The global higher education market and its tensions

Simon Marginson
Joint Editor-in-Chief, *Higher Education*

Centre for the Study of Higher Education
University of Melbourne, Australia
s.marginson@unimelb.edu.au

The global market and 'World-Class Universities'

Higher education has been transformed since the advent of the communicative globalization triggered by the roll-out of the Internet in the early 1990s. The Internet created a one-world communicative and cultural environment for the first time. Together with satellite media and the cheapening of air-travel this not only facilitated the mobility of messages, ideas, knowledge, technologies, people and capital in higher education, it facilitated a single networked system of research universities at global level. This global system is not all-inclusive. Much local and national activity in higher education does not pass through the global circuits, and as will be discussed below, global engagement is highly uneven by country, sub-sector and individual institution. But there is no doubt about the power of this global system to affect the most parochial nations. The main new changes in higher education of the last 15 years have all been global in character: world university rankings, Mass Online Open Courseware (MOOCs), and the spread of research capacity including the spectacular rise of East Asian science.

The global system of higher education combines collaboration and competition between mostly the same players. In a globalizing environment in which individual nation-states increasingly see themselves as 'global competition states' (Cerny, 2007), and the knowledge economy imaginary has become near universal in government, all governments and research-intensive higher education institutions (HEIs) must have global strategies, and higher education is being partly shaped by cross-border comparisons. National systems and individual HEIs are understood with reference to each other and to common global standards, variously defined. In the United States sensitivity to ranked comparison is apparent in relation to PISA at secondary school level. This sensitivity is not yet apparent in relation to higher education, where the country maintains a long lead over Asia and Europe, though the gap with Asia is starting to narrow. The old baseball conceit still applies in universities: best in the USA is best in the world. The amateurish *US News and World Report* still regulates the 'world series'. However, in all other countries, global rankings matter.

The empirical foundations of the knowledge economy argument are unclear. It has not been conclusively demonstrated in political economy that investment in human capital generates growth, or that investment in R&D, especially in basic research, leads to commercially profitable innovations, and less so in the specific

national economy. What is clear is that (1) advanced economic development, strong higher education and capacity in science form a single inter-dependent system in which it is no longer possible to have one without having all three; (2) both nation states and the growing number of aspirants families agree that tertiary participation should continue to grow well beyond what Martin Trow (1974) tagged as 'universal', 50 per cent of the age group; and (3) in most policy environments the knowledge argument is strongly held as an article of faith.

The essential knowledge economy myth is Silicon Valley, where research-driven technological innovation triggered a world-wide wave of productivity advance in every industry, the global renaissance of the US economy, and numerous private fortunes. 1980s/1990s Silicon Valley has been as strong an influence in R&D thinking as was the Manhattan Project in the 1940s, though the implications for public/ private funding ratios in higher education are different. The myth is more directly relevant to R&D than tertiary participation. While a case can be made that all higher education fosters generic capacities that provide favourable conditions for productivity advance, here the economic contribution is indirect and depends on factors largely outside the control of HEIs. Where there is clear evidence of growing demand for high skill graduates this is episodic and specific to industry sectors, rather than being consistent or universal. But it is more social demand than economic demand that drives the growth in participation.

Nations vary in their levels of tertiary participation and within that, participation in the degree programs of three years and more that the OECD defines as 'Tertiary Type A' (OECD, 2012). High participation systems include Korea, Taiwan and Japan; the United States, Canada and Australia; the Netherlands and Belgium; Slovenia, the Czech Republic and Poland; the Nordic countries; Russia. The UK and Singapore recently entered this group though France, Switzerland and Germany remain on the cusp or just inside. The overall trajectory though is upwards everywhere and while some nations have expanded their sub-degree programs to accommodate the newcomers many have grown degree programs.

However, as everyone knows, the prolonged recession in North America and Europe has placed great pressure on existing cost structures. There have been sharply varied responses. In Europe between 2008 and 2012, there were overall decrease in public funding of higher education in more than 10 per cent in 11 countries, including the Baltic countries, Czech Republic, Hungary, Croatia, Greece, Italy, Spain and Portugal. At the same time some countries maintained or increased public funding, including all Nordic systems except Iceland, France, Belgium, Germany, Austria and Switzerland (EUA, 2012). On the whole research-intensive universities have often been better protected than others, though not always. But the overall trend is a continued and accelerated increase in the proportion of costs of teaching that are financed by students and/or families.

This trend has been facilitated not only by the recession but also by international education. In some European countries, domestic student places are free but international students pay fees, and this may be the 'thin end of the wedge' for broader private funding. The funding compact remains a national matter, local political idiosyncrasies are pronounced, and there is often strong opposition to

tuition increases. Nevertheless we are seeing a slow, long-term, hesitant, uneven trend to global convergence around a mixed public/private funding model. In many jurisdictions the growing evacuation of government funding is joined to official rhetoric about the private benefits of degrees and weakened focus on the public or social benefits of higher education, except in relation to equity (mostly understood in terms of inclusion not social equality) and the 'engagement' of HEIs in communities and sub-national regions, including their welfare functions. The official indifference about national public goods also shelters widespread indifference about the (considerable) role of HEIs in creating global public goods.

Though it is not a predominantly trading industry, higher education is often understood as a global market, an imaginary that fits mainstream political cultures. Increasingly the global higher education market is structured by global rankings, which define a reputational hierarchy with shaping effects in the flows of knowledge, people and capital. The global higher education market is not an illusion. It has profound material effects. At the same time this global market is reified and generates both distortions and limits. There is more to global higher education than market competition but that 'more' is often partly hidden from view, for example the role of HEIs in generating global public goods. Moreover, competition in higher education is both more and less than orthodox economic competition because status plays a central role—most HEIs, including all leading HEIs, are not primarily profit-driven—and because governments persuaded of the knowledge economy argument will not let go (Marginson, 2006; 2007, 2012).

Thus the sector remains more policy dependent than conventional industries. In this market, for government and HEIs the chief regulatory technologies are rankings and quality assurance. Each have their weaknesses. Rankings say too much, in that they are overly prescriptive, too steeply hierarchical, recycle reputation and limit the scope for merit and innovation. Quality assurance says too little. 'Quality' and 'excellence' are notoriously slippery as Bill Readings emphasized at an earlier stage in *The University in Ruins* (1996). QA mechanisms provide no clarity on material trends, provide little practical defence against the erosion of product value, and are often captured by HEI marketing departments.

The formation of the global market is articulated through and intensifies the stratification of HEIs. This is one of the primary trends of the times. The creation of modernized status aristocracies—ostensibly meritocratic, but strong enough to lock out new entrants, in the manner of the new oligarchs that took over post-Soviet Russia in the 1990s—seems to be a feature of high capitalism in this more global era. The global market is not an all-in competition of HEIs. It is limited to status-bearing research universities able to attract good quality cross-border students and research talent. The outer limit for this group is suggested by the Academic Ranking of World Universities (ARWU) world top 500, HEIs seen to be in the category 'world class universities' (WCUs). Perhaps the next layer of WCU aspirants could be added to the 500. Note that prestige at national level is necessary but not sufficient for global prestige. Research performance is the essential requirement for membership of this group. Many nations have no WCUs, or not enough, and this is driving increased investments in the top layer

of national HEIs, at the expense of many teaching institutions and without regard for the balanced distribution of infrastructure across sub-national regions.

However, in global competition the main attention falls not on the top 500 but on a much smaller network of elite HEIs. Arguably, the global system is dominated by the top 30-50 'Superleague' institutions, more than half of which are located in the United States. The advent of MOOCs suggests that even as research power becomes more pluralized in future, global market power will become yet more concentrated in a handful of high prestige Anglo-American HEIs that are able to leverage their research power and household name brands into global thought leadership. MIT, Harvard and Stanford have shown they can attract very large MOOC numbers. Oxford and Cambridge could join them, perhaps in the long term Peking University and others, but the core of the 'winner take all' competition (Frank & Cook, 1995) will remain small. These universities will exercise the cultural hegemony in higher education that Hollywood exercises in film. The leading global HEIs already overshadow the second tier HEIs. Note the political economy of the free MOOC programs—these are public goods in economic terms that enable oligopolistic closure of the market they create, while complementing and substituting for existing delivery—places extreme cost pressures on lower tier HEIs from both inside and outside the existing forms of provision.

In the next 15 years this combination of market stratification and partial displacement of conventional delivery by free Internet-friendly 'customer-centred' courseware platforms is likely to profoundly transform higher education across the world. In future globalization will bite deeper. In higher education it will continue to be synonymous with (US) Americanization, though the rise of China and East Asia, and to a lesser extent modernizing Northwestern Europe and emerging Latin America, will begin to provide a welcome balance.

Caveats and tensions

Hence the conventional picture called up by the rankings—that of a seamless single global higher education market—must be qualified. An informal global hierarchy of the top 500-600 HEIs, led by the top 30-50 HEIs and dominated by the leading ten or so Anglo-American universities, is neither inclusive of nor in synchrony with each national system. There are significant tensions between national and global practices and associated incongruities and gaps in regulation.

1. National systems and individual HEIs are unequal in their capacities in education, in research, and hence their effectiveness within the world circuits of knowledge and people mobility. There are now 49 systems that produce more than one thousand journal papers in the Web of Knowledge science literature each year (see Table 1). One thousand papers is a useful proxy for the presence of an indigenous research capacity, including doctoral training in at least some fields. There were just 38 such systems in 1995. So as noted, research capacity is spreading. Yet this should not be overstated. The main change of the last 15 years is the rise of East Asia and to a much lesser extent Latin America.

Table 1. Nations publishing more than one thousand science papers in 2009

ANGLO-SPHERE	EUROPEAN UNION	NON-EU EUROPE	ASIA	LATIN AMERICA	MID. EAST & AFRICA
USA 206,601	Germany 45,003	Russia 14,016	China 74,019	Brazil 12,306	Iran 6313*
UK 45,649	France 31,748	Switzerl. 9469	Japan 49,627	Mexico 4123	Israel 6304
Canada 29,017	Italy 26,755	Turkey 8301	Sth. Korea 22,271	Argentina 3655	Sth. Africa 2864
Australia 18,923	Spain 21,543	Norway 4440	India 19,917	Chile 1868*	Egypt 2247
New Zealand 3188	Netherlan. 14,866	Ukraine 1639	Taiwan 14,000		Tunisia 1022*
	Sweden 9478	Serbia 1173*	Singapore 4169		
	Poland 7355	Croatia 1164*	Thailand 2033*		
	Belgium 7218		Malaysia 1351*		
	Denmark 5306		Pakistan 1043*		
	Finland 4949				
	Greece 4881				
	Austria 4832				
	Portugal 4157*				
	Czech Rep. 3946				
	Ireland 2799				
	Hungary 2397				
	Romania 1367*				
	Slovenia 1234*				
	Slovakia 1000				

* = countries that have entered the one thousand papers group since 1995
Source: adapted from NSF, 2012

There is much talk about the BRIC countries (Brazil, Russia, India and China) but in higher education and science their trajectories are divergent. Only China is clearly an emerging superstar. China's GDP will soon exceed the US and national income per head has doubled in the last five years. Total R&D expenditure in China will pass the US in the next decade. Between 1995 and 2009 China's academic journal papers per year jumped from 9061 to 74,019, a factor of 8.17. Higher education and research in Brazil are improving fast also, from a lower base and in a more fragmented system. Journal paper output multiplied by 3.58 between 1995 and 2009. The University of Sao Paulo is the world's eighth largest in terms of journal paper output (Leiden, 2012). There is much talk about the knowledge economy in India but national policy has insufficient purchase in a country in which the states run education, public universities have yet to be fully modernized on new public management lines, and there is a long tail of mediocre small private colleges. After a long period of stagnation India's output of journal papers has begun to climb. Volume multiplied by 2.13 between 1995 and 2009. In contrast, Russia's science paper output fell from 18,604 in 1995, twice the size of China, to 14,016 in 2009, a factor of 0.75 (NSF, 2012). There are two Russian universities in the top 500 compared to 33 in China including Hong Kong.

The majority of sovereign nations still lack an indigenous science system and their own research-intensive universities. This position will become more depowering over time, unless it is corrected. But science is expensive, particularly given that a science system is not viable unless salaries are high enough to persuade at least the most committed experts to stay in the country. There is a close correlation between national income and capacity in science. Of

the Shanghai top 200 only eight are in countries with a per capita Gross National Income of under $25,000 USD a year: mainland China, Russia, Brazil, Argentina and Mexico. China has four universities in the top 200, located in zones much wealthier than the national average. The other countries have one university. The poorest countries in the Shanghai top 500 are mainland China, with 28 universities, Brazil (6) and Iran (1) where national income is at the world average, Egypt (1) and India (1). Where research performance is improving it is strongly government investment driven, as in China, Chile, Iran and Brazil.

2. Nations are unequal in their commitment to global networking, openness and proactivity. Arguably, all national systems and HEIs need to sustain a distinctive identity within the global setting. At the same time all nations and HEIs need to engage: those not fully effective within the global conversation are slower to receive new knowledge and less able to shape the cross-border environment through their own actions. They become more determined than determining. Nevertheless, for many nations and HEIs global engagement carries with it the risk of being swamped by influences coming in from outside. For nations with weak capacity, that risk is maximized. In nations with higher capacity that remain parochial and inner-referenced, capacity is under-developed. A present example is higher education in Russia, but there are part blockages to cross-border mobility in many systems. There are visceral global/national tensions, between global engagement and knowledge economy objectives on one hand, and more nation-bound (and even pre-modern) agendas on the other.

One example is blockages in relation to inward movements of foreign faculty, which are hampered by rules governing visas and citizenship, by protectionist career structures, and by the inability of many HEIs to offer competitive salaries. High skill researchers and international students are central elements in government strategies and essential to HEIs with global ambitions. Yet in a globalizing setting, immigration policy is fraught. There is an antagonistic contradiction between the principles of free cross-border movement and national sovereignty; and between the Hobbesian autarky of the system of sovereign states, and the fact of global interdependence of nations. There is no way of effectively reconciling these contradictory elements within the weak multilateral framework that regulates formal international relations.

More generally, the national framework of citizenship cannot provide effectively for the human rights or the welfare needs of mobile populations. This becomes a greater problem in relation to international students than faculty, because the average student has less material resources (Marginson at al., 2010). Cross-border international students are located in a 'gray zone' of regulation with incomplete security and capabilities. Like other mobile persons such as short-term business and labour entrants, and refugees, they do not enjoy the same protections and entitlements as do local citizens. Nor are they effectively protected by their own national governments while on foreign soil. International students are affected by two different national regulatory regimes, in the nations of citizenship and of education, yet they are fully covered by neither. Their position is vulnerable and uncertain, mediated by non-citizen status and the related facts of cultural difference, information asymmetry and communication

difficulties. Their subordinated outsider status magnifies the welfare problems they face, including the potentials for social isolation or discrimination. Here the universal promise of the UN Declaration of Human Rights collapses; and the tension is exacerbated, rather than modified, as global integration increases. Nor can global market forces substitute for the absent global polity. Many nations need international students for economic reasons but it is plain that status is insufficient to protect the welfare of students, let alone guarantee their rights.

3. The policy actions called up by global rankings are not necessarily the same as the policy actions called up by national needs according to the logic of the knowledge economy. There is a clear tension between a global market competition model and national policies designed to further the public good, but there is also national/ global conflict within the market model itself. The knowledge economy argument suggests a research and educational capacity effectively distributed across sub-national regions, and an emphasis on local engagement with industry (and community). On this criterion Canada, Australia, Germany, the Netherlands and the Nordic countries have strong systems. As noted, global rankings suggest research concentration and stratification, less commitment to local embeddedness and the even distribution of capacity, and a more cavalier approach to the quality of mass higher education. The US and perhaps emerging China look better on this criterion. France and Germany plan to move their systems closer to the second model. The UK has combined the two forms though its capacity to do so may reduce given funding constraints.

4. As noted, quality assurance is a weak technology. From the point of view of system managers in government it cannot guarantee adequate surveillance or a consistent pattern of measurable improvement, unless it becomes more externally driven and more invasive of the autonomy of HEIs. But this not only conflicts with the language of autonomy, devolution and self-regulation that permeates the QA world, it conflicts with the Hayek-Schumpeter policy logic of entrepreneurs and market evolution that underlies the new public management. While this tension is not new it is more difficult to resolve in a globalizing setting.

5. If governments begin to sense that the knowledge economy claims are weak, in relation to the alleged benefits of mass higher education and/or basic research—especially the claims made about the building of global capacity—the present emphases on higher education and basic science will falter. Already in the Westminster systems of the UK and Australia there are signs the national Treasury departments that call the shots are skeptical about the benefits of increased public investment. Others may follow. The focus on basic research which is called up by global rankings is vulnerable to the argument that what really matters is commercializable innovation, and the links between basic research and innovation are weak. Another policy problem is leakage of the findings of commercially useful research to foreign rather than national corporations. Governments are stepping up development of measures of the 'impact' of research to strengthen the research-innovation nexus, but the actual relationship is too attenuated, indirect and conditional on external factors. Attempts to engineer a policy technology based on 'impact' will not succeed and this will reinforce disillusionment with the outcomes of public investment.

Just as the 1960s policy euphoria about building human capital collapsed into policy disillusionment in the 1970s, the present enthusiasm about the knowledge economy and WCUs will pass. What goes up must come down. It is impossible for nations to exit from global engagement and competition. It is possible for them to pursue their global ambitions detached from the knowledge economy agenda and through sectors other than formal higher education and public science. And the early success of the MOOCs suggests it is possible for an attenuated version of the knowledge economy to substitute for HEIs, especially if alternate mechanisms for status production and codified knowledge emerge.

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