

Higher Education and Globalization: Issues for research

Part II: Cross-border mobility, flows and the globalization of the academic profession

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I will look briefly at the impact of globalization in tertiary education and the nature of global flows, the patterns of worldwide difference and inequality between nations which shape the pattern of flows, the dominant role of the USA and the prospective rise of East and South Asia. Then I will spend a little more time on mobility issues that directly affect tertiary education: mobility of programs and institutions, the cross-border flows of students, the flows of researchers and academic faculty, the growing global element in academic labour markets, and what is happening to national labour markets. I will conclude with some implications for next stage research.

Impact of globalization

If globalization is defined as ‘the widening, deepening and speeding up of interconnectedness on a world-wide scale’ then global flows include not just economic activity but more importantly in tertiary education perhaps, people, communications, knowledge, ideas, technologies, policies and organizational practices. At times globalization seems like unstoppable wave. It is transformative of individuals, institutions and national systems. Globalization has not led to the fatal undermining of the nation-state as some theorists forecast, but many institutions now operate more independently of government, to a greater or lesser degree, because they raise part of their funding or secure accreditation outside the country; and a small number of institutions have become predominantly global in orientation. This should not be overstated. The great majority of financing is still national in origin and most of that comes from national government. The most globalized aspect of tertiary education is knowledge and research; and the most globalized aspects of personnel are mobile doctoral students, post-doctoral researchers and other faculty.

Globalization is not a single, universal trend but is filtered by national and local factors. It is highly nuanced by geography, history, policy, culture and language; and by type of institution – the most globalized institutions tend to be for-profits in e-learning or onsite vocational education (such as the University of Phoenix) or research intensive universities. Likewise global flows of knowledge, people and finance for tertiary education are

not uniform or multi-directional – often they are one-way or largely one-way and dominated by the stronger countries and institutions, particularly in the Anglophone bloc and most of all the United States.

Global flows and the vexed question of ‘who gains’ from those flows and ‘how much’ are affected by differences in national wealth. They are closely determined by the size of national investment systems and their resources, underpinned by national spending, where the USA invests seven times as much in tertiary education as the next nation, Japan – and naturally dominates the production of scientific papers, followed by the leading European systems. As you know the distribution of the world’s top 100 research universities is lop-sided and like all measures of scientific research performance focuses on the globalized scientific disciplines, and favours the English-language nations. We do not know enough yet about knowledge flows in languages other than English.

Tertiary education in the United States has a remarkable global role that extends to the gravitational pull of people flows into that country. Not all that many students or talented researchers flow outwards from the USA to other nations but a lot of knowledge workers flow into the USA. All forms of mobility into the USA of students, researchers and other academic faculty, whether on a short term basis, a stay of several year’s duration or a permanent career move, appear to have increased. But there are signs that a more plural global balance of power is emerging at least in the economy and perhaps in research and tertiary education. Centres other than the USA might become magnets for talent in future: for example Europe, China and India. Let’s look at the long term trend in shares of world output. In 1700 China and India produced almost half of world GDP and Western Europe was next. By 1978 the USA was the second largest source of output and the share of China and India was at 7 per cent. The forecast for 2030 is for China and India to return to one third of world output and the shares of the USA and Europe to fall. In tertiary education, the last two decades have seen the rise of a new group of Asian science powers: China, Taiwan China, Korea and Singapore. China’s total R&D spending is now second in the world and its rate of growth far outstrips the OECD nations. What is striking here is the step like progression in the graph, the annual rise of R&D investment corresponding to the growth of China’s GDP at 10 per cent per annum.

Mobility of production

A striking feature of globalization in higher education is that as in some sectors of business and industry, though to a more limited degree,

production has become more mobile across borders. In research and innovation, the OECD notes that ‘the internationalization of R&D is now a key dimension of globalization’. As well as researchers becoming more mobile, corporations are performing a growing proportion of R&D outside home base. They are relocating R&D to benefit from knowledge capabilities in different parts of the world. So in part global competition in research is competition for that company R&D activity and this highlights the importance of sustaining national system research capacity (despite the fact that a rising proportion of national talent is moving!).

Another case is program and institutional mobility. First, cross-border distance education, largely mediated by the Internet. Second, academic institutions from one country that operate in another; through partnerships or in their own right. Among the most active provider nations are the UK, Australia, the USA and France. The pattern of program and institutional mobility is shaped by the regulatory environment in the nation from which the institution comes, and the nation in which it operates.

Student flows

The number of cross-border students is growing much faster than tertiary students overall. It doubled in the last decade and is forecast to double again by 2020 (though such forecasts have a poor track record). As you know the dominant attractors of students are the Anglophone nations, Germany and France. With the demographic downturns in much of Western Europe and Japan, international students recruitment – and faculty recruitment - will be crucial to the viability of many institutions.

Note that while China is the main supplier of cross-border students who go to other nations, China is also a significant attractor of students. Its global market share, mainly from Asian nations, is 7 per cent (fifth in the world). Malaysia and Singapore also total 4 per cent between them, just behind Japan. There are difficulties in tracing numbers because some nations still collect data on non citizen or ‘foreign’ students not cross-border students. ‘Foreign’ students can include families resident in the country for two or three generations.

Student flows in and out of countries are exceptionally uneven by nation, and vary in character. Note that the only area we have reasonably solid data is for student movement across borders for a year of study. Shorter term movement is not mapped which cuts out much European student mobility. Of the one year traffic, about half the cross-border students pay full price fees. The rest, especially in Europe, take up free or subsidized

places. There is also much variation in the extent to which national system enrolments are internationalized. Few nations exhibit balance between inward and outward flow though Japan has sustained it for some time. Only Iceland, Ireland, Norway, Switzerland and Austria have at least 4 per cent of local students going abroad and an inward movement of cross-border students constituting at least 4 per cent of local enrolment. The pattern in the Anglophone nations, especially the USA and Australia, is for ratios of inward to outward student flows of 10 to 1 and more. These nations profit markedly in economic terms from global flows. In Australia, the UK and New Zealand, international students are 'cash cows' that help to finance the domestic tertiary education system. In some nations such as the USA, UK and Switzerland, though not Australia, a significant minority of cross-border students are doctoral students and scholarships are used to attract the best foreign talent at scale.

Student choice of destination appears to be strongly affected by the language of use, and by global rankings. Information asymmetries are greater for cross-border students than other students so the use of global rankings data is inevitable. Prominence in the rankings acts as a de facto indicator of quality. This is held to include teaching quality regardless of whether the rankings incorporate teaching performance. (Note that a classification system could serve the same purpose without sorting the market in such a pejorative fashion as league table rankings, which tend to exaggerate the vertical distinctions between institutions).

Student choice is also affected by the cost of tuition and the cost of living, the character of available financial support and opportunities to work. Research suggests that cross-border students favour institutions offering full packages, grants, loans and/or jobs, over those that offer grants or tuition only. In all countries cross-border students are restricted in the number of hours they are permitted to work during study periods, except Sweden. The typical maximum duration is 20 hours per week. In Spain, Portugal, the Czech Republic and China cross-border students are not meant to work at all. A further element that affects choice-making is the visa process. Research in several countries suggests that the time taking to obtain a visa, the cost of visas and discrimination between students from different countries are primary areas of student dissatisfaction.

A further and important factor especially in the English-speaking countries is the ease of migration by cross-border students after they graduate. The stock of foreign students from a given country of origin enrolled in a given destination is an important predictor of subsequent migration between the two countries. Often a sizeable proportion of

cross-border students stay in after graduation to work off the costs of study, if work opportunities are available and visas permit.

Most OECD countries provide some financial support to encourage outward student movement, except Greece, Poland and the UK. A large number support the total cost of study abroad, including tuition and living costs. Belgium (Flanders) and Finland have the most liberal policy.

Researcher and academic flows

The number of people working in scientific and technologically-related occupations, HRST personnel, grew twice as fast as overall employment between 1996 and 2006 and there was parallel growth in researcher labour. In about half the OECD countries the proportion of researchers who work in the higher education sector fell. However overall expenditure on R&D in higher education is increasing faster than R&D investment in business and government labs. Given the age profile of research in many countries tendencies to future shortage are in the pipeline. As the role of research expands tertiary institutions are ever more central because of their research training function. This makes it mandatory to both sustain and improve national research capacity and attract foreign talent, especially at the top or quality end of research.

For their part people move at all stages. Global competition for mature researchers is a serious business for national systems. While for their part, bright young researchers must now give thought to the possibility of a career abroad. Possible earnings are one of the primary considerations, though the opportunity to work with good researchers with strong infrastructure in a vibrant university also matters as does the broader living environment. In building itself as a global research hub Singapore offers salaries at American levels and has been strong in attracting talent though not always in holding it. China also offers some high salaries.

Nations use researcher mobility to improve research performance through the doctoral training of nationals abroad, the doctoral training of foreigners at home, short term academic exchange, research collaboration and networking across borders, the medium and long-term recruitment of and migration of foreigners. From a narrow national viewpoint researcher mobility is a double-edged sword and its effects are partial and uneven. Strong systems with a critical mass of research capacity act as poles of attraction and always do better from mobility than do weak systems. But there is the relentless logic of the consequences when global flows confront fixed national systems, when the flows outwards from nations

cannot be stopped. If a nation maintains a closed labour market it cannot prevent researchers leaving. So to maximize its share of talent it has to open its borders to foreign recruitment. In China the government used to prevent people from leaving China. Chinese nationals could not get a passport for foreign travel until 1985. But that no longer works and China, pragmatic emerging global knowledge economy that it is, sums up its policy as ‘Support for overseas study, encouragement for returning, freedom for coming and going’. Yes, the global mobility of talent is a field of freedom. Perhaps that is why it is so universally attractive.

And there are also common public goods created when knowledge and researchers flow freely. All national systems and institutions benefit provided they have the means of access: research capacity at home, ICT networking, academic journals and open borders. Like global market goods, global freedoms and public goods flow mostly – but not entirely - to those with the resources and advantages to make the best use of them.

The question of the costs, benefits and means of maximizing the net outcomes of mobility is an under-developed area. Most thought is given to one domain of policy, the part reversal of net brain flows out of national systems. Taiwan and Korea have been particularly successful using grants, research infrastructure packages and salary variation.

However we lack solid mobility data for most countries in most areas of cross-border mobility with the important exception of movement in and out of the United States. It is apparent that there is substantial variation between nations in the extent of doctoral, post-doctoral and mid career mobility out of the country, the entry of foreigners into the country and the extent to which academic employment and career structures are open or closed. The proportion of university faculty who are foreign born varies dramatically from systems such as Singapore where the majority are of foreign origin to systems such as Spain which permit almost no foreign recruitment. The lack of solid data handicaps us in theorizing and observing an overall picture of flows of researchers and academic labour. It is hard to tell whether and to what extent movement in different categories is becoming faster, more extensive and more intensive; and the extent to which it is just mobility hype; whether and to what extent there might be convergence between countries and even a global labour market; and to what extent national career systems are changing.

If we were to provide a guestimate overview of cross-border researcher and academic mobility we would summarize it as follows:

- Notwithstanding September 11th the trend is for all forms of mobility into the USA to increase and for foreigner stay rates to increase. The flows into the USA particularly from Western Europe, China and India are the most dynamic element;
- The evidence is patchy but cross-border research collaboration, faculty exchange and other short-term visits appear to be increasing;
- Outside the USA doctoral mobility appears to be increasing;
- Though many faculty find that a period spent abroad is helpful to their careers, the great majority are still fixated on a career at home. There is no evidence to say that post-doctoral mobility and long-term academic migration are increasing overall though there are some increases in long-term movement into certain countries;
- Disciplines vary in how peripatetic they are but in the science-based disciplines at least the mobility of top flight researchers is probably increasing.

The global market for high performance researchers in areas such as biomedicine and nanotechnology is intensifying and a key strategic issue for governments and institutions. Properly speaking this is not one labour market in the sense of a single set of employers, salaries and conditions of work; but a partly joined up set of national labour markets for elite researchers in which the US universities are by far the most important element and set benchmarks for employment and work conditions.

Thus each national labour market contains a top layer which is subject to cross-border influences, on top of an essentially national career structure. Christine Musselin's work suggests that despite globalization and Europeanization, the national labour markets, especially in the larger countries, remain surprisingly unchanged and if there is a longer term transformation at work it is as much or more instigated by the New Public Management at the national and local level, as by globalization. Most national systems are more closed than the American, though if labour shortages emerge they will be under growing pressure to change.

Issues for research

Areas for further research have already been suggested. We need to know more about knowledge flows in languages other than English; and we need comprehensive data sets in the different areas of people movement. We need consistent categories, so that 'international students' ought to mean cross-border students and not non-citizen students. We need solid data on the proportion of academic labour that is foreign born in each

country. We need a more complete picture of program and institutional mobility. We know little about the take-up of online education.