle East, only Israel regularly succeeds.

Table 14.1 Number of Institutions in the Global Top 100:

World Regions in Selected Rankings, 2004, 2008, 2011, 2012

RANKING	YEAR	NORTH AMERICA	EUROPE (w/RUSSIA)	AUSTRALIA & NEW Z.	ASIA (w/INDIA)	LATIN AMERICA	AFRICA	MIDDLE EAST
QS/ THE-QS	2012	35	38	7	20	0	0	0
	2011	35	40	7	18	0	0	0
	2008	42	35	8	13	0	0	1
	2004	38	36	12	13	0	0	1
THE-TR	2012	52	32	6	10	0	0	0
	2011	57	30	4	9	0	0	0
	2010	57	28	5	10	0	0	0
ARWU	2012	57	31	5	4	0	0	3
	2011	57	33	4	5	0	0	1
	2008	58	34	3	4	0	0	1
	2004	55	37	2	5	0	0	1
WEBOMETRICS	2012	65	25	2	5	3	0	0
	2011	73	16	2	7	2	0	0
	2009	71	21	1	5	2	0	0
SCImago	2012	45	25	4	24	2	0	0
	2011	46	25	4	24	1	0	0
	2009	47	25	4	22	2	0	0

Key: THE-QS = Times Higher QS World Ranking; QS = Quacquarelli Symonds; ARWU = Academic Ranking of World Universities.

Note: THE-QS (pre-2011) is combined with QS for 2011 and 2012 as the methodology is broadly similar. THE-TR was only established in 2010.

THE-QS for 2008 only sums to 99 due to tying institutions.

However, rankings are a measure of past performance. The prioritization now being given to investment in higher education and research in emerging societies may produce interesting shifts in the world order and the international division of knowledge—assuming support for R&D and ranking criteria remain stable. While it will be a long time before US dominance of research is undermined given the time

lag associated with such investment—there is already evidence of shifting power of influence (Costello, 2010; Curtis, 2009). The OECD has adopted a strategy to expand its membership and enhance engagement with BRIC and other emerging societies (OECD, 2004). The G7 is being quickly overshadowed by the G20 and the EU is increasingly looking to China to help overcome its financial crisis (Alderman and Barboza, 2011). Major structural inequalities exist between traditional developed economies and BRIC and other emergent societies, but this also depends on what is being measured.[2] Many countries within the developed world are experiencing a severe crisis of public and private debt, but Brazil has a balance sheet four times that of the World Bank—and China and India are both investing heavily (Leahy, 2012, p. 7; Anon, 2012c; OECD, 2012, p. 26); China was the world's second largest R&D spender in 2009 (WIPO, 2012, p. 6). Societies best able to invest heavily, especially in the biosciences and technology, may be poised to make the greatest gains in the future; many of these entrants will be emerging societies, most notably the BRIC countries.

These factors are contributing to acceleration in the rankings race. Despite criticism of the methodology (Hazelkorn, 2011; Rauhvargers, 2011), rankings appear to address the question: "How can our university/nation perform better?" (Marginson, 2009, p. 6). In some instances, policymakers have sought to explicitly identify and define their national ambitions and strategies in terms of a favorable global ranking for their universities or to use rankings as a benchmarking or quality assurance tool. There is increasing interest in the performance of the top 100 universities and in creating pathways to becoming a "world-class university" (Sadlak and Liu, 2007; Salmi, 2009a; Liu, Wang, and Cheng, 2011; Altbach and Salmi, 2011b). China, Korea, India, Russia, Malaysia, Singapore, and Vietnam, to name a few, have adopted policy strategies to rival the "Ivy League". Supranational regions (e.g., the Organization of Islamic Countries and the African Union) have sought to devise alternative rankings more favorable to their universities. Romania, Albania, Macedonia, Croatia, and many others have developed national rankings to help establish a quality rating for their universities. Russia, Brazil, Singapore, Saudi Arabia, and Kazakhstan are using rankings to identify appropriate host countries and universities for talented scholarship students, and as a means of "determining the legitimacy of foreign universities for recognizing foreign degrees, determining eligibility for academic collaborations and other aspects of international higher education relations" (Altbach, 2012b). HEIs and individual academics are not innocent victims in this process; they are using rankings to inform institutional strategy and priorities and international partnerships.

The arrival of global rankings has coincided with and intensified competition for knowledge and talent. In turn, they are influencing how we perceive and interpret the balance of world power, influencing policy choices and HEIs around the world. In contrast to other studies that have been "Western-centric" (Usher and Jarvey, 2010, p. 2), this chapter looks at the relationship between rankings and emerging societies. How do the indicators or methodologies affect, positively or perversely, emergent societies? What policy or institutional decisions are being taken in response to rankings? To what extent do emerging societies use rankings differently from developed societies? How do emerging societies perform in rankings? Will

[2] BRIC refers to Brazil, Russia, India, and China.

the global economic crisis and uneven investment strategies lead to changes in the rankings world order? This chapter has five sections, each discussing a different aspect of the phenomenon of rankings and emerging societies: The first section will present an overview of rankings methodology with specific reference to emerging societies; the second will summarize how governments and institutions are responding to and using rankings; the third will look at the proliferation of national and alternative rankings systems; the fourth will look at some strategies for creating "world-class" universities that are being pursued in different policy jurisdictions; and, finally, the last section will conclude by speculating on the future performance of emerging societies in the context of globalization and the aforementioned policy and institutional changes.

<A>Ranking and the Performance of Emerging Societies

Rankings compare HEIs using a range of indicators, weighed differently according to the criterion and judgment of the ranking organizations. Because there is no such thing as an objective ranking or an agreed methodology for what or how to measure academic or educational quality, the ranking methodology may change in response/reaction to: criticism, methodological developments in other ranking systems, or concerns about "gaming." Different rankings assign different weightings to the indicators, and thus an HEI's position can change considerably, which can lead to inconsistency across rankings or year to year. Scores are aggregated to a single digit, in descending order, to come up with a single "best institution" (Usher and Medow, 2009, p. 4) that is given the lowest scores. Despite these perceived shortcomings, rankings are seen and employed widely as a user-friendly guide to higher education quality and performance. They are used by policymakers' and higher education administrators, students, stakeholders, the public, and the media.

Because age and size matters, global rankings reveal a super-league of large, well-endowed, comprehensive universities, usually with medical schools and in English-language countries. These world leaders are distinguished by large budgets, large endowments, long history, excellent staff to student ratios, and, most importantly, access to large pools of highly developed human capital (staff and students). Of the 16,000 HEIs internationally, research performance is concentrated in the top 500 and is virtually undetectable (on that index) beyond 2,000 (Sheil, 2009). In this context, small and emerging societies find it difficult to register their performance. This is because rankings tend to focus on attributes that advantage HEIs in developed societies, principally those in Anglophone and European countries. ARWU's heavy reliance on internationally available bibliometric databases and citation practices is probably the best exemplar of this approach, and may account for why Chinese universities do not do particularly well in this ranking, in contrast to their performance in other rankings (Holmes, 2010).

Bibliometric practices disproportionately reward research which is published in English-language international peer-reviewed journals, favored by these databases. Although English is the lingua franca of business and the academy, it is an inhibitor. Thomson Reuters justifies this on the basis that "English is the universal language of science at this time in history." This benefits countries where English is the native language and countries that publish the largest number of English-language journals. Despite the size of

other language groups, the prevailing position of English corresponds to the simple correlation that a bigger audience means more widely read and more widely cited. It can disadvantage the social sciences and humanities, which often consider issues of national relevance and publish in the national language, but can equally affect the sciences, for example, environmental or agricultural science, for similar reasons.

Disparity across disciplines and world regions is further reflected in citation practices. Authors are most likely to reference other authors whom they know or who are from their own country. Given an intrinsic tendency to reference national colleagues or English-language publications, the reputational or halo factor means certain authors are more likely to be quoted than others. Altbach (2006) claims non-English-language research is published and cited less often, because researchers from US universities tend to cite colleagues they know. It is also easier, says Altbach (2012a, p. 29; also Jones, 2011), "for native English speakers to get access to the top journals and publishers and to join the informal networks that establish the pecking order in most scientific disciplines." This may occur because of the significance of their work or because of informal networks. This can affect reputational surveys which have become the chosen methodology of both the new QS and THE-TR rankings. Because detailed familiarity with an country or institution may in reality be quite limited, faculty and other peers "tend to rank high those departments of the same type, and with the same emphases, as their own universities" (Webster, 2001, p. 44) or those with whom they are most familiar (Hazelkorn, 2011, pp. 74–77).

> The universities that host the most international students and scholars and attract the largest numbers of postdoctoral students are likely to be the most visible to the most people, and these universities are largely in the English-speaking countries. (Altbach, 2012a, p. 29)

The pool of peers has been disproportionately weighted in favor of Anglophone countries (Baty, 2010); while changes have been made to the peer selection process, including expanding the number of languages used for the surveys, participation remains limited (Usher, 2012).

Webometrics measures the size and quality of university Internet presence; its results broadly match other rankings. However, by listing 4,000 HEIs compared with a much smaller number (usually max. 500) HEIs of other rankings, it facilitates a much wider representation of institutions. Nonetheless, developing countries with poor internet connectivity are disadvantaged (Ortega, 2009; Macgregor, 2009).

<A>Summary of National and Institutional Responses

Rankings have received increasing attention worldwide because of the way in which they can tell a complex story of higher education performance in a simple yet effective manner. This has helped expand the range of users beyond undergraduate students and their parents to include, *inter alia*, policymakers, employers, foundations and benefactors, potential collaborators and partners, alumni, other HEIs, and many other stakeholders. As a result, at governmental and institutional level, there is a strong belief that performance in global rankings can bring real tangible benefits to a country or university. Good students, especially international research students, use rankings to "short-list" university choice; business and industry use rankings to influence investment decisions and employee recruitment; and other HEIs use

rankings to help identify potential partners, assess membership of international networks and organizations, and for benchmarking. The mere inclusion of an HEI within the rankings is usually perceived as granting an important level of national and international visibility, even for lower-ranked institutions. Thus rankings can provide an important branding and advertising value. Doing well in rankings can help maintain and build national and institutional reputation—essential elements in a competitive marketplace.

Given this scenario, it is not surprising that 70% of university leaders expressed their desire to be in top 10% of HEIs nationally, and 71% want to be in the top 25% internationally (Hazelkorn, 2007). More than 50% said they had a formal process for reviewing their institutional position, as a result of which, 63% had taken strategic, organizational, managerial, or academic action. Similar evidence is found in Japan, where 47% of national universities refer to rankings as generating explicit management objectives (Yonezawa et al., 2009). There are five broad types of national and institutional responses: (1) rankings are used as an explicit strategic goal; (2) rankings are used as an implicit goal; (3) rankings are used to set standards or targets with the indicators being rolled into the strategic plan or performance management or funding system; (4) rankings are used as a measure of achievement or success; and/or (5) rankings are used to help position or promote the country or institution internationally.

Many strategic plans or government statements make specific reference to rankings. This usually entails setting the goal for a fixed number of HEIs being within the top 50 or 100 universities in national, regional, or global rankings (see Box 14.2). Rankings may be used as a benchmarking tool to improve quality and/or as a means of sorting or classifying institutions. They set important international benchmarks, vital in a competitive environment and especially for HEIs that have operated within a relatively protected environment. Strategies or statements may also refer obliquely to rankings, using terminology such as “world class.” For many countries—such as Croatia, Romania, Malaysia, Pakistan, the Philippines, South Korea, Taiwan, Bulgaria, Russia, and a growing number of other countries, this involves establishing a national or alternative ranking (see the section “Proliferation of National and Alternative Rankings”). Some countries may recruit an international ranking organization to conduct this work. For example, the German Centre for Higher Education (CHE, 2011), which is responsible for developing the foremost European ranking, has developed a system for Albania, while Shanghai Jiao Tong University was asked to evaluate public and private universities in Macedonia to “see where we stand in regard to the quality” (Anon, 2011b).

As part of a wider reform package, Vietnam announced plans to rank its own universities “to encourage schools to improve their performance because a low ranking may hurt a school’s reputation” (Nhan, 2007; Anon, 2012e). Because its members perform poorly against international indicators for research and innovation, the Organization of Islamic Countries (OIC) is adopting clearly defined measures to promote scientific and technological development, innovation, and higher education. In parallel, various member nations are establishing bilateral agreements as part of a broader capacity-building initiative; this includes the creation of a Central Asian higher education area (Sawahel, 2012). Finally, rankings may be used to validate a policy or strategic approach—on the basis that improvement in rankings justifies the

actions taken; for example, the Sri Lankan government says its "efforts to improve higher education has paid off with six universities in the country being ranked among the top 100 universities in South Asia" (Dissanayake, 2012).

Box 14.2 Rankings and Global Positioning

"With National Taiwan University (NTU) now on the list of the world's top 100 universities in recent rankings by British newspaper the *Times*, the Ministry of Education's next goal is to help other universities make the top 100 rankings in different academic fields" (Ching-chi, Minister for Education, Taiwan, 2009) (Wang, 2009).

"The task given to them [the universities] was simple. They knew the measurement criteria of the *THES* rankings. All they had to do was to identify how their existing plans for improving the quality of their institutions matched those criteria" (Mohamed, Higher Education Minister, Malaysia, 2007) (Chapman, 2007).

"Today, no Nigerian university is listed among the top 500 universities in the world as ranked by the 2007 *THES-QS* World University Rankings … The place of Nigerian universities in the African rankings is more pathetic because they trail universities from Kenya, South Africa, and Ghana, countries endowed with fewer natural resources" (Chima Ibeneche, Managing Director, Nigeria LNG Ltd.) (Isiguzo, 2009).

"I hope that this event will become an important milestone for the steps towards World-Class University for the universities in Indonesia … World-Class Universities (WCU) is only a proxy, not the main priority of the higher education development in Indonesia. However, we are proud that some universities in Indonesia can achieve a good evaluation results on different world university rankings" (Sudibyo, Minister of National Education, Indonesia, 2009) (Sudibyo, 2009).

"The 'Shanghai' and 'Times Higher Education' benchmarks were among the most authoritative classification systems … [but] no Tunisian university figures among the top tertiary institutions in Africa and in the world" (Mehrez, Member Chamber of Deputies, Tunisia, 2010) (Anon, 2010).

Rankings are used in other ways to help set standards. For example, Macedonia introduced Article 159 of the Law on Higher Education (no. 35/2008) to automatically recognize degrees from the top 500 universities listed in the THE-QS, ARWU, or USNWR without going through complex recognition processes.[3] Rankings are also a marketing tool, helping to attract mobile investment and talent; they can bring additional or essential prestige to a country or its institutions. While universities often feign lack of interest in rankings, they "take steps to be part of the lists. The reason is marketing, in the competition to attract the best researchers and students" (Macgregor, 2007).

This extends to using rankings to identify potential partners or conversely to refuse partnerships or strategic alliances. More than 76% of international HE leaders said they monitored the performance of

[3] *US News and World Report* Best College Ranking.

peer institutions in their country, and almost 50% said they monitor the performance of peers worldwide. Almost 40% consider an institution's rank prior to forming strategic partnerships; 57% said rankings were influencing the willingness of other HEIs to partner with them, while 34% said rankings influenced the willingness of other HEIs to support their institution's membership of academic or professional organizations (Hazelkorn, 2011, chap. 3). Countries and institutions want to partner with strong and successful organizations that can aid prestige. Accordingly, Russia, Brazil, Chile, Singapore, Saudi Arabia, Kazakhstan, Mongolia, and Qatar, to name a few, award scholarships only to students admitted to ranked universities, usually those within the top 100. A poor showing can have the opposite effect: African universities say they have been told, "usually by universities in Europe or Australia seeking to improve their image internationally—that they cannot work with our institution, because it does not have adequate status in global-university rankings" (Holm and Malete, 2010).

International evidence shows that rankings have generated different institutional reactions. This includes consolidating teaching and "specialising in particular disciplines where they have strengths" (Macgregor, 2007), targeting faculty recruitment, changing academic and research practice, "lobbying for the inclusion of non-English publications in rankings systems ... the creation of separate language-based rankings lists" (Marginson, 2009, p. 12), and developing alternative rankings. Faculty are encouraged to "write original papers" in English in internationally oriented journals, and are discouraged from publishing in domestic or regional journals or on subjects with a strong cultural or social orientation. Some HEIs offer bonus payments in return for exceptional performance.

Because rankings effectively measure reputation, whether via research, surveys, or web presence, internationalization has become an important means to heighten visibility and attractiveness (Edukugho, 2010). For example, Markerere University, Uganda, has established a committee to improve publication presence on the web (Bareebe, 2010). KAUST, Saudi Arabia's international graduate-level research university of science and technology, is actively signing up "top-ranked researchers from different scientific disciplines—all on the Institute for Scientific Information's (ISI's) highly cited list," even on an adjunct basis, in order to boost their position (Bhattacharjee, 2011). Universiti Kebangsaan Malaysia (Shahabudin, 2008) has identified key actions with respect to academic recruitment, including strict selection criteria, better starting salaries and promotion schemes, and special incentive schemes to attract world-renowned scholars.

<A>Proliferation of National and Alternative Rankings

Rankings help to understand the relative standing of institutions nationally and internationally, drive quality improvement and internal efficiency through "healthy competition in our higher education" (Maslen, 2010), inform resource allocation, provide good information for students and other stakeholders, and strengthen human resource policy-making (Okebukola, 2011; Shahabudin, 2011). Given these benefits, there has been a proliferation of new or alternative rankings, developed by governments, government agencies, or regional commercial companies, and commercial rankings targeting specific regions (Table 14.2).

Table 14.2 Selection of Global and National Rankings in/by Emerging Societies

Name	Country
African Quality Rating Mechanism (AQRM)	Africa
QS Asian Ranking	Asia
AsiaWeek Ranking	Australasia
Inep (Instituto Nacional de Estudos e Pesquisas Educacionais	Brazil
Bulgarian University Ranking System	Bulgaria
Panorama General de las Mejores Universidades del Pais	Chile
AmericaEconomica Ranking	Chile
Banco Central de Chile Ranking	Chile
Encuesta Que Pasa	Chile
Chinese University Alumni Association Ranking	China
Guangdong Institute of Management Science Ranking	China
Netbig Ranking	China
Wuhan University Center for Science Evaluation Ranking	China
HEEACT Performance Ranking of Scientific Papers for World Universities	Global
Shanghai Jiao Tong Academic Ranking of World Universities	Global
Education18.com Ranking	Hong Kong
Dataquest India Ranking	India
India Today Dream Universities Ranking	India
Mint India Ranking	India
Outlook India Rankings	India
Ranking of Leading EIs of Kazakhstan	Kazakhstan
National University Ranking	Kenya
QS Latin America	Latin America
Higher Education Rankings	Macedonia
SETARA Rating Instrument	Malaysia
El Universal Ranking Global de Universidades	Mexico
Estudio Comparativo de Universidades Mexicanas	Mexico
Nigeria Universities Commission Ranking	Nigeria
Ranking of Universities of Islamic Countries	Organisation of Islamic Countries
Higher Education Commission Rankings	Pakistan
Ranking Universitario	Peru
Perspectywy Ranking	Poland
Ad Astra Rank	Romania
Interfax, Ekho Moskvy Ranking	Russia
Reputation Ranking	Russia
RatER Independent Rating Agency	Russia
Ranking IberoAmericano	Spain, Portugal, Latin America
Academic Ranking and Rating Agency	Slovakia
Academic Reputation Ranking in Taiwan	Taiwan
Correspondent University Rankings	Ukraine
YourCompass	Ukraine
Vietnam Proposed Ranking Model	Vietnam

Source: Updated from Usher and Jarvey (2010).

Government rankings include the Pakistan Higher Education Commission rankings, the Kazakh Ranking of Leading Educational Institutions, the Setara rankings produced by the Malaysian Qualifications Agency, and the Performance Ranking of Scientific Papers for World Universities developed by the Higher Education Evaluation and Accreditation Council of Taiwan (HEEACT). Nigeria was the first sub-Saharan African country to rank its own universities in 2001, followed by Tunisia. In Romania and Croatia, rankings are used to classify HEIs to regulate the educational marketplace, composed of a plethora of public and private HEIs that have emerged somewhat chaotically over recent decades. "The proposed Vietnamese rankings of 2008, though carried out by an institutionally-based researcher at Hanoi National University, received some official sanction from government ... even though in the end the Government chose not to proceed with the project" (Usher and Jarvey, 2010, p. 8). In contrast to government rankings that have access to a relatively wide range of data sources (even when the data are less than optimum), Chile has seen the growth of commercial rankings. These rankings rely heavily on survey-based indicators (usually reputational surveys) and indicators based on responses from institutional surveys (Usher and Jarvey, 2010, p. 8).

Individual countries and regional groups are developing alternative rankings to challenge the "world order" presented by global rankings. In 2010, the African Union endorsed a regional initiative, the African Quality Rating Mechanism (AQRM) with 34 HEIs participating (Okebukola, 2011). A Ranking of Universities in Islamic countries was an initiative of the Extraordinary Islamic Summit in 2005 "aimed at strengthening selected universities in the field of science/engineering, with the objective of elevating initially at least 20 Universities from the Islamic countries to the rank of Top 500 World Universities" (Billal, n.d., p. 4). It was being developed by the OIC to facilitate the placement of OIC universities among the top 500 universities in the world. No university out of almost 1,800 universities of the Islamic world is included in the recent list of 500 elite universities of the world (Statistical, Economic and Social Research and Training Center for Islamic Countries [SESRTCIC], 2007).

This proposal has now been dropped on the basis that such a ranking may not hold much credibility. Another project, developed for the MENA region as a classification tool, aims to provide "more comprehensive information for students, better understanding of the diverse range of institutions in the region, more effective benchmarking and comparison both within the region and outside, and increased degree recognition and academic mobility" (Labi, 2010; World Bank, 2012). The original eight pilot countries were Egypt, Jordan, Lebanon, Morocco, Qatar, Saudi Arabia, Tunisia, and the UAE (Bhandari and El-Amine, 2012; Labi, 2010).

International (commercial) rankings have also adapted their products for this growing market. The now-deceased *Asiaweek* created the first international rankings in 1998, re-issued in 1999 and 2000. It used a "survey instrument sent to institutions by the publication which covered such factors as student selectivity, research output, financial and faculty resources and academic reputation (each institution was asked to rate its peers)" (Usher and Jarvey, 2010, p. 12). This was followed in 2003 by Shanghai Jiao Tong's ARWU, which was developed to highlight the position of Chinese universities vis-à-vis competitor

universities and lobby their government for support (Liu, 2009, p. 2). More recently, commercial global ranking companies, such as QS and THE-TR, have turned their attention to the growing interest in and market for rankings in emerging societies. Both companies regularly host seminars on/about rankings. QS has also developed specific rankings for Asia and Latin America. They claim to use criteria that address region-specific issues, such as the proportion of faculty with a PhD, research productivity per capita, and web presence (Macgregor, 2009; Holmes, 2010).

<A>Pathways to "World-Class Excellence"

The message coming from rankings is fairly simple. If higher education is a global indicator, then more attention needs to be focused on ensuring its capacity and capability to underpin strategies for competitive advantage. For many governments, this means creating at least one world-class research university to ensure success in the global economy. Mohrman, Ma, and Baker (2008), Moodie (personal communication, 2009), and Hazelkorn (2011, pp. 185–186) refer, respectively, to the "emerging global model" (EGM), the "Harvard here" model, and the "neoliberal" model wherein a few institutions (are facilitated to) dominate within a hierarchically or reputational differentiated system. There are also many national versions within well-developed societies, as Altbach and Salmi (2011, p. 1) note:

> For middle-income and developing countries ... a major challenge for building and sustaining successful research universities is determining the mechanisms that allow those universities to participate effectively in the global knowledge network on an equal basis with the top academic institutions in the world.

This requires targeted funding for a select number of universities. Salmi (2009a) identifies three different policy approaches: A government may seek to upgrade a few existing universities (picking winners) or it may encourage several universities to merge and transform themselves (hybrid model) or it may create a new world-class university from scratch (clean-slate approach). Governments may use competitive or performance-based funding instruments, based on the indicators adopted/adapted from rankings.

Elements of all three approaches are evident in the examples below:

- China commenced *Project 211* in 1995 with the aim of building up 100 top-level universities to the international competitive level; it was followed in 1998 by *Project 985*, which had a more focused objective of developing a smaller number world-class universities able to compete with the best universities in the US and Europe. In 2009, nine universities formed the C9 group to rival the US Ivy League and the Australian Go8 (Sainsbury, 2009). Actions include: institutional mergers and resource sharing between institutions; cultivating new talent and recruiting world-class academic leaders; building national science technology innovation platforms and national centers for innovation in humanities and social sciences; and developing competitive academic programs (Ngok and Guo, 2008, p. 551; Li, 2004; Anon, 2009). The 985 project has received a total of more than CNY 23.8 billion (EUR 2.6 billion) (Cao, 2009; Ngok and Guo, 2008). Since the onset of the global economic crisis in 2008, China has been expanding its

investment in higher education "as part of a wide-ranging response to joblessness among college graduates and recipients of master's degrees, coupled with a longer-term emphasis on developing more home-grown research and innovation" (Anon, 2011a).

- Malaysia presented its *Action Plan for Higher Education* in 2007 with the aim of establishing one or two Apex Universities, which "will be given the latitude to put in place the necessary ingredients to achieve world-class status." Its objective was to have at least one university in the top 100 ranking by 2010 (Government of Malaysia, 2007, pp. 35, 36). Special status amounts to approximately MYR 153 million (EUR 38.46 million) each (Universiti Sains Malaysia, 2010).

- Taiwan introduced a targeted initiative in 2005 to provide annual funding of TWD 10 billion (EUR 237 million) for five consecutive years to the nation's top universities. The aim is to "help universities improve their global standing" and has seen the bulk of the funding go to National Taiwan University; a second stage of the project was planned to begin in 2011. The aim is to have universities specialize in particular fields where they can excel to increase Taiwan's presence in the world's top 100 (Wang, 2009).

- *Brain 21 Korea* aims to reduce the number of institutions through mergers, reduction in the number of students entering national universities by raising entry standards, and targeting investment, with the aim of establishing 15 "world-class" universities. The government spent KRW 1.34 trillion (EUR 885 million) during the first stage (1999–2005) of BK21, and has earmarked KRW 2.03 trillion (EUR 1.34 billion) for the second stage (2006–2012); in addition, the WCU Project (2008–2012), which covers personnel fees (annual salaries), direct costs, indirect costs, and additional expenses, will cost EUR 681.69 million (Government of Korea, 2002, 2008).

- Nigeria has introduced a quality-assurance system to help "drive up standards and boost the Nigerian university sector's global standing" with the aim of having "at least two institutions among the top 200 universities in the world rankings by 2020—the so-called 2/200/2020 vision" (Baty, 2009; Okebukola, 2011). In 2008, the government announced a new NGN 42 billion (EUR 230 million) special Intervention Fund, "under which six universities, three polytechnics, three colleges of education and the Nigerian Defence Academy will receive funding to improve their infrastructure" (Baty, 2009) in addition to World Bank funding (NUC, 2010; see also Davie, 2007).

- India is increasing its spending on higher education, planning to establish itself as a major higher education superpower (Sharma, 2011), with spending on R&D set to rise to at least 2% GDP. There are proposals to establish 1,000 new universities, with the help of foreign investment, and to make India a major player in science before the end of 2017 (Teo, 2012).

- Russia is aiming to differentiate, and merge, close, and/or upgrade universities in order to establish its own "premier league" (Vorotnikov, 2010). Following a competition, more than two dozen universities have been designated as flagship institutions. The government is pledging RUB 70 billion (EUR 1.82 billion) especially to federal and national research universities, and has launched a RUB 12 billion (EUR 311 million) project to attract top international specialists to universities. In return, universities are "expected

to improve their governance, attract younger scholars, retrain their faculty and, ultimately, produce better research and become more visible in the global academic industry" (Rankin, 2012; Fedyukin, 2010; Luchinskaya, 2011).

- Since the ending of Apartheid in the early 1990s, higher education in South Africa has been seen primarily as a way to bring about greater equity, efficiency, democratic participation, and development. Pursuance of this strategy has included active encouragement of mergers between predominantly white universities and black technikons. The *National Development Plan: Vision for 2030* (2011) has placed a new emphasis on higher education, recognizing it as a vehicle for economic development. Using the ARWU as a benchmark, the plan states that while South Africa is doing well as a developing country, it is "underperforming in a number of key areas" (Nation Planning Commission, 2011, p. 271; Cloete, 2011). In this context, the decision to locate the global SKA research project jointly in South Africa and Australia represents a very significant effort on the part of the former to boost its research output and position itself internationally (Macgregor, 2012).

<A>Looking Forward

The pervasiveness of focusing on the top 100 can obscure the changing geography of academic activity. Since many of the characteristics associated with doing well in rankings are associated with being well-established and well-endowed, "it is not easy to knock the traditional leaders off their perches. Hence, the rankings undervalue the advances in Asia and perhaps other regions" (Altbach, 2012a, p. 28; Marginson, 2012b; Anon, 2012a). While there is relatively little movement among the top 25, there is strong evidence that new entrants from emerging societies, most notably China and possibly India, are beginning to make an appearance (Sharma, 2010; Levin, 2010; Byrne, 2012; Lau, 2012; Li, Shankar, and Tang, 2011a; Morgan, 2010; Shepherd, 2012; Silverstein and Singhi, 2012; see Table 14.3).

Table 14.3 Number of Institutions in Top Ranking Categories:

BRICS Countries in Selected Rankings, 2004–2011

RANKING	YEAR	BRAZIL TOP 200	BRAZIL TOP 500	RUSSIA TOP 200	RUSSIA TOP 500	INDIA TOP 200	INDIA TOP 500	CHINA TOP 200	CHINA TOP 500	S AFRICA TOP 200	S AFRICA TOP 500
QS/ THE-QS	2012	1	4	1	6	0	7	7	19	1	4
	2011	1	4	1	7	0	7	7	16	1	4
	2008	1	5	1	4	2	8	6	12	1	3
	2004	0	n/a	1	n/a	0	n/a	5	n/a	0	n/a
THE-TR	2012	1	2	0	2	0	3	3	9	1	4
	2011	1	2	0	2	0	1	3	10	1	3
	2010	n/a	n/a	n/a	n/a	n/a	n/a	6	6	1	1
ARWU	2012	1	6	1	2	0	1	5	37	0	3
	2011	1	7	1	2	0	1	3	35	0	3
	2008	1	6	1	2	0	2	1	30	0	3
	2004	1	4	1	2	0	3	1	16	0	4
W-METRICS	2012	6	11	1	2	0	1	4	19	0	2
	2011	4	4	0	1	0	0	3	8	0	1
	2009	5	5	1	1	0	0	2	6	0	1
SCImago	2012	3	7	2	2	1	3	28	54	0	1
	2011	4	6	2	2	1	2	24	50	0	1
	2009	5	7	2	2	1	3	14	35	0	1

Key: THE-QS = Times Higher QS World Ranking; QS = Quacquarelli Symonds; ARWU = Academic Ranking of World Universities; W-Metrics = Webometrics.

Note: THE-QS (pre-2011) is combined with QS for 2011 and 2012 as the methodology is broadly similar. THE-TR was only established in 2010; and only provides data on 200 institutions. For 2011 and 2012, THE-TR provides information on 400 institutions.

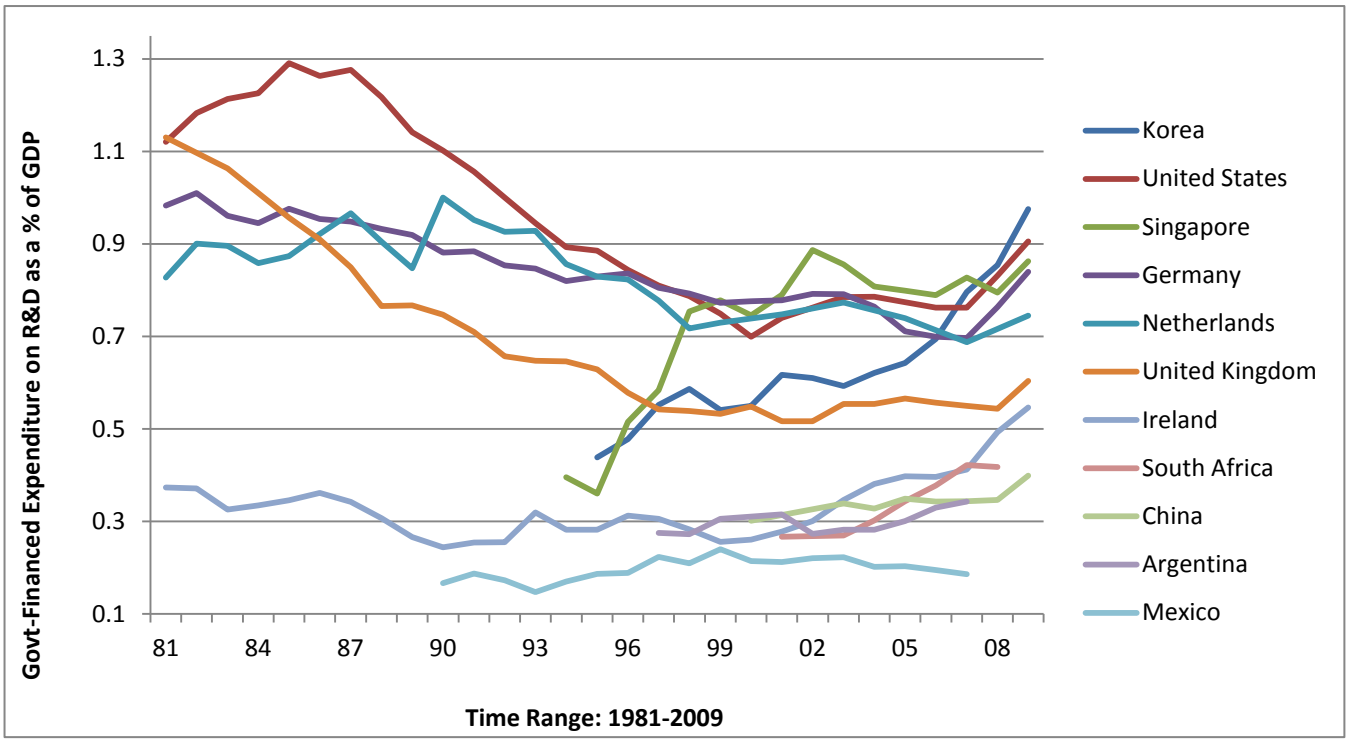
THE-QS for 2008 only sums to 99 due to tying institutions.

According to Li, Shankar, and Tang (2011b, p. 923):

> A large amount of cross-country variation in university performance can be explained by just four socioeconomic factors: income, population size, research and development spending, and the national language. Conditional on the resources that it has, the USA is actually underperforming by about 4–10%. On the contrary, an emerging economic power, China, is rising fast in the league table as well as outperforming countries with similar levels of resources.

Asian societies may have specific advantages; this includes cultural emphasis on obedience as a virtue, and access to financial resources. Encouraging change in academic practice, for example, stressing performance and productivity, may be easier than in other societies. Hong Kong and Singapore benefit from English being the "main language of teaching and research, and a policy of employing research-active international staff" (Altbach, 2012a, p. 30). OECD data show China and South Africa spending much more as a percentage of GDP over the last 10 years; South Korea's trajectory starting 10 years ago is also very impressive, and they are now spending more than anyone else as a percentage of GDP (see Figure 14.1). It reflects "a deliberate national strategy to become important educational hubs in their area of influence. This is the case in China, Singapore, Malaysia, South Korea and the Gulf countries, all aiming at becoming world class educational and research centers, and challenging primacy of the USA and Europe" (Knobel, 2011, p. 2; Dong, 2010). The EU shares this prediction, believing that Brazil, Russia, India, and China will dominate future R&D growth, overwhelming Europe and Japan and, eventually, matching the investments in the U.S. At the current levels of spending, China alone will match assumed aggressive spending in all of Europe combined in 2018, and match U.S. R&D spending in 2022 (.

Figure 14.1 Government-financed expenditure on R&D as a % of GDP.



Source: OECD *Science and Technology Indicators* (2012)

However, just because certain countries are improving, it does not mean that they will surpass other countries quickly in the rankings. First of all, there can be a considerable time lag between investment, outcomes, and impact (Mansfield, 1998). Much of the education and R&D investment has been in the past

decade, and the infrastructural base is fragile. And, there may be a limit to what can be achieved, without systemic changes to governance structures and academic culture and capability; "even well-supported universities in peripheral regions such as the Middle East have disadvantages in becoming academic centers" (Altbach, 2012a, p. 30; Ward, 2010; Matthews, 2012). China has systemic restrictions (Altbach and Wang, 2012), and India's traditional universities are so large they defy "effective management," and recruitment and promotion is based primarily on seniority, personal affiliation, caste system, and so on (Altbach quoted in Reynolds, 2010). English language, a critical albeit controversial criteria for international entry, remains difficult for many countries.

Russia may be restricted by institutional rigidities and reliance on traditional prestige factors in contrast to international bibliometric practices. On the other hand, application-oriented technological research, which is historically associated with Russia, is undervalued by these same bibliometric practices (Reynolds, 2010). Language is also a problem. Furthermore, Russia, like many South American countries, has tended to "place strategically important scientific research in laboratories and centres," separate from the universities; this has had the effect of placing research beyond the scope of rankings—and is now, in response or reaction, responsible for triggering a restructuring of HEIs and systems (Balan, 2012).

While rankings have come under sustained critique from many quarters, most especially by academics and policymakers in developed countries—including this author—emerging societies tend to view them more benignly. Rankings dominate political speeches and the media. They serve as an important reminder to governments of the importance of (investment in) higher education and provide an important benchmark against which to assess and drive the modernization of higher education, its performance, and its quality. They can be a useful accountability tool, especially in societies and institutions where such culture and practices are weak or immature. More critically, rankings have geopolitical significance. Billal (n.d., p. 2), for example, argues that "the size and strength of higher education systems is determined by possession of world class universities which are considered [a] more powerful asset for a nation then possession of weapon[s] of mass destruction." Similar sentiments have been expressed by the Russian Minister for Education, who said rankings were an "instrument of competitive battle and influence" that should not be monopolized—a factor that justifies Russia's attempt to establish a new rankings system (Anon, 2012d).

Investment in higher education can be an important game-changer for emerging societies, but are global rankings the appropriate rubric or do they encourage improvement only against specific indicators? Do they promote a "Western" educational model? Do they encourage a perverse incentive towards the creation of world-class universities at the expense of broader educational goals? Even for well-endowed nations, policy decisions and resource allocation can be a zero-sum game; Ritzen (quoted in Lederman, 2012; Marginson, 2012a) argues that it is necessary to have both broad-based education and scientific excellence: "Mass higher education is necessary for a country to belong to the league of developed countries...[and] it's very important to make sure that you are also going to be part of the world elite."

Would alternative rankings—better suited to the values and objectives of emerging societies—be more appropriate? Other methodologies, such as quality assurance and benchmarking, either at the institutional or the system level, may perform a similar or better function (Usher and Jarvey, 20010, p. 19; Salmi, 2009b; Hazelkorn, 2012a, 2012b; Altbach, 2012a, pp. 28–31). Nonetheless, all commentators agree on three points: (1) Rankings map changes in the knowledge world order; (2) having the capacity and capability to participate in global science is the *sine qua non* for national sovereignty; and (3) rankings should not be followed slavishly, so as to distort societal values, policy objectives, or institutional strategies (Anon, 2012b).

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