

# Chapter 11

## Training Researchers in the Asia-Pacific: A Regional Response to Global Leadership in Research

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### 11.1 Introduction

The growth of the audit culture in the world academic research system as typified by the United Kingdom Research Assessment Exercise (RAE) has led to an extreme preoccupation with research league tables, and their associated branding, marketing and managerial strategies. The most examined of all research league tables is the UK RAE, which has been held every 5–6 years since 1985 (Taylor 1995; McNay 1997; Elton 2000; Bence and Oppenheim 2004). This was introduced during the Conservative Thatcher regime in the UK, when questions were being asked about ‘value for money’ in relation to higher education investment by the government, and the old system of 5-year plans and expanding budgets for the sector were being challenged. A substantial proportion of the higher education budget (about 15 %) was set aside for distribution on the basis of the assessed quality of research, in relation to indicators such as quality of published output, quantity of research funding, and output of PhD graduates. Departments were ranked on a five-point scale (later extended to 7, from 1 to 5\* via 2, 3b, 3a, 4 and 5) and the higher the ranking, the greater the funding that universities received. While to nobody’s surprise, the top spots ever since have been occupied by Oxford, Cambridge, and the top London institutions, i.e., Imperial College, University College, and the London School of Economics (wherever these exercises have been introduced the main beneficiaries have been the longer established and politically important universities), there have been some surprises lower down

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in the ranking, with the strong showing of comparatively new institutions and older established provincial universities. The competition between universities became increasingly intense, with universities hiring in international superstars with big publications and research grants to boost their fortunes in advance of the ‘census days’ by which staff members had to be in post to count in the assessment.

Nevertheless, universities are seen to be leading providers of training for future researchers and the generators of much of the new knowledge, which is essential to a nation’s long-term economic growth and social cohesion. However, given that a few top universities are recruiting the best students, earning most of the research money, and generating most of the PhDs under the current system, there is a concentration of resources in a few elite institutions on a world-wide basis. This chapter explores the Asia-Pacific’s response to this concentration, which remains heavily biased toward the USA and Europe. And we do it through an examination of recent changes in the flows of research students within the Asia-Pacific region and to the outside. We also examine what lessons the UK experience of RAEs have for the increasingly competitive universities of the Asia-Pacific region, and what strategies does it suggest for new and/or upwardly mobile Asia-Pacific universities?

## 11.2 University Rankings and the Asia-Pacific Region

As mentioned above, the increased emphasis on the audit culture means that university managements are increasingly obsessed by university rankings, and ranking tables based on all kinds of criteria abound, both nationally and internationally. One of the most interesting of the ranking web sites is that developed by Jiaotong University in Shanghai, PRC. This is based on indices calculated from a number of criteria: ranging from the number of Nobel prizes to the number of citations of alumni and researchers in international journals; in other words heavily research output oriented. The Jiaotong list ranks the top 500 universities in the world, and provides separate rankings for Europe, the USA, and the Asia-Pacific regions. Results are starting to accumulate over time, and the site allows comparisons extending back to 2003.

The first glance at the list would appear to confirm the predominance of American and European Universities. In 2006, Harvard was at the top with a notional score of 100 and the other universities were ranked in descending order from there. Cambridge ranked second, but with a much lower score of 72.6. It was closely followed by Stanford (72.5), University of California Berkeley (72.1), MIT (69.7), California Institute of Technology (66), Columbia (61.8), Princeton (58.6), Chicago (58.6), Oxford (57.6), Yale (55.9), and Cornell (54.1). In other words, the top 12 universities were all Anglophone, with 10 in the United States (US) and 2 in the UK. The first universities to break this pattern were Tokyo (ranked 19), and Kyoto (ranked 22), the highest ranked of the Asia-Pacific Universities. Overall, 37 of the top 50 schools were in the US, 2 in Japan (Tokyo, Kyoto), 2 in Canada (Toronto,

University of British Columbia), and 1 each in Switzerland (Zurich Institute of Technology), the Netherlands (Utrecht), Sweden (Karolinska Institute of Technology), and France (Paris 06) (Table 11.1). After the first 100 institutions, the list results typically become increasingly bunched (the distribution is highly skewed), and the index does not differentiate between numbers 202–252, 253–202, 203–300, 301–400, and 401–500.

If the US scored heavily in the top 50, the picture is not so clear-cut if we look further down the table. Taking the top 100 or 500 universities as a whole, and dividing the percentage of the universities in any one country by the percentage of the world population in that country, the league table changes radically (Table 11.2). The table has been arranged with the countries with the highest representation in the top 500 institutions, relative to the size of their populations, at the top. An index of 100 % suggests that a country is pulling its weight in world terms (the Czech Republic at 100 % and South Africa at 114 % are the nearest), though the top countries are considerably higher. The highest ranked countries now become Sweden (2,200—i.e. over-represented by some 22 times), Switzerland (1,600), Austria and Israel (1,400), Australia (1,070), and New Zealand, Hong Kong, Finland, and Denmark (all on 1,000). What these countries (or territory, in the case of Hong Kong) have in common is that they are relatively small in terms of population (Australia being the largest), relatively affluent, and they are English speaking. The larger countries then follow, with the UK (9,500), and Canada (8,800). On this reckoning, the US is only 14th (726), while Japan ranks 20th with 320, roughly in the same league as France (470), Singapore (400), and Spain (260).

The results are perhaps hardly surprising. The figures seem to suggest that though the best schools in the US (plus Oxbridge in the UK) are pre-eminent from a global point of view, the more welfare state minded and egalitarian countries of Northern Europe (plus a few offshoots like Australia, Israel, and New Zealand) may have a more consistent standard of higher education provision. China, India, and Russia just make it into the top 500, but seem set to move up the rankings in future, if their economic growth continues. China has recently overtaken Japan as the second largest investor in research after the United States. Apart from the regional heavyweights (South Africa, Egypt, Chile, Argentina, Brazil, and Mexico), the states of Latin America, Africa and Central Asia are conspicuous by their absence. Perhaps more surprisingly so is Southeast Asia; with the obvious exception of Singapore.

Despite this degree of English-speaking hegemony, Japanese universities still dominate in the Asia-Pacific region, given the size of the country's population and the large number of institutions. Not surprisingly, the former Imperial Universities predominate within Japan according to the Jiaotong list. In order of ranking the top Japanese universities are Tokyo (ranked 20), Kyoto (23), Osaka (61), Tohoku (76), Tokyo Institute of Technology (89), Nagoya (98), Hokkaido (107), Kyushu (108) and Tsukuba (116). Hiroshima, Keio (the first of the private universities), and Kobe follow along in the 200s, Chiba, Kanazawa, Nihon, Niigata, Okayama, Tokyo Medical, Waseda and Yamaguchi in the 300s, and Ehime, Gifu, Gunma, Kagoshima, Kumamoto, Nagasaki, Nara IT, Osaka Prefectural, and Tokyo

**Table 11.1** Top 50 universities in the jiaotong world ranking of universities 2006

World rank	Institution*	Country	Total score
1	Harvard University	USA	100.0
2	Stanford University	USA	77.2
3	University Cambridge	UK	76.2
4	University California—Berkeley	USA	74.2
5	Massachusetts Inst Tech (MIT)	USA	72.4
6	California Inst Tech	USA	69.0
7	Princeton University	USA	63.6
8	University Oxford	UK	61.4
9	Columbia University	USA	61.2
10	University Chicago	USA	60.5
11	Yale University	USA	58.6
12	Cornell University	USA	55.5
13	University California—San Diego	USA	53.8
14	Tokyo University	Japan	51.9
15	University Pennsylvania	USA	51.8
16	University California—Los Angeles	USA	51.6
17	University California—San Francisco	USA	50.8
18	University Wisconsin—Madison	USA	50.0
19	University Michigan—Ann Arbor	USA	49.3
20	University Washington—Seattle	USA	49.1
21	Kyoto University	Japan	48.3
22	Johns Hopkins University	USA	47.5
23	Imperial Coll London	UK	46.4
24	University Toronto	Canada	44.6
25	University Coll London	UK	44.3
25	University Illinois—Urbana Champaign	USA	43.3
27	Swiss Fed Inst Tech—Zurich	Switzerland	43.2
28	Washington University—St. Louis	USA	43.1
29	Rockefeller University	USA	40.2
30	Northwestern University	USA	39.5
31	Duke University	USA	38.9
32	New York University	USA	38.7
33	University Minnesota—Twin Cities	USA	38.3
34	University Colorado—Boulder	USA	37.8
35	University California—Santa Barbara	USA	37.0
36	University British Columbia	Canada	36.3
36	University Texas Southwestern Med Center	USA	36.3
38	Vanderbilt University	USA	35.1
39	University Utrecht	Netherlands	34.9
40	University Texas—Austin	USA	34.8
41	University Paris 06	France	33.9
42	University California—Davis	USA	33.6
43	Pennsylvania State University—University Park	USA	33.5
44	Rutgers State University—New Brunswick	USA	33.4
45	Tech University Munich	Germany	33.3

(continued)

**Table 11.1** (continued)

World rank	Institution*	Country	Total score
46	Karolinska Institute Stockholm	Sweden	33.0
47	University Edinburgh	UK	32.9
48	University Paris 11	France	32.5
48	University Southern California	USA	32.5
48	University Pittsburgh—Pittsburgh	USA	32.5

Source Jiaotong World Ranking of Universities 2006

Metropolitan in the 400s. Of these 29 Japanese universities, only 3 (Keio, Nihon, Waseda) are private universities, and only 2 are ‘public’ (i.e. run by prefectures or cities, namely Osaka Prefectural, and Tokyo Metropolitan). The other 24 are former national universities, led by the former imperial universities (Tokyo, Kyoto, Osaka, Nagoya, Kyushu (in Fukuoka), Tohoku (in Sendai), and Hokkaido (in Sapporo)), together with Tokyo Institute of Technology. The private universities in Japan which make up the overwhelming majority of Japanese institutions of higher education are thus strikingly under-represented. Over a quarter of the former national universities make it into the ranking, compared with less than 1 % of the private universities. Despite their high rank in some of the Japanese domestic league tables (see for instance the *Asahi Shimbun Daigaku Rankingu*), other leading private universities such as Doshisha and Ritsumeikan in Kyoto do not make the cut in the Jiaotong list.

It is also increasingly recognized in Japan that links with Asia, and especially the rising economies of India, South Korea, and China are particularly important. A report by Demos, a policy think tank in the UK, noted that China had now moved ahead of Japan in terms of its investment in research, and spelled out the implications of such changes: ‘Britain has a choice. Either we become a marginal science and innovation player in world terms, just as we have in the car industry, or we can take our lead from the City of London and become a global hub for research initiatives. That means choosing our areas of specialization, collaborating with others, and placing ourselves at the center of knowledge and innovation networks’. Between 1999 and 2005, there was a massive increase in the number of UK students from China (a 735 % rise) and from Korea (a 79 % rise). However, not all the students were happy with the education they received. Indian students in particular tended to complain at their treatment. Relatively few of them attended the more prestigious universities, and some in lower ranking institutions complained that they were treated as ‘cash cows’ and subjected to ‘mass produced degree courses’. International links therefore should be a means of raising research profiles, and not just a source of revenue through the recruitment of students.

**Table 11.2** National representation in top 100/500 universities, by percent of world population

Country	Percent of top 100 (A)	Percent of top 500 (B)	Percent of world population (C)	Percent ratio A/C	Percent ratio B/C
Sweden	4.00	2.20	0.10	4000.00	2200.00
Switzerland	3.00	1.60	0.10	3000.00	1600.00
Austria	0.00	1.40	0.10	0.00	1400.00
Israel	1.00	1.40	0.10	1000.00	1400.00
Australia	2.00	3.20	0.30	666.67	1066.67
New Zealand	0.00	1.00	0.10	0.00	1000.00
Hong Kong	0.00	1.00	0.10	0.00	1000.00
Denmark	1.00	1.00	0.10	1000.00	1000.00
Finland	1.00	1.00	0.10	1000.00	1000.00
UK	10.90	8.60	0.90	1211.11	955.56
Canada	4.00	4.40	0.50	800.00	880.00
Netherlands	2.00	2.40	0.30	666.67	800.00
Norway	1.00	0.80	0.10	1000.00	800.00
USA	53.50	33.40	4.60	1163.04	726.09
Belgium	0.00	1.40	0.20	0.00	700.00
Germany	5.00	8.00	1.30	384.62	615.38
Ireland	0.00	0.60	0.10	0.00	600.00
Italy	1.00	4.60	0.90	111.11	511.11
France	4.00	4.20	0.90	444.44	466.67
Singapore	0.00	0.40	0.10	0.00	400.00
Japan	5.90	6.40	2.00	295.00	320.00
Spain	0.00	1.80	0.70	0.00	257.14
China-Taiwan	0.00	1.00	0.40	0.00	250.00
South Korea	0.00	1.80	0.80	0.00	225.00
Greece	0.00	0.40	0.20	0.00	200.00
Hungary	0.00	0.40	0.20	0.00	200.00
South Africa	0.00	0.80	0.70	0.00	114.29
Czech	0.00	0.20	0.20	0.00	100.00
Poland	0.00	0.40	0.60	0.00	66.67
Chile	0.00	0.20	0.30	0.00	66.67
Argentina	0.00	0.20	0.60	0.00	33.33
Brazil	0.00	0.80	2.90	0.00	27.59
Egypt	0.00	0.20	1.10	0.00	18.18
Russia	1.00	0.40	2.30	43.48	17.39
Mexico	0.00	0.20	1.60	0.00	12.50
China	0.00	1.80	20.40	0.00	8.82
India	0.00	0.40	17.00	0.00	2.35

Source Jiaotong World Ranking of Universities and the authors

### ***11.2.1 University Research Rankings in Japan***

Because its economic restructuring occurred rather later than that of the UK, Japan's embrace of the research audit culture also came rather later than the 1980s (Goodman 2003). Nevertheless, by the late 1990s, a series of government reports on higher education (and an interest in ministry circles in the UK experience) suggested that serious reform might well be on the cards. By this time, commentary on Japanese higher education from outside was scathingly critical (e.g. Cutts 1997; Hall 1998; McVeigh 2002). During the 1990s, the number of 4-year universities expanded, along with the percentage of high school leavers continuing to university, despite a decline in the number of 18-year olds in the population, which fell 3 % in between 1992 and 2004. More recent developments have included the appearance of vocational universities, a new generation of international universities with multinational students and staff members, and the Center of Excellence (COE) Programs, designed to fund new international exchanges and research collaboration, to raise research in Japan to an 'international' standard (Eades 2005). There have also been awards for teaching best practice, and a UK-RAE style research evaluation exercise is also being planned. But perhaps the most important of the reforms took place in 2004, a 'big bang' (Eades et al. 2005) in which the national and public universities were turned into educational foundations, thus putting them on a similar legal footing to the private universities, and creating an apparently level playing field for all institutions.

It is clear from the vantage point of 2009 that under the new dispensation not only are the average abilities of the groups of students going to the research and non-research universities becoming increasingly polarized, but so is research output and research funding. The case of the COE program is interesting in this regard (Eades 2005); the first proposal from the Ministry was for 30 institutions to be chosen and for most of the money to be invested in them. After a vigorous protest from other universities that wanted to be included as well, the eventual competition was much more open. Subject committees were formed, applications were called for, proposals were reviewed by the subject committees, and after a round of interviews a final shortlist was selected and ranked. The final selection was carried out by the Japanese Society for the Promotion of Science, a part of the Education Ministry, which simply worked down the list allocating the budget for each subject until it ran out. The net result at the end of the exercise, which lasted from 2002 to 2004, was that the top 20–30 institutions, mostly national universities, did in fact get most of the money. A few large prestigious private universities (Keio, Waseda, Ritsumeikan) also made it into the list, though with only a fraction of the awards of the top national universities, as did one or two of the local public institutions, but the general distribution was similar to that of the Jiaotong list—the prestigious national universities predominated and the private universities were barely in the frame.



**Fig. 11.1** Two-stage process *Source* The authors

### 11.3 The Mobility of Research Students

Given this situation it can be seen that the mobility of research students will be a critical factor in the raising or lowering of rankings and in the health of the higher education sector as a whole. In this regard, some interesting patterns are beginning to emerge. This section therefore looks at two of the primary indicators of effective research capacity development in a nation or region—those of research student mobility and interuniversity research links—in the East Asia Region focussed on Japan, China, and the Republic of Korea. Recent government policy directives in this region resulting from the trends discussed above indicate that there is a need to encourage institutions to be more flexible and responsive in developing a strategic portfolio of research activities and research training programs in order to secure national benefits arising from the endeavors and achievements of individual researchers and teams in an international context.

The evolution of the framework for research student mobility and international research links in the East Asian Region must however be seen in the context of that region's emergence as an economic powerhouse in the world economy. As a result of growing interdependence within this region, comprising China, Korea, and Japan (with as yet fairly tenuous links to East Russia, India, and Mongolia), an independent economic system is forming that does not rely on the rest of the world for its rationale or strength. This development can be seen in the emerging trade patterns within East Asia, among other indicators (Watanabe 2004).

In an interesting paper, Kuroda (2007), asked the obvious question: can the trend of economic integration at the trade and production level that is occurring in East Asia be confirmed in the sphere of student mobility and research links? In other words, is *de facto* economic integration being transformed into a framework for full institutional integration including higher education? While the data on student mobility in East Asia is at best partial and the history of research linkages is in the main those created with third parties from outside of the region (most often based on historical linkages between institutions and/or governments in Europe and the US), it is possible to trace emerging intraregional patterns in recent times.

The traditional higher degree pattern in most parts of the world has been that Masters and Honors level research students carry out local and low-level supplementary research in the major paradigms of the time or place, and this is



examined 'in house'. Also In this system, the PhD is personal and subject related but might include a foreign location and/or mentor.

In a major shift in emphasis, a new pattern is emerging in Asia-Pacific countries. In this pattern, the Masters by Course Work remains a personal development tool (post graduate), but may also be used by government/business as a form of capacity building for their employees (with government, business or ODA sponsorship). Here also the PhD is changing, with the basic traditional PhD declining in importance and being replaced by PhDs in fixed topic research as part of team (locationally footloose students, paid directed research) and explicitly designed for country or regional needs. Post-doctoral research is now also becoming footloose, and is often directed research or paid team research. Business, universities, and governments have of course invested in higher degree students at various times and at various levels in the past through scholarships and the like; what seems to be occurring now is a much more intense and directed form of such investment. In essence, this is a two-stage process (Fig. 11.1).

In this situation, the reputation of a university and/or its research centers for applied research is critical; 'pure' research is less well thought of, and increasingly less well funded. Externally based research training is also less well thought of—in a situation of rapid Asian growth, each of the countries involved is moving away from sponsoring its research students, and perhaps eventually all students, studying in European, American, or Australasian institutions.

## **11.4 Recent Patterns of Research Links and International Student Mobility in East Asia**

East Asia as an economic powerhouse and major contributor to the internationalizing of linkages involving student mobility and research is quite a recent phenomenon. Before the late 1980s, only Japan was in a position to contribute much to international student mobility and research in the region, and those Japanese students and research universities that chose to internationalize their education or research experiences looked mainly to Europe and North America (Umakoshi 1997). Since then Korea and more recently China have become major contributors in both areas, and the East Asian Region as an entity in its own right has become much more important to the flow of students and research ideas in its part of the world.

### ***11.4.1 East Asia Student Mobility Patterns***

Taking 1987 as the base point (before the Asian Financial Crisis), Table 11.3 shows that the number of foreign students studying in the Universities of the East

**Table 11.3** Student mobility in East Asia compared to the US, UK, and France

Inbound—selected country	1987	2002	Rate of increase
USA	3,43,870	5,86,316	1.70
France	1,33,848	2,21,567	1.65
UK	45,416	2,55,233	4.62
Japan	10,697	95,550	7.93
China	3,250	85,829	25.41
Republic of Korea	900	4,956	4.51
Total for East Asia	14,847	1,77,290	10.94

Source 2007

**Table 11.4** Student mobility in East Asia compared to the US, UK and France

Outbound—selected country	1987	2002	Rate of increase
France	12,500	53,152	3.25
USA	19,707	40,750	1.07
UK	14,513	30,201	1.08
China	42,491	2,74,144	5.46
Japan	15,335	62,938	3.10
Republic of Korea	22,468	83,242	2.71
Total for East Asia	80,294	4,20,324	4.23

Source Kuroda 2007

Asia Region had increased markedly by 2002 (the latest year for which figures for *all* regional countries are available; Kuroda 2007). While the US, France, and the UK, which had traditionally taken large numbers of foreign students, recorded increases (the UK by nearly 500 %), those moving to and within East Asia (led by China) increased by 1,100 %. Table 11.4 confirms that this pattern of considerable change is also found in the outbound flows of students from the countries of East Asia, China especially.

These data show that there has been a sharp increase in student mobility within the region, in the form of student exchanges between individual institutions and countries, based on government sponsorship. In more recent times, these have included a fair number of postgraduate research students, mainly at the Masters level, moving from China and Korea to Japan.

Coupled with this is the current very significant investment in research capability by China, Korea, and Japan (and other countries close by). Each country is investing huge amounts in research capability and in student mobility, but this is intended to make the region self-sufficient in both higher degrees and research and development, not to provide students for institutions outside the region. While research and development in specific fields of endeavor may still require that East Asian students and research centers look for opportunities and partners from outside the region, this appears less and less attractive to the funding bodies involved as time goes on.

**Table 11.5** Number of international students in Japan

Source country	2001	2002	2003	2004	2005
China	44,014	58,533	70,814	77,713	80,592
Taiwan	4,252	4,266	4,235	4,096	4,134
Korea	14,725	15,846	15,871	15,533	15,606
Malaysia	1,803	1,885	2,002	2,010	2,114
USA	1,141	1,217	1,310	1,456	1,646
Thailand	1,411	1,504	1,641	1,665	1,734
Indonesia	1,388	1,441	1,479	1,451	1,488
Philippines	490	483	508	525	544
Brazil	343	347	353	330	338
Bangladesh	805	823	974	1,126	1,331
Others	8,441	9,205	10,321	3,331	3,461
Total	78,812	95,550	109,508	117,302	121,812

Source Unesco Statistical Yearbooks, various

### 11.4.1.1 Japan

A complication in this analysis, but one that actually reinforces these changes in research student mobility and research links in the East Asian Region is that of the demographic change now affecting Japan and other countries in the region (Cooper and Eades 2007). During the twentieth century most of the advanced industrial societies moved toward increased life expectancy and decreased fertility—more old people and fewer children—and Japan led this process. By the late twentieth century, the birthrate in Japan and most of the other industrialized countries had fallen so low that any population growth still happening was due to immigration and people living longer. While the very high life expectancy in Japan has offset the effects of declining fertility on the total population size of the country for some time, the impact of this ran out during the first decade of the twenty-first century with the population peaking at 127 million, since when it has started to plummet. By 2050, it could be back to World War II levels, or around 70–80 million if no new offsetting trend occurs. The impact of this population decline with respect to the higher education sector is twofold. First, the number of young Japanese seeking higher education has declined rapidly in the past few years—so much so that on a yearly basis it is now less than the total number of places available at domestic universities—and, second, there is an increasing desire to fill the surplus places with Japanese students who would otherwise go offshore for such education, and/or with foreign students. So, while the mobility of undergraduate students is not at issue in the present discussion, these trends will also have an impact on the flow of research students from Japan because this demographic situation is forcing internationalization on Japanese universities (the alternative, that of foreign universities setting up in Japan has largely failed, for reasons that will not be discussed here). We may therefore expect that in the future there will be a much greater concerted effort to keep both types of student ‘at home’ in the region and ultimately in individual countries.

How this is already impacting on Japan as shown in Table 11.5, where the number of foreign students in Japan is rising rapidly partly due to the need fill these surplus places, but partly also due to the push for Asianization outlined above.

## 11.5 Models of Research Student Mobility and Research Linkage Development

As Kuroda (2007) notes, the original model of student mobility was one of universalism, or unbounded study, where universities were seen as communities of universal knowledge not bounded by state borders or business requirements. Thus, universities could be and were open to all regardless of cultural origin and political background, and faculty members and students could be international as much as local (the ‘Cosmopolitan University’ model—Kerr 1990). However, as time went by, the nation state came to the fore as a funding agent, and universities lost some of their independence. Universities were gradually transformed into ‘National’ universities (e.g., the University of Tokyo, or the Australian National University; Kerr 1990); a model diametrically opposed to the Cosmopolitan model, even though it is doubtful if faculty and students recognized much difference.

Research student mobility developed within this period of change. To the extent to which the Cosmopolitan model prevailed in any given situation, the nationality of students and faculty, seen as a community of world-wide scholars, did not matter and the existence of foreign research and other students was proof of the universality of higher education. Under the National University model, the dispatch of students abroad and the recruitment of foreign faculty (usually in limited numbers because of funding or legal constraints) were also seen as important. However, this was because of the needs of the nation (e.g., ‘nation building’), and did not include the receiving of students from abroad or the cultivation of an international outlook on the part of domestic students. Research student mobility was nevertheless important.

### 11.5.1 *The Third model: The Cosmopolitan Nation State University*

It is possible to distinguish a third model—that of the ‘Cosmopolitan Nation State University’ and of its research links—as being useful for the development of a country’s science and engineering research and development (Ebuchi 1997). As a result, a strong sense of the need for internationalization combined with national control of research student support and research linkage development is becoming the preferred approach in Asia, especially East Asia, in line with this model. Its

counterparts in Europe can be seen in the ERASMUS programme and the Bologna process.

This model has become more important in the Asia-Pacific because the current preference for the formation of a ‘knowledge economy’ centering around universities is clearly a part of the national strategies of Asian Countries, and they are actively engaged in moves to secure excellent students from any source as well as to promote research linkages based on domestic needs. Organizations set up to achieve these aims have been promoted by ASEAN, Australia (the University Mobility in Asia and the Pacific or UMAP programme, established in 1993) and others. As with the European ERASMUS and similar American initiatives, these moves should be seen as much a human resource strategy as an exercise in cosmopolitan intellectualism in today’s world market. From the point of view of the nation states involved, in order to achieve Asia-Pacific regional integration, international research, other student mobility within the region, and the creation of intraregional research links should be considered and promoted from the perspective of strengthening competitiveness in human resources *vis-à-vis* the other regions of the world. And, as we have seen earlier in this chapter this is precisely what is now happening.

### ***11.5.2 Connecting Research Links and International Student Mobility to Community Development in East Asia***

The most salient trend in higher education on a world-wide basis in the early twenty-first century is the rapid process of its marketization (Kuroda 2007). The current trend toward transforming national universities into either incorporated administrative bodies or privatizing them is undoubtedly contributing to this, but so are business and government HRD, research, and development needs. The diversification of higher education funding, closer industry–university–government partnerships, and networks of universities are all aimed at the acquisition of research (and other) students in the international market, or retaining/developing their services on a regional basis. In the World Trade Organization context, and consequently within the framework of many of the new Free Trade Agreements, higher education has become a marketable commodity on an international basis. And, in line with the discussions and behaviors seen in relation to other important commodities, there are varying degrees of protectionism and liberalism throughout the sector and the World.

This is true of the Asia-Pacific as much as of elsewhere in the world. In particular, the rapidly growing demand for higher education and research and development in China cannot be fully absorbed domestically and must therefore be satisfied elsewhere. What is apparent though is that satisfaction of this demand is increasingly being sought in Asia itself, or at the very least in countries where higher education and research are being transformed into a service commodity market in close proximity to that region. Malaysia, Singapore, and the Philippines,

as well as Korea and Japan, are becoming the preferred sources of supply as their own higher education and research sectors become as sophisticated as those in Europe and the Americas. Thus, a regional market in higher education and research is rapidly forming in East Asia, bolstered by South East Asian suppliers.

This can be illustrated by reference to the research plan for the period 2006–2010 of our own university, Ritsumeikan Asia Pacific University (APU). This business plan provides a preamble to its substantive content which is encapsulated by the following statements:

## **11.6 A Framework for Research and Research Training at APU**

Universities are the nation's leading providers of training for future research workforce and generate much of the new knowledge which is essential to the Asia-Pacific's long-term economic growth and social cohesion. In order to achieve this, APU established the following research framework policies for 2006–2010:

1. To serve as a hub for research in Asia-Pacific Studies by responding to issues of the Asia-Pacific region and contributing to the development of Asia-Pacific Studies as a core field of study in global terms;
2. To establish and/or contribute to the academic networks of research institutions, organizations, and individuals in the region and in various countries of the region;
3. To promote a research policy that enhances the social contribution of research. First, emphasize various types of international and regional exchanges; second, share research findings; third, contribute to regional capacity building through research;
4. To emphasize research supported by public and private funds. APU should obtain funding from as many external sources as possible, in particular for international research appropriate to the eventual creation of a COE in Asia-Pacific Studies;
5. To Contribute to the improvement of the content of education and to educational systems in the Asia-Pacific Region at an international level.

## **11.7 Conclusion**

We can see from this example and the very many others like it that international student mobility and international research linkages will continue to grow—but there will be significant limits (boundaries) to that growth. In particular, demand patterns are now much different than before: countries, industry, and indeed universities themselves have an increasingly different outlook on research student

mobility and international research links. While it is a truism that there are more competitors fishing in the same pools on a world-wide basis—for students, for researchers, for staff, for revenue from higher education, for research outputs and linkages, etc.—we should expect that a form of protectionism will increasingly come to the fore. In other words, the demand for and supply of higher degree and research students in regions like the Asia-Pacific will become increasingly concentrated within those regions, for reasons that have more to do with the playing out of regional trade, investment, and market forces than of the promotion of cosmopolitan styles of education.

As the Asia-Pacific Region becomes an ‘Asia Pacific Community’, international research student mobility and the formation of intraregional research links will be just as much part of the discussions on tactics and strategy as will political and economic issues such as trade and security. Other regions of the world should expect a decline in the numbers of research students from the Asia-Pacific and of research links with the Asia-Pacific as this process works itself through. The model of higher education and research that the Asia-Pacific is adopting at present is thus the ‘Cosmopolitan Nation State University’ and its research links will reflect this as the region broadens and deepens its economic and intellectual capacity.

In this chapter, we have argued that higher education has become increasingly competitive, and that one symptom of this is the increasing obsession with national and international rankings. The UK has taken the lead in the development of the audit culture, and many of the UK initiatives have been noted or adapted by the Ministry of Education in Japan, in attempting to raise teaching and research in Japanese universities to ‘international standard’. These models may be of use in analyzing the situation in the Asia-Pacific as well, and especially the changing university landscape in Japan. On the one hand, Japan aspires to be the higher education hub of East Asia, and indeed its most prestigious universities are dominant in the region, particularly in the sciences. However, the Japanese higher education sector is numerically dominated by private universities, few of which feature in international rankings. This raises the question of how they can raise their international profiles, and this is where the mobility of research students and methods to attract them will become an increasingly important battleground.

One alternative has already been tried in Japan. In recent years, there have been several bold attempts to set up institutions to attract students on the international market, including the International University of Japan, Akita International University, and initiatives from both Waseda and Ritsumeikan (Ritsumeikan APU). The scale of these experiments varies, from the very small (IUJ and AIU) to the substantial (APU). They vary in their approach to language, and in the markets they are trying to attract, as well as in the strategies they are using. APU appears to be going clearly down the vocational-teaching route, expanding student numbers, while at the same time trying to maintain an academic-research base, particularly in the graduate school. How far this strategy will work in the long run is an open question, given that the major universities competing in the international market are generally academic-research based in the first instance. Meanwhile IUJ and Waseda seem to be going more down the academic-research route, with a more

limited curriculum, a smaller infrastructure, and smaller numbers of students. Seeing how these programs fare in the next few years should make for an interesting comparison, one which will tell us much about whether Japanese universities can gain a foothold in the global mass market for research students, or whether their futures lie more in cutting edge research in a few high prestige institutions, leaving most universities in the country to compete for an increasingly precarious domestic research student market resulting from long-term demographic decline (Kinmonth 2005).

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