

Higher Education Dynamics 36

Simon Marginson
Sarjit Kaur
Erlenawati Sawir *Editors*

Higher Education in the Asia-Pacific

Strategic Responses to Globalization

 Springer

Higher Education in the Asia-Pacific

HIGHER EDUCATION DYNAMICS

VOLUME 36

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Editors

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Preface

*'We can be heroes
Just for one day ...'*
~Heroes, David Bowie, 1977¹

These are the great times of higher education in Asia-Pacific and especially of its signature institution, which is the research university. Higher education seems to expand without limit, along with the middle classes that are always its mainstay. Its remarkable growth, scarcely touched by the global financial crisis that has battered universities in North America and UK/Europe, is financed by both governments and families. The mix varies by country but the role of families is more important in the Asia-Pacific, especially in East Asia, than in most other parts of the world. First-generation families are moving into higher education everywhere in the region, certain that the sacrifices they are making for their children will pay off. Higher education is taking into itself an ever-growing accumulation of hopes and dreams, of each and every national people. Government and public expect much of higher education. And governments and public wait with impatience for the pay-off from their investment, the better future that is expected to follow: stellar individual opportunities at home and abroad, accelerated national growth and a modernized economy, global research power. A larger figure for the nation, as it stands out decisively, beyond the long shadow of the West at last, and begins to make its own place in the world. All this and more higher education institutions will provide.

It is too much to expect. As the Asian-Pacific nations follow Japan and Singapore into the era of high industrial modernization, they will find that after all, universities cannot do everything. Perhaps, like Japan, they will start to underfund them. Perhaps, like Singapore, they will invest even more so as to move ahead of the pack. But in this process higher education is becoming central, everywhere. It is also becoming more global. The more research universities evolve, the more some of their activities happen behind the back of governments, or move beyond the border and outside their reach. This is frustrating for governments, which want their

¹ From the album *Heroes*, RCA, recorded 14 October 1977, Hansa Studio by the Wall, West Berlin.

universities to cut a larger figure in the world, but also want control. We expect that the potential for national/global tensions, always there in research universities, will increase as globalization becomes still more influential.

The nations of the Asia-Pacific—which in this book means littoral East Asia, Southeast Asia and the nearby Western Pacific countries—are at very different points on long and diverse curves of development of modern higher education and research systems. They range from the higher education system with the second largest level of investment in the world (Japan); and the largest in student numbers and the second largest in aggregate R&D (China); to Cambodia, Laos, Myanmar and Papua New Guinea, where participation and spending are near the global bottom and research activity scarcely exists; and Indonesia, where a great population is scarcely served by tertiary provision that is still rudimentary in large parts of the country. Only in Japan, China, South Korea, Taiwan China and Singapore has national infrastructure in higher education become decisively positioned at the centre of national life in the manner of Western Europe and North America. However, others such as Malaysia and Thailand could join that list fairly soon; and many expect that sooner or later neighbouring India, just off the edge of the Asia-Pacific, will kick-start the transformation of higher education in South Asia. The example power of the five stellar cases—above all, the power of China's extraordinary self-transformation through investment in education and research—looks irresistible. Though the rest of Asia-Pacific is at different points on the various trajectories, all nations seem to be moving in the same direction.

This book was conceived while Sarjit Kaur was working for a period of 5 months in 2007 at the Centre for the Study of Higher Education at the University of Melbourne, alongside Simon Marginson and Erlenawati Sawir. We were delighted at the enthusiasm of the first contributors we approached. The book kept on growing from there. Though eventually 12 nations were included in its coverage, along with the broader regional chapters and two on neighbouring countries, we sincerely regret that individual chapters on some Asia-Pacific cases such as Korea, Taiwan China, Philippines, Laos, New Zealand and Fiji were not included. These countries are included in some of the comparisons in Part I, and we hope that the omissions can be rectified in a future volume. Another dimension we would hope to cover more completely in future is the role of regional and global agencies in education in the Asia-Pacific and the potential for regional organization, which is slowly growing.

It is exciting to be working in research and scholarship on higher education, in the Asia-Pacific, at this time. This book has been a pleasure to prepare. We hope that it stimulates discussion about the many themes and issues raised by the contributing authors. We would like to record our heartfelt thanks to Yoka Janssen at Springer, whose guidance and support were crucial to the successful completion of the book. Thanks also to Annemarie Keur at Springer, and to Peter Maassen and Joe Muller, Editors of the Springer book series *Higher Education Dynamics* in which this volume has been included.

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Simon Marginson
Sarjit Kaur
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Part I
Introduction

Chapter 1

Global, Local, National in the Asia-Pacific

Simon Marginson, Sarjit Kaur and Erlenawati Sawir

Introduction: “The East Is Rising”

On 1 February 2010 Yale President Levin (2010) spoke at the Royal Society in London on higher education in Asia. “At the beginning of the twenty-first century, the East is rising”, said Dr Levin.

The rapid economic development of Asia since the Second World War—starting with Japan, South Korea, and Taiwan, extending to Hong Kong and Singapore, and finally taking hold powerfully in mainland China and India—has altered the balance of power in the global economy and hence in geopolitics. The rising nations of the East all recognize the importance of an educated workforce as a means to economic growth and they understand the impact of research in driving innovation and competitiveness. In the 1960s, 70s, and 80s, the higher education agenda in Asia’s early developers—Japan, South Korea, and Taiwan—was first and foremost to increase the fraction of their populations provided with postsecondary education. Their initial focus was on expanding the number of institutions and their enrolments, and impressive results were achieved.

Today, the later and much larger developing nations of Asia—China and India—have an even more ambitious agenda. Both these emerging powers seek to expand the capacity of their systems of higher education, and China has done so dramatically since 1998. But they also aspire simultaneously to create a limited number of “world class” universities to take their places among the best. This is an audacious agenda, but China, in particular, has the will and resources that make it feasible. This aspiration is shared not only by other nations in Asia but also by certain resource-rich nations in the Middle East (Levin 2010).

Nations and institutions in North America and Western Europe are watching the emerging Asian systems of higher education and research with a mix of excitement and apprehension. It seems that “the East” is seen as both rival of “the West” for global primacy and a fecund source of future collaborations.

The “rise” of “the East” should not come as a surprise. The cultural and demographic depth of Asian civilizations is immense. East Asia and Southeast Asia—like South Asia and the Middle East—have been main centres of activity since humans

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emerged from the Neolithic. Though European and American scholars mostly see world affairs as driven from the North Atlantic; and though European and American armies, financial economies, science, and techniques of state secured the global lead in 1700–2000; world history has always been multi-polar. As the last 50 years show, events in apparently local or peripheral zones in Vietnam, the West Bank or Afghanistan readily take on global significance (Bayly 2004). Now, because of the growing weight of Asia, future human evolution and global affairs will be shaped by an increasingly plural set of knowledge economies.

The “rising” of the “East” in higher education and other spheres is a truism taken for granted (Morgan 2010). But at best truisms are over simplifications. At worse they are seriously misleading. Is all of the “East”, the whole of Asia, rising fast in education—and if not, which parts are rising and why? And which are not?

Geographical Asia is the largest and most heterogeneous continent on Earth. It contains a number of distinctive regions, each loosely united by geographical proximity and a degree of shared culture: the Northeast Asia of China, Japan and Korea; Southeast Asia; India and South Asia; landlocked Central Asia; Northern Asia in Siberia; and West Asia, the “Middle East” and the Gulf States. Asia is bordered by Europe on one side and the Western Pacific nations on the other.

Focus of the Book

This book focuses on higher education systems in greater East Asia and the Western Pacific: the “Asia-Pacific” region. While some chapters cover a broader field of data, notably Chap. 1, and Chap. 4 which compares the effects of government financing of education in a range of countries, the purpose of the book (including its examination of the larger context in which the region sits) is always to discuss and explain higher education and research in the Asia-Pacific region.

In important ways the drivers of higher education development in Asia-Pacific are distinct. As Chap. 3 shows there has been a dynamic transformation of higher education in the “Confucian Model” systems of East Asia and Singapore—though at the same time other systems are not travelling as well and some remain very poor. Between 1990 and 2007, tertiary education enrolments in China as a proportion of the age cohort rose from 4 to 23%. Since 2003 China’s share of the world top 500 universities has risen from 3 to 6%. China’s total investment in R&D is second highest in the world. After the USA, China and Taiwan China between them have the second largest number of top 100 research departments in engineering (SJTUGSE 2010). There have also been stellar rates of growth in educational participation and research in Korea, Taiwan, China and Singapore. State investment plays the key role in research growth, though much of the expansion of student participation is funded privately by student families.

But the impact of the Asia-Pacific in higher education and research does not simply derive from the scale or rapidity of growth in the leading nations. It is also a matter of demographics—a third of the world’s people are in the Asia-Pacific—and

timing. Asia-Pacific higher education is rising at the same time as two other changes which are amplifying Asia-Pacific higher education on the world scale. Knowledge-based activity has moved to front stage in economics, culture and government. And global convergence and partial integration have accelerated.

Higher education is at one and the same time global, national and local. From its beginnings the university was always rooted in local settings, while at the same time it connected to a larger international field of knowledge. In the nineteenth century it became national as well, a means of nation-building and modernization. Universities began to carry out research activities in the sciences, first in Germany and then the United States. In the twentieth century, higher education in this local/national form spread throughout the world. In the early twenty-first century higher education and research continue to be local and national. They have also become global. The cross-border passage of ideas, people, technologies, policies and organizational systems has intensified. Global English is spreading. Global comparisons and rankings are widely used, alongside national comparisons.

Research universities help to bring the wider world into their nations. They both respond to globalization, and are one of the drivers of globalization. But their role in the present era of global convergence is larger than this suggests. Universities have one foot in the national and local dimensions of human agency and action. There they secure most of the resources they need to keep functioning. Their other foot is in a different place. This other place is the growing global dimension of human agency and action. In the global dimension flows of ideas, knowledge and people freely and directly cross borders. The work of higher education can no longer be contained entirely by national systems of regulation. Higher education is at the core of the global society that is beginning to emerge, in which there is no doubt that Asia-Pacific nations will have a central part to play.

In conjunction with economic growth, new forms of government, and social and geographical mobility, higher education is carrying the nations, peoples and long traditions of the Asia-Pacific region towards an advanced form of modernity. Universities and knowledge across the world are become more important—and globalization brings the world's universities together. This is why the "Rise" of "the East" in higher education and research has such strategic significance, and its outlines are suddenly so visible. Yet little is known around the world about the emerging higher education systems in the Asia-Pacific and of the responses of institutions and national governments to globalization. This book is designed to help fill that gap in knowledge—to take readers inside the global trends playing out in the Asia-Pacific region, and into the nations and the institutions themselves.

Anatomy of the Asia-Pacific

The Asia-Pacific region combines three areas.

First, East Asia: China; its offshoots in the SARs, Taiwan and Singapore; and Korea and Japan, nations partly shaped by China that evolved distinctive forms.

Second, Southeast Asia from Myanmar to Indonesia to the Philippines and Vietnam. Historically the two great cultural influences in Asia beyond Iran were China and India. Diverse India was diffused by trade, ideas and Hindu-Buddhist religion. India's principal contribution to East Asia was Buddhism. China's slower and more compact effects were secured by trade, conquest and the customs of daily life. The two sets of influences met in Southeast Asia where the cultural fault line ran between the Dai Viet in northern Vietnam, long colonized by China, and the Hindu kingdom of Champa on the central coast. Later the Chams and part of Cambodia were absorbed by the Viet and the cultural line—which has never been watertight—shifted further West. Meanwhile, migrations out of both India and China continued into all parts of Southeast Asia and beyond. Southeast Asia formed the one formal regional grouping in the Asia-Pacific, the Association of South East Asian Nations (ASEAN), in 1967. ASEAN meets with China, Japan and Korea as “ASEAN plus three”. Recent summits have taken this greater East Asian form.

Third, there is Australia, New Zealand and the island Pacific. Their indigenous peoples came from Southern China and Southeast Asia. Australia and New Zealand are separated from most other Asian-Pacific nations by their British-European heritage governmental, economic, civil and public forms. But they are increasingly Asian in international trade, their politics and diplomacy are often focused on Asia, and via migration they are becoming more Asian in demography.

What connects these three areas? For three thousand years and more the continental Asia-Pacific has been joined by sea-lanes between coastal ports and by rivers that flow inland. Sea-lanes and rivers have always been vital in human affairs, channels of economic exchange, people movement and cultural transfer and commonality (Murphy 2010). Thus India and China knew about each other from the beginning of recorded history; and from time to time Korea and Japan; and the kingdoms and empires of Southeast Asia; were drawn into the orbits of China and of each other. Littoral linkages have now extended to the West Pacific and follow air routes as well as sea-lanes. Coal and iron ore move from Australian ports to Shanghai and other Asian cities and students flow in the reverse direction to Australia and New Zealand. East Asia, parts of Southeast Asia and the Western Pacific share a common process of modernization though the higher education systems in parts of Southeast Asia and the Pacific still lag behind.

Yale's Dr Levin mentioned also higher education in India and the Gulf States. South Asia is connected with Asia-Pacific but distinct: a culturally coherent world of its own though politically fractured. As discussed in the concluding chapter, higher education in India is growing but more slowly than in the Confucian zone. Bangladesh, Pakistan and Nepal are further behind. The dynamics of university and research development in the Middle East and the Gulf are different again. Modernized systems are being built using top down policies financed by oil revenues. A widespread spirit of higher education has yet to be entrenched in society. Part IV considers one country case in each of South Asia and West Asia.

Growth of Tertiary Participation and Research

Table 1.1 summarizes the worldwide expansion of tertiary students between 1991 and 2007. There was massive growth in the number of tertiary students in both East Asia and the Pacific and South and West Asia. In both groupings the absolute number of tertiary students more than tripled over the period (UNESCO 2010). During this period, population growth was more rapid in South Asia than in East Asia, so the increase in the rate of participation in tertiary education rate was greater in East Asia and the Pacific. Across East Asia and the Pacific from 1990 to 2005 the Gross Enrolment Rate (GER) in tertiary education rose from 6 to 24%. It has now reached the world average level (Varghese 2009, p. 8).

The growth of tertiary educational participation in Asia is especially significant because of its global scale. McKinseys estimates that in each of China (1.3 billion) and India (1.1 billion) the middle class could reach 500 million by 2025, multiplying three or four times from the present levels (Altbach 2009, p. 181). If the educated population in China and in India reached average OECD tertiary participation levels, more likely to happen in China, the total pool of educated labour would be almost three and a half times the pool from North America and Europe (Willekens 2008, p. 118). On top of this Southeast Asia has another 0.6 billion people.

Here what distinguishes the Asia-Pacific from South Asia is the quality of the student places in which tertiary students are enrolled—there is unevenness in all national higher education systems, but the best institutions are stronger in Asia-Pacific than in South Asia—and the related and concurrent growth of research.

From 1995 to 2007 the number of internationally published science and technology¹ papers from Asia grew by 141.8%, from 76,922 to 167,389. Papers from the European Union increased by 25.5% to 245,852, and in the United States by 8.5% to 209,695. Asia's share of world science papers jumped from 13.6% in 1995 to

Table 1.1 Tertiary students by world region, 1991 and 2007. (Source: UNESCO Institute for Statistics)

	1991 (millions)	2007 or nearest year (millions)
East Asia and the Pacific	14	44
South and West Asia	6	20
Central Asia	2	2
Arab States	2	8
Western Europe and North America	26	35
Central and Eastern Europe	10	21
Latin America and the Caribbean	7	18
Sub-Saharan Africa	1	4
World	68	153

¹ Includes social sciences.

22.1% in 2007 (NSB 2010, A5–25). The annual Shanghai Jiao Tong University ranking measures comparative university performance in research and has become a key indicator of the knowledge economy.² Between 2004 and 2010 the number of “Asia/Pacific” universities in the Shanghai Jiao Tong world top 500³ grew from 89 to 106, an increase of 19.1% (SJTUGSE 2010). There were 204 world top 500 universities in Europe and 187 in North America in 2010.

Compared to measures of the number of science papers, rankings are slow to change. New top 500 universities must displace existing ones, and there are time-lags between growth in science outputs and the manifestation of that growth in rankings. However, all measures suggest the world role of Asia-Pacific research is advancing at speed. There were Jiao Tong top 500 research universities in eight systems in 2010: Japan (25), China (22), Australia (17), South Korea (10), China Taiwan (7), New Zealand and China Hong Kong (each 5), and Singapore (each 2). Five of these Asia-Pacific systems—Japan (9), Australia (7), Taiwan (2) and South Korea and Singapore (each 1)—had top 200 universities (SJTUGSE 2010).

South Asia had just two universities in the research top 500 in 2010, both in India and none in the top 200. South Arabia also had two top 500 universities.

Variations Within the Region

Table 1.2 uses selected indicators to summarize the Asia-Pacific higher education systems, their demographic and economic conditions, global connectedness and research. There are marked variations between systems in resources and outputs.

The sheer size of many nations in the region is striking. China, Indonesia and Japan each have over 100 million people, large when compared with Europe and most of the Americas and Africa. The Philippines, Vietnam and Thailand all have over 50 million. Korea and Myanmar are just below this. With the exception of Korea and Japan, all of these nations have many regional language groups. On the other hand, many Asia-Pacific nations are very small, especially the island Pacific. Some are too small to have universities and national innovation systems. (Nations with under 300,000 people have been excluded from the table).

These indicators are broad signifiers only. They need to be interpreted within each national context. For example, Internet connectivity takes place at a range of speeds. Nations with a high penetration of broadband—Korea is the standout in Asia—are more effectively connected to the rest of the world. Another example is tertiary enrolment rates, where there are national variations in the mode of en-

² The annual rankings by the *Times Higher Education* and QS marketing use composite indexes that cover a range of criteria, of which research is only one. Composite rankings can be criticized on grounds of validity; and these rankings are prone to sharp annual rises and falls that appear unrelated to institutional performance (Marginson 2010a).

³ “Asia-Pacific” as defined in the Shanghai Jiao Tong ranking includes West Asia, and also covers Australia, New Zealand and the Pacific islands.

Table 1.2 The Asia-Pacific nations: Selected indicators of demography, economy, connectedness, education and research. (Sources: Data bases of World Bank (2010), Asian Development Bank (2009); UNESCO Institute for Statistics (2010); National Science Board of the United States (2010); CIA (2010) for Taiwan data only)

Nation and sub-region	Population 2008 (Millions)	GDP PPP 2008 (\$ US bill)	GNI per head PPP 2008 (\$ US)	Internet users per 100 persons 2007	Adult literacy (male & female, 15 years & over) 2007 (%)	Public education spending proportion of GDP 2008 (%)	Gross enrolment ratio tertiary education 2007 (%)	Scientific papers 2007
<i>East Asia</i>								
China	1,325.6	14,204.3	6,020	22	93.3	3.9	22	56,806
Hong Kong	7.0	306.5	43,960	***59	...	4.5	34	...
China								
Macao, China	0.5	31.3	52,260	46	...	...	55	...
Taiwan	22.9	717.7	###	...	...	**1.7	...	12,742
China								
South Korea	48.6	1,358.0	28,120	***77	...	**3.1	96	18,467
Japan	127.7	4,354.6	35,220	69	...	**3.8	58	52,896
<i>South-East Asia</i>								
Vietnam	86.2	240.1	2,700	21	90.3	...	...	283
Lao PDR	6.2	13.2	2,040	2	73.4	...	12	12
Cambodia	14.7	28.0	1,820	***0	76.3	1.1	5	26
Thailand	67.4	519.0	5,990	20	94.1	4.0	...	1,728
Myanmar (Burma)	49.2	...	1,290	0	...	...	9	13
Philippines	90.3	317.1	3,900	6	93.4	2.5	*28	195
Malaysia	27.0	383.7	13,740	63	89.9	6.0	*30	808
Singapore	4.8	238.5	47,940	68	94.4	**3.1	...	3,792
Brunei	0.4	19.5	50,200	48	94.9	**2.9	15	16
Indonesia	228.2	907.3	3,830	11	91.4	#	18	198
Timor-Leste	1.1	0.9	4,690	...	...	...	**15	...

Table 1.2 (continued)

Nation and sub-region	Population 2008 (Millions)	GDP PPP 2008 (\$ US bill)	GNI per head PPP 2008 (\$ US)	Internet users per 100 persons 2007	Adult literacy (male & female, 15 years & over) 2007 (%)	Public education spending proportion of GDP 2008 (%)	Gross enrolment ratio tertiary education 2007 (%)	Scientific papers 2007
<i>Pacific</i>								
Australia	21.3	762.6	34,040	***56	...	##	75	17,831
New Zealand	4.3	115.4	25,090	69	...	#	79	3,173
Papua NG	6.4	14.2	2,000	2	57.8	4.5	...	21
Fiji	0.8	3.7	4,270	11	92.9	3.8	...	35
Solomon Islands	0.5	1.3	2,580	2	...	...	...	2

Nations with less than 300,000 people not included; Democratic Republic of Korea (North Korea) not included due to lack of reliable data

... = data not available; PDR = Peoples Democratic Republic

*data for 2006; **data for 2007; ***data for 2008

#In 2004 public spending in Indonesia was 0.8% of GDP; in New Zealand 5.1% of GDP

##In 2005 public spending in Australia was 4.8% of GDP

###In 2008 Taiwan's GDP per head (*not* GNI per head) was \$ 32,100 in PPP terms

Papua NG = Papua New Guinea; PPP = Purchasing Power Parity, designed to represent dollar amounts in each country as equivalent in terms of local purchasing power; GNI = Gross National Income

rolment. Hong Kong China established mass tertiary education somewhat slower than the other wealthier systems in Table 1.2; and it did so primarily by expanding 2-year associate degrees in community colleges. Entry to the research universities remains highly selective. The growing weight of community colleges is a fiscal benefit for government because these student places are largely self-financed. But all else equal, 2-year programs produce less breadth and depth in the labour market than do 4-year programs. Not all in Hong Kong agree that community colleges should be designated “higher education”; though many 2-year students will eventually upgrade to university (Kember 2009).

The Demographic Factor

Demography shapes the demand for, and the supply capacity of, national higher education systems. It particularly affects system size and growth. At any given time demography is largely set. Nations can influence their demography, primarily through migration policy and also fertility inducement or retardation, but such policy actions are manifest only slowly in higher education.

Among Asia-Pacific countries there is much variation in the age profiles of populations, with implications for future demand for higher education. This could also feed into variations in future labour capacity, and in global connectedness, given that young people are more communications savvy than older people. Nations with a high incidence of young people will need larger tertiary education systems, and in future will sustain larger pools of productive labour relative to total population and a relatively greater capacity to generate wealth. Note, however, that future immigration trends cannot be predicted with accuracy and have the potential to modify the age profile. If Asia-Pacific nations choose to supplement an ageing population with skilled migration, foreign student intakes can be important avenues for such migration, as is already the case in Australia and New Zealand.

Table 1.3 summarizes the age profiles of Asia-Pacific nations. In half of the nations listed, 30% or more of the population were aged 14 years or less in 2007. This

Table 1.3 Proportion of the population aged 0–14 years in 2007, Asia-Pacific. (Source: Asian Development Bank 2009)

Systems with over 30% of people aged 0–14 years		Systems with 20–30% of people aged 0–14 years		Systems with less than 20% of people aged 0–14 years	
	%		%		%
Timor-Leste	44.6	Brunei	28.8	Australia	19.0
Papua NG	40.0	Vietnam	28.1	Singapore	18.0
Solomons	39.7	Indonesia	27.7	South Korea	17.6
Laos	38.1	Myanmar	26.6	Taiwan China	17.6
Cambodia	35.8	Thailand	21.2	Hong Kong China	14.4
Philippines	35.5	New Zealand	20.9	Japan	13.7
Fiji	32.2	China	20.6		
Malaysia	30.5				

group will be 13–27 years in 2020, indicating a school leaver age group larger relative to national population than in most OECD countries. In contrast the ratio is less than 21% in eight nations, all “Confucian” or Anglo-European. In these countries the relative size of the school leaver age group will be small. If participation rates, completion rates and average course length are unchanged “countries where those cohorts decrease in size will normally experience a fall in their student enrolments” (Vincent-Lancrin 2008, p. 43). In some countries this fall will be dramatic. In Korea in 2025 the size of the 18–24-year-old age group will be 65% of the 2005 level. The ratio will be 80% in China and 81% in Japan, but 98% in Australia and 99% in New Zealand. If present conditions hold, in 2020 the tertiary enrolment in Korea will be at 81% of 2005 level, and in 2025 just 66% of the 2005 level. The respective enrolments in Japan will be 87% (2020) and 82% (2025).

Yonezawa and Kim (2008) discuss the implications for higher education in Japan and Korea. Even if Japan and Korea increase tertiary entry rates there will be a fall in enrolments, particularly affecting lower status private institutions. Expenditure on higher education as a proportion of GDP will probably fall; while at the same time, it should be easier to lift the overall participation rate and improve social equity in access. Any enhancement of openness in access contributes to improved equity (Vincent-Lancrin 2008, pp. 45–47, 55, 70 ff. and 97). In China the continued expansion of secondary schooling suggests that tertiary enrolment rates will continue to increase, partly compensating for decline in the youth cohort.

Low birth rates often coincide with affluence. Seven of the eight nations in Table 1.3 with the lowest proportion of 0–14-year-olds are relatively wealthy. Their modernization and demographic profiles resemble Western European nations. Affluent countries are migration magnets. This provides a way to supplement the age structure. But of this group only Australia, New Zealand and Singapore have a high migration history. It is unclear whether Japan and Korea can adjust so as to permit a large influx of non-traditional citizens. China is so big that only very large numbers of migrants could have an impact on the age profile. This interaction between migration and national population is example of a fact of life common to all nations—they are increasingly shaped by global flows, whether of people, messages, ideas, knowledges, policies, technologies or financial capital. We now turn to globalization and its implications for higher education in the Asia-Pacific.

Global

Held et al. in *Global Transformations* (1999, p. 2) define “globalization” as “the widening, deepening and speeding up of all forms of world-wide interconnectedness”.⁴ Globalization is about partial convergence and integration of nations and local sites

⁴ Held et al. (1999, p. 16) later define globalization in more precise terms as “a process (or set of processes) which embodies a transformation in the spatial organization of social relations and transactions—assessed in terms of their extensivity, intensity, velocity and impact—generating transcontinental and interregional flows and networks of activity, interaction and the exercise of

on the world or planetary scale. It is powered by worldwide flows of technologies, people, finance, language and ideas, especially the instantaneous transmission of data and ideas in real time (Castells 2000, 2009). Globalization includes all trends towards world systems and “one-worldness” (Marginson 2010b). It is marked by the growing role of the global dimension of action, including global spaces, systems, agencies, products; and also by the growing impact of global systems and phenomena in local and national affairs. Sometimes the global pushes aside the local and national dimensions. Sometimes it does not, so that the global coexists with the local and national. The processes of global convergence play out not only at the world level but the part-world level, in regions larger than nations in scale: for example in the formation of the European Higher Education Area, and in regional groupings in the Asia-Pacific such as ASEAN and ASEAN plus three.

In the era of communicative globalization, beginning with the Internet in the early 1990s, the different parts of the world have moved closer to each other. For the first time in history it has become impossible to cut off a nation from global relationships. Cross-border interactions have become more extensive, intensified, regularized and faster. Local and global dimensions are increasingly intermeshed, so that local events are transmitted everywhere, and distant events can have a magnified impact at home. Each research university can take a virtual tour of each other research university in the world via its web page. Global science leaps over every border. Global systems, networks and relationships now play a major role in higher education, though they are felt more deeply in some places than others.

According to Held et al. (1999, pp. 7–9) there are three positions in the debates about globalization. First are the “hyperglobalizists”, who privilege an economic explanation of globalization. As they see it, global markets are becoming more dominant in human affairs and the nation state and its economic regulation are losing ground. Second are the “sceptics”. They also discuss globalization in terms of the economy but assert the continued supremacy of national politics over global markets, suggesting that little has really changed in the Internet era. The third group are “transformationalists” who see globalization in cultural, social and political as well as economic terms. They take a middle path. Global elements are increasingly important in human affairs but it should not be assumed globalization is predestined or is sweeping away nations. As Held et al. state, it is driven by contradictions and “shaped by conjunctural factors”. In higher education the interplay between the national, local and global dimensions can take many different forms. It can differ nation by nation, and university by university—though within resource constraints,

power”. Carnoy (1999) distinguishes the processes of globalization from its “ideological packaging” and ideologically driven policy designed to further it. One ideological packaging of globalization is the normative notion of “globalization” as the worldwide spread of capitalist markets, as expressed in popular culture and academic literature. Interestingly, both pro neo-liberal and anti neo-liberal positions often draw on this normative notion of globalization, leaving themselves without a term that readily describes forms of world system other than global markets—for example communicative convergence, which combines cultural and economic phenomena and does not necessarily involve market transactions, as much of information and knowledge flows on an open source basis (Marginson 2009a).

and subject to the workings of global systems such as the knowledge system which are becoming increasingly potent.

Glonacal Higher Education

Universities are active at the same time in all three dimensions of activity: global, local and national. The easiest one to recognize is the local dimension: the day-to-day life of institutions, localities, communities and employers of graduates.

The second dimension is the national dimension: the national polity and economy, which have legal boundaries, and the less clearly bordered national culture. This includes the systems, policies, laws and regulations that shape higher education and research. Universities have long been important for nation-building governments because they prepare skilled labour and provide social opportunities. Universities also need governments, which are their most important single source of funding. Government resourcing often brings with it unwanted control. But most universities that eschew the resources of nation-states will falter at the global level.

The third dimension is the global dimension: world systems of knowledge and information flow and people movement and networks between higher education institutions. The term “global” does not include everything in higher education, just the spaces, systems, agencies and products with worldwide reach: for example the global environment, or global science; global products such as CocaCola or Pokemon. Spatially, the global dimension lies across every nation-state, and also lies beyond all the nation states. It does not dissolve each nation-state into itself. But it has a life of its own that is separated from them, while also affecting them all.

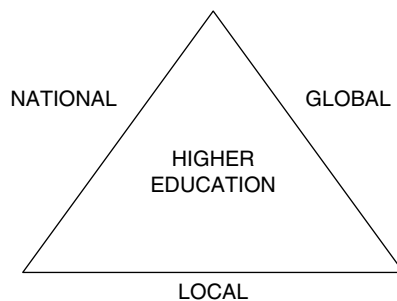
We are in a “glonacal” era of higher education (Marginson and Rhoades 2002; Marginson and van der Wende 2009). Glonacal = *global* + *national* + *local*.

The three dimensions of higher education constantly overlap. Activity in each one of the global, national or local dimension can affect activity in the others. For example when a university does well in the *global* rankings, this can lift the university in the eyes of *national* government and public. It might also draw more *local* investment from business, and attention from prospective students. Another case is the university that is granted a funding increase by *national* government, enabling it to do more and better work both *locally* and *globally*. Universities that effectively coordinate action in the three dimensions, so that each tends to produce the other, or least does not work against the others, tend to benefit. Figure 1.1 sets out in simple form the three dimensions of higher education.

Strategies in the Global Dimension

Most of the analysis of globalization and higher education focuses on its impacts on national systems and local institutions, which are often seen in negative terms. Two

Fig. 1.1 Dimensions of higher education. (Source of concept: Marginson and Rhoades 2002)



other aspects tend to be neglected. The first such aspect is the emergence of world systems across and beyond the different nation states. These systems gain a life of their own as a distinctive zone of action, and they also feed back into the national and local dimensions. The second aspect is the potential of national systems, institutions and even individuals to move beyond a defensive posture and contribute to the shaping of the common global systems and setting. In this era the most creative and far-reaching opportunities lie in global creation.

Here practical developments have moved out well ahead of scholarship and research. The global dimension of higher education and research is extraordinarily dynamic. In the last 20 years, especially the last ten, a remarkable list of global strategies has emerged (Marginson 2010a); some led by governments, some by universities or their units, and others by publishing companies and corporations. Often a key initiating role is played by university executive leaders. These global strategies have changed the possibilities, and the necessities, affecting all national systems and single research universities. The strategies are a mixture of old and new. But this global space-making has been greatly facilitated by synchronous electronic communication and the one-world visualization enabled by the Internet.

These strategies include research concentrations; education hub strategies designed to pull global flows into the city or nation; cross-border collaborations, alliances and consortia; region-building in higher education, especially but not only in Europe; the commercial marketing of international education at home; the creation of transnational (offshore) campuses on a partner or stand-alone basis; and the creation of global “e-universities” designed to reach students everywhere. Some universities pursue a number of these strategies simultaneously. Other kinds of initiative have contributed to shaping and defining the global dimension of higher education and research in a more holistic fashion. One is the process of multilateral trade liberalization through WTO-GATS, though the momentum for that development now seems to have slowed. The other is global comparisons, rankings and moves towards a global classification of the higher education sector.

Government-driven global strategies include capacity building in research, education “hubs” and the WTO-GATS open trade agenda. Many (though not all) national governments believe that expanded investment in basic research is one key to future economic competitiveness. This “arms race in innovation” has been accelerated by the growth of knowledge intensive production within the econo-

my, and the emergence of global research rankings, which provide a measure of comparative knowledge economy “firepower” (OECD 2008; Marginson and van der Wende 2009). By growing their investment in basic research national systems secure a heightened capacity to compete globally for the best doctoral students, post-doctoral researcher-scholars and senior researchers. Basic research can also feed industrial innovations if other conditions are right. Global education hubs are designed to position a particular national system or city within the global setting as a pole of attraction to foreign students and investment capital in education. The hub may include a focus on research, industry innovation, and capital for R&D and commercialization. The first global knowledge hub was the Singapore “Global Schoolhouse” (Kong et al. 2006; Sidhu 2009). Malaysia has also set out to be a hub, as have Mauritius, the United Arab Emirates and Qatar—though a successful hub cannot be created in a vacuum by education alone (Marginson 2010a).

The WTO-GATS negotiations set out to create an open global trading regime in education and other service sectors (OECD 2004). The agenda emerged originally out of the successive rounds of global trade talks. Nations are expected to negotiate with each other to establish free trade. However, the process also offers them the option of exempting some or all parts of their education systems on grounds of “national treatment”. Most governments have done so in higher education. It is now clear that WTO-GATS will not achieve its original objectives.

The institution-driven strategies include the formation of partnerships and consortia, transnational education and global e-universities. Cross-border partnerships between universities are a long-existing strategy that has become much more important in the last 15 years. The globe is criss-crossed by a complex lattice of networked relations between universities. Some universities have many such connections—and in a few exemplary cases, most of the partnerships are active. Partnerships facilitate resource sharing, people exchange, benchmarking, joint degrees between universities from different countries, and twinning programs across borders where students do part of the degree in each country. Multi-agent networks or consortia are the extended family version of institutional partnerships. Typically their membership spans the globe or covers a region within it, such as Europe, Asia-Pacific or East Asia. Transnational education means the enrolment of students in a nation other than the home nation of the educational institution (Verbik and Merkeley 2006; Ziguas and McBurnie 2006). Mostly, the institution is the foreigner and the international student is at home—rather than, as when students enter the country of education, the international student being the foreigner while the institution is at home. Transnational education is produced by distance education or a branch campus. Branch campuses are in two forms. The first is stand-alone, owned/rented and operated by the transnational institution. The second and more common model is collaboration with a local partner. Transnational education is a highly innovative strategy. It is shaped by regulation in both the provider country and the country of education, while at the same time it secures a certain autonomy in relation to both, and has the potential to stimulate intercultural changes in both countries.

Global e-universities—the delivery of programs via the Internet by a virtual institution, mounted by an existing university or a purpose built corporation—are

equally innovative, but less successful. At the end of the 1990s much was invested in e-U ventures, especially in the USA and the UK e-university. There was little student take-up. It is now apparent that aside from students working full-time, e-degrees have limited appeal (OECD 2005). They lack the status of face-to-face programs. Most students also want the teaching and networking benefits.

Global strategies driven by governments and universities operating together include education export, knowledge cities and regionalization. Commercial education exports are among the most successful strategies (Bashir 2007; Verbik and Lasanowski 2007). The objective is to generate revenues. Providing programs for foreign students as a business grew out of the long role of English-speaking countries in educating foreign aid scholarship students and private international students after the Second World War. The key moves were the switch from aid to trade, and the deregulation of numbers, permitting free expansion. In the UK, Australia, New Zealand, Malaysia, Singapore and China the industry is supported by government regulation and national positioning strategies. It is also powered by entrepreneurial recruitment by the institutions. In contrast, in national systems where foreign education is run on a subsidized basis, and the objectives are intercultural education and foreign policy, not income, numbers are restricted. Education export draws global capital flows and flows of talent into the exporting nations and strengthens the global presence of their institutions. It also augments the process of global convergence. International students maintain contact with families and friends at home while engaging with the country of education.

Knowledge cities are a more modest and more effective version of the hub strategy. They are driven by universities in concert with local or municipal government, sometimes with provincial or national government. This is again a place-based capacity building strategy, like research concentration and the hubs, designed to draw on global flows of knowledge and innovation, talent and money. Like hubs it involves infrastructure investment, precinct architectures, worldwide marketing, visa policies that facilitate mobile of talent, and other inducements and conditions designed to make the city and its institutions more attractive. Region building in higher education is another process of concentration but it works across borders on a networked basis. There are four conditions for successful regional organization: geographical proximity, sufficient cultural commonality, adequate educational infrastructure, and political will. Without political will, geography and culture are not enough. This is why regionalization is little developed in East Asia (for more discussion see the conclusion). The only zone that clearly fulfils all four conditions is Europe (van der Wende 2008; Kehm et al. 2009; Marginson 2009b; van Vught 2009). Regionalization is pursued both top-down through inter-governmental structures and the European Commission, and bottom-up in negotiations, partnerships and exchange between institutions. Regionalization is building the coherence, resource sharing and long-term global impact of the European Higher Education Area. In Southeast Asia ASEAN maintains a framework of collaborative programs, though as yet these are largely marginal to national systems.

Global comparisons and rankings are being created by a range of agents: media and publishing companies, governments and their agencies (for example HEEACT

2009), university specialists in research metrics (CWTS 2010), and web-based groups (webometrics 2010). The comparison and ranking of national systems and individual institutions, both in general as in “best university” lists and in relation to research performance, is reshaping higher education. Ranking has done more than has the WTO to advance the organization of higher education as a market, by defining the field of competition, standardizing the criteria and setting institutions and nations directly against each other. At the same time comparison and ranking also provide certain data that facilitate mutual recognition and collaboration. The potential for collaboration is impaired by hierarchical forms of ranking, which tend to marginalize institutions with less resources, and subordinate national systems whose main language is not English or are weak in the science-based disciplines. Alongside rankings, classification systems are emerging, enabling institutions to be compared in customized groupings according to mission. The Europe national systems are moving to both multi-layer classifications and multi-purpose rankings. This will make it possible to fully comprehend the European wide sector of higher education for the first time (Bartelse and van Vught 2007). There is a close interest in comparisons and rankings in East and Southeast Asia.

Nations and institutions use a mix of some or all of these global strategies. Their options are determined by two sets of factors. First, their *position*: the circumstances they inherit, including their size, cultural resources and the state of the economy. Second, their *positioning strategies*: the circumstances they make for themselves, with vision, ideas, focus, coordination, leadership, and investments in future capacity. (For more on position and positioning see Chap. 20, and Bourdieu 1993). The outcomes for particular systems and institutions are governed by what social scientists call a combination of structure (position) and agency (positioning). The dynamic interaction between agency and structure—between the things higher education can do for itself and its constituencies, and the things that it cannot control, including what other higher education systems do—plays out in each of the local, national and global dimensions.

Local

Local universities are governed by the same interplay of agency and structure that positions national systems. But perhaps individual universities have more scope for free action, if their national regulatory framework gives them room to move, and if they are strong enough—especially in research. Individual institutions vary not only in the weight of cross-border resources and activities but in the strategic capacity to manage global pressures and forces and turn them to advantage. In the global setting there is much scope for imagination and agency. At the same time, both nations and universities are more effective if they are pulling together.

The global capacity of a research-intensive university depends on its “infrastructures”, meaning its financial resources, its physical resources such as communications and transport, its facilities and specialist equipment, its cultural/linguistic and

intellectual resources, and its organizational and regulatory mechanisms, including internal cultures and the rhetorics, systems and policies of its institutional and academic leaders. Mission statements can be reinvented more quickly than university capacity, which is history-bound and practice dependant. Global capacity is also created and sustained in processes of “institutionalization”, the regularization of global relationships and interactions so they are embedded in the life of the institution (Held et al. 1999, p. 19). In this process the university becomes not just self- and nationally referenced, but globally referenced. This perspective is crucial to success. The institution must be able to see its position in the global context if it is going to succeed. Yet this also sets the bar high.

World-Class Universities

All universities involved in research and doctoral education want to become “World-Class Universities” (Salmi 2009). To be globally effective institutions must be pro-active as well as responsive/reactive. Much depends on the foresight, acumen and strategies of leaders, who extend university capacity but never as quickly as they want; and who are duty bound to explore the open-ended potential of the university in the global setting, but within limits that they cannot ultimately control.

The term “World-Class University” (SJTUGSE 2010) is sometimes questioned because it is normative and lacks objective definition. The term immediately poses the question “what is world class?” It is lampooned by some scholars, particularly from the United States, where all research institutions are secure in their global status. But the term is entirely meaningful for those nations and universities who aspire to it. “World-Class University” is an aspirational notion. It reflects the desire to be globally effective and to be seen as such by all. The term “Global Research University” (Ma 2008; Marginson 2008) provides an objective descriptor that gives content to the “World-Class University”. In sum, the era of communicative globalization has seen the emergence of a new idea of the university, the “World-Class Global Research University” or WCGRU. It must be globally networked and recognized, and effective in local, national and global action. It must house global research capability and output in several fields, and maintain staff able to interpret and apply developments in most fields of knowledge. It must have a viable local doctoral program. It must pay enough to attract and hold the necessary faculty; or alternatively, inspire an affective commitment to university or nation strong enough to compensate for salaries that are below global levels. There must be reasonable stability in policy, funding and organization and a liveable setting in which to work.

Research capacity is central to the WCGRU for interrelated reasons. First, knowledge is the common currency, the medium of exchange in which research universities deal and collaborate. more important than money. Knowledge is a global public good in the economic sense (Stiglitz 1999). In its natural state it flows freely across borders and used everywhere without losing value. Globalization has enhanced its universal character and intrinsic importance. Second, the creation, inter-

pretation and codification of knowledge in the form of research is the one function that distinguishes universities from other educational institutions, and most other social organizations. Third, research capacity is long been closely associated with dominant notions of the university and taken into nation-building strategies. This embedding of the university in research is grounded in the military and economic role of science and technology. It long predates communicative globalization. It was confirmed above all in the US nuclear weapons program in world war two, where science was the decisive element. Fourth, research performance has long been the marker of university status, even in first degree education where, strictly speaking, research is not in play. Finally, the university functions of knowledge creation, dissemination, storage and transmission; and research training; are now spreading from some nations to the majority of nations. This enables research status to function as regulator of the sector on the global scale. But it is a competition which only some nations have the opportunity to win.

National

The global dimension exercises a growing influence. But local and national agency continue. They are not swallowed up by the global. National identity still matters. National systems have differing histories and traditions, and modes of student progression, staff career institutional diversity. These features tend to persist. We have not become one world and one single higher education and research system—not yet anyway. Bayly remarks that although ideas freely jump borders, global patterns can “as much give rise to assertion of specificity and local variation, as sameness and emulation” (2004, p. 4). Carnoy and Rhoten (2002, p. 6) note: “Educational changes in response to globalization share certain defining parameters but still vary greatly across regions, nations and localities”. The global elements are uneven, often unstable, unpredictable and by no means always dominant. Some nations have more economic and cultural resources to go their own way. And some nations have a greater will to be different. Global changes and common trends are also contested in nations, in varying ways, to varying degrees. Deem (2001) argues that if we are to trace the changes and variations; global, national and local; we must engage in situated case studies. We cannot explain what is happening in institutions and individual national systems simply by describing a theory of globalization, or the New Public Management, or account of “global neo-liberalism” or another combination of the two elements.

The chapters of this book underline the Carnoy and Rhoten point about scope for variation. Human agents *always* have a measure of autonomy. This enables them to take initiatives, if they choose to exercise their autonomy. And nations do not share the same history, languages, cultures, political systems or resources for teaching and research. This generates variations in how they see the global and the strategies they imagine within it. Some also have a much broader range of options than others, especially those nations with developed research systems.

In a world where almost all sites are globally networked by communications and finance, the nation can no longer block out global pressures. Rather, it mediates and interprets those pressures. This leaves governments, even in middling developing nations, with alternative moves at their disposal: from broker, relay station and retarder of global signals; to an amplifier of global pressures, as one way to achieve internal reform and control. Globalization encourages “a spectrum of adjustment strategies and a more activist state” (Held et al. 1999, pp. 9, 13).

Pressures on the Nation-State

Yet in a more global era, there are unprecedented pressures on national systems. These are enhanced in higher education by its intensive global engagement.

Held et al. note that the old conception of the nation-state as “an absolute, indivisible, territorially exclusive and zero-sum form of public power” is obsolete. States no longer exercise complete control within their borders. New non-territorial forms of power have emerged (Held et al. 1999, pp. 7–9). One of those new powers is knowledge, and with it higher education. The complication for analysis is that higher education and research are both subsumed within national systems *and* partly independent of those systems. The degree of independence varies by institutional type and national policy regime. But each research university must perform according to two sets of potentially conflicting standards—those of the global research environment, and those of the nation and its agents. This means multiple loyalties. Government policies do not always maximize the global effectiveness of research universities, far from it. Likewise, successful university activities at the global level are not always immediately useful to the nation.

Global/national relations in higher education are a perpetual problem. They are driven by contradiction. The only question is whether it is an “antagonistic contradiction” or a “non antagonistic contradiction” (Zedong 1937). The nation cannot fully control globally connected institutions. But there is always a danger that global/national tensions will undermine the research university; that the nation will ignore, starve or restrict its globally defined activities; or a university working to global indicators will generate insufficient national benefits. It takes a far-sighted nation to harmonize its own strategies with the strategies of its universities.

Take the example of basic research: research curiosity-driven by researchers rather than driven by direct application to industry or a social problem. A university strong in basic research is a creative contributor to knowledge in its own right. This is the sign of a fully developed research university, one with global status and the capacity to attract high-calibre students and staff from around the world. Yet basic research is largely dependent on national government funding. Industry rarely finances curiosity-driven research with no immediate benefits to itself; and only in the USA is philanthropy sufficient to fund basic inquiry on a consistent basis. But the benefits of basic research are not contained within the nation. They feed straight into the global knowledge system, global public goods of no particular benefit to the

nation (Marginson 2007, 2009a). When it comes to applications the fruits of basic research often leak offshore. Research in science journals can be accessed by any firm from any country. The direct gain for the nation is a lift in the research rankings but even that can take a decade or more to show. And this is merely a symbolic benefit. It feeds national pride but it does not create jobs.

In the longer-term basic research *does* have benefits for the nation that finances it. The problem is that these benefits are not just delayed but indirect. Trained personnel capable of basic research may do brilliant applied work, using ideas that have emerged from elsewhere. In a strong research system the excitement of discovery and innovation permeates the nation over time, enhancing global connectedness and the power to initiate at world level. It is hard to imagine an advanced modern society without basic research capacity. Strong economies are nearly all in countries with strong research systems. Creativity and research are central to American power and becoming central to the rising power of China, Singapore and Korea. But it takes time, money and patience to build across-the-board strength in research. It is difficult for governments to hold the commitment for long enough. For many administrations the globally measured benefits seem to be ill connected and remote. When government is contemplating funding for basic research it is all too easy for it to ask: “what’s in it for us?” And to answer: “nothing”.

The national/global tension shows less in systems presently expanding funding for research—including most of those in the Confucian zone—than in systems in which research is imagined as a commodity market in R&D despite its public good character. But there are also tensions in science in China between national priorities and decision-making, and scholarly merit (see Chap. 3).

Inequality

Table 1.2 demonstrated the immense variation within greater East Asia and the Western Pacific, in national size and wealth, education resources, tertiary participation, research outputs and global connectedness. Many Asia-Pacific nations are impoverished and far from achieving mass tertiary participation, and far from top 500 research university lists and other kinds of global ranking.

GDP per head varies from \$ 1,290 in Myanmar to over \$ 40,000 in Macao, Hong Kong, Singapore and oil-rich Brunei. Public spending on education varies from under 3% in several nations to over 5% in Bhutan and Malaysia. Adult literacy rates vary from near 100% in the most modernized nations⁵ to 57.8% in Papua New Guinea. The Gross Enrolment Ratio in tertiary education varies from over 85% in Korea in 2007 and Taiwan in 2009, to just 5% in Cambodia. Likewise, there is great unevenness in levels of connectedness as measured by Internet use, where the standouts are Korea, Japan and Singapore. At the other end of the scale Internet connectedness falls below 1% in Myanmar, Cambodia and Bangladesh.

⁵ The World Bank does not list literacy data for the most developed nations.

Importantly, some nations have a global science system and others have almost nothing. The number of international scientific papers published per year exceeds 50,000 in China and Japan, and 15,000 in Korea and Australia, but it is less than 300 in many nations, including 195 in the Philippines and 198 in the Indonesia—nations of 90 million and 228 million people, respectively (Table 1.2).

Globalization is associated with two structural forms of inequality in higher education (Naidoo 2009). First, inside/outside. Globalization fosters a binary divide between institutions and nations with global mobility and power of attraction, and those de-linked from global circuits. Higher education in the poorest nations such as Cambodia and Papua New Guinea has little effective global connectivity. Second, the hierarchy inside. Among those universities connected to global circuits the capacity to operate with effect is unequal. Some research universities have many scholarship programs for doctoral students. Universities in certain other nations cannot buy basic journals in each discipline. There are not just inequalities of resources, there are also inequalities in the freedom to operate. Some universities are constrained or marginalized by national policies and regulation. The global strategies of fortunate universities are fostered intelligently by their governments. The National University of Singapore is a prime case of this.

These structured inequalities are not the only issues of power in play. The flip side of inclusion is global homogenization, the informal discipline exerted by global norms and standards—especially problematic for universities in non-English speaking cultural environments. Perhaps it will not always be so, but at present the dominant forms and models in higher education and research are Anglo-American. Global systems and convergence often constitute a process of Americanization.

At this time universities from the United States start from a dominant position. This derives from more than academic capacity. It is also a function of the global power that underpins American academic capacity: the worldwide dominance of US government, military, business and philanthropic as well as education organizations. In reputable rankings of research universities, American universities occupy more than half the top 100 places and most of the top ten, led by Harvard (SJTUGSE 2010). Only a unified Europe and in the future, China, could operate on the American scale. There are signs that global capacity in education and research are becoming more plural. The rise of the Asia-Pacific is central to this. Even so the US will retain an advantage in innovation for a long time to come. This creates a difficult situation for higher education in other traditions. The challenge is to find a way to become both engaged in and potent in the global dimension while sustaining control over self-identity. How this is handled will shape the fate of the world's cultures. Their lines of evolution were once largely separated. They are now running closer together. Only some traditions, some knowledge, will survive.

Despite grossly unequal starting positions there is much that nations can do. As noted in relation to institutions, global effectiveness is affected not just by size and resources but by organization and leadership. One key to the rise of higher education in China is the quality of the national ministries, which have the capacity to read global trends, focus and implement a coherent national policy. Nations cannot will themselves into becoming global hegemony by their own efforts. But

wherever they sit they can lift their position in absolute and relative terms. But here the nation-building project has changed. Instead of just building the nation within its borders on its own terms, everywhere the policy emphasis falls on strategies for improving the effectiveness of the nation within the global setting. National identity must be continually nurtured in the context of global cultural relations. For nations and universities the questions are: “What are the conditions that sustain national (and university) self-determination in the global era? What is the nation’s (and the university’s) strategy for building its global role and influence?”

Yet more than a competition game is at stake here. It is also possible for all nations to be lifted together. The global public good in higher education would be much advanced by the move to full global inclusion—that is, the creation in all nations of research university capacity sufficient to create knowledge as well as interpret it. Just as all modern nations need viable banking systems and state administrations, all modern nations need research universities. For example, generalization of the capacity to create and manage knowledge about ecology would better equip the world to manage climate change and its consequences. A genuinely inclusive worldwide network of research universities, reaching across the emerging nations as well as the advanced countries, would do more than strengthen cross-border understanding. It would be a primary instrument for shaping world society. In the Asia-Pacific it is ultimately in the interests of the stronger systems to help to build capacity in those that are less advanced.

Difference

Nearly every Asia-Pacific system, and many individual institutions, are stepping up cross-border work. Motives are both competitive and collaborative. All universities want to stand out from the others, especially their local and national rivals—and there are many opportunities for mutual benefit through cooperation and networking. Often, universities cooperate and compete with the same institutions. How are we to make sense of this more complex higher education setting, where changes can be instigated in any one of the three dimensions—global, national and local—and also seems to be proceeding from all three together at once?

How much scope is there for difference between nations and between institutions, in the evolution of these globalized modernizing systems of higher education and research? Is there only one possible path of development, and one possible kind of research university? Is globalization making nations and institutions the same as each other, in higher education and in other spheres? How helpful is the notion of national pathways and regional variations in a globalizing world? Have all become branches of a world system? Or are they *both* parts of a world system *and* regionally/nationally/locally variant at the same time?

Bayly (2004, p. 10) notes modernity has been a long “process of emulation and borrowing” in which nations and institutions are aware of common worldwide trends. Even nations and national identity in their modern form are the products of

global trends. Today's nation-state emerged in the nineteenth century, first in Europe, Japan and North America. It was characterized by a new capacity to mobilize resources and populations, especially in the military sphere and later the economy, and in the inculcation of a bordered patriotism. In the twentieth century this nation-state spread everywhere. It "was the period of the 'internationalization of nationalism', when the ideas and practices of the nation-state became rooted among the elites in all major world cultures" (p. 41). At the same time all nations became more conscious of global patterns and changes, and of each other (p. 4).

In today's more global era, imitation and commonality between countries has intensified. Global systems play a larger role. Yet the scope for national difference and local variation continues. It might seem a paradox. It is not. This coupling of one-world plus national/local variation is endemic to the global setting, though the relation between one world and nation shifts around. The higher education world is a relational environment with many different agents. No single agent, no one nation or university, is forever dominant. The list of strong players is growing. There is more than one possible path of development. For example China and Singapore have shown that the combination of high growth manufacturing and services, modest taxation and high state investment in research universities, is a more rapid route to the knowledge economy than the neo-liberal pathway.

The New Public Management and Globalization

National higher education systems everywhere are undergoing the same kind of changes. They are affected by similar economic policy trends, such as downward pressures and efficiency drives in public spending, concerns about international competitiveness, and measures to enhance skilled migration. In nearly every higher education system, student numbers are growing and the female proportion of enrolment is increasing. Nearly all higher education systems are becoming more open to market forces, and more socially engaged. In most systems the proportion of income from private sources is rising. Most systems and institutions have adopted some features of the New Public Management (NPM) such as corporatized institutional governance, a professionalized and strategically focused executive management, performance measures of staff and quality assurance processes. The NPM has been spread through global policy borrowing, led by the English-speaking nations. The role of the NPM is discussed in many of the country chapters in this book. Is the NPM a form of global homogenization?

Yes and no. Governments who implement NPM reforms often drive changes using arguments about the need to be globally competitive or globally relevant. It might appear that NPM governments are "implementing globalization" at home. In some respects that is true. But their interest remains national, not global. The NPM view of the world does not embrace a full globalization of higher education. First, the NPM is a national and local control system. It is not a world system. Second, the NPM models higher education simply in economic terms, and the global setting as

a trading market between national GDPs. It focuses on those aspects of globalization, such as the market for cross-border students, open to business organization. It does not grasp the cultural and social aspects of globalization, and it downplays the collaborative and synchronous aspects (Marginson 2010b). Third, there is much variation in the way the NPM is applied in each setting (King 2009).

It is true that global communications and flows, particularly in research and global comparisons, have opened universities more to the global forces. This suggests homogenization. But there are two counter trends at work—though they are in tension with each other. First, the NPM models universities as business firms. This favours autonomous universities that work out their own responses to global forces, and the strategic opportunities globalization provides. This encourages local institutional variations (though only within the competition template). Second, in NPM systems governments maintain control over “their” higher education systems. Rather than being administered as departments of state in the old manner, institutions are steered from a distance using systems of output-based planning, competition for resources, tied funding, performance reporting, audit and accountability. Using these systems government control can be made more effective, suggesting the possibility of national variation. The tension is between on one hand autonomous university operations, on the other hand heteronymous universities steered by government. On the whole, government exerts closer control in first degree education, while the university has more autonomy in those matters most global in character, such as research. Thus the global dimension is both a source of pressures for homogenization and a source of scope for greater university freedom beyond the bounds of the nation-state. Matters can swing either way. This dual set of possibilities plays out in the chapters that follow.

In sum, in the global setting the horizons of some universities, those with research capacity, have expanded. At the same time the conditions and potentials of the nation in higher education are both diminished and enhanced. The power of national governments has not so much been reduced by globalization, as relativized and reconstructed by global and regional elements and flows.

Globalization has two principal meanings in human affairs. Both arise often in *Higher Education in the Asia-Pacific*. First, it is a mode of modernization, powerful in the remaking of higher education systems by national governments and the remaking of universities by themselves. Second, it has formed a new dimension of action. Global systems of information, knowledge, people flows and relations between networked institutions have a growing power to generate action. They have moved beyond the capacity of national governments to wholly control them. But the extent to which this global dimension will take a regional form in the Asia-Pacific, and if so what the basis and bounds of that region might be, is open.

The awesome global transformations discussed in this chapter have many manifestations at the regional, national and institutional levels. Situated studies in particular nations and institutions have much to tell us about the more general global/regional patterns and how these can vary. *Higher Education in the Asia-Pacific: Strategic responses to globalization* opens up those changes for the reader, in relation to most major countries of the region, as well as some smaller and emerging countries and a sprinkling of individual universities.

The Chapters

The book is organized in four principal sections:

- Five chapters looking at higher education in the Asia-Pacific region within the larger global setting (Part II).
- Four chapters concerning the international and global strategies and activities of individual Asia-Pacific institutions (Part III).
- Ten chapters focusing on the responses and strategies of Asia-Pacific national governments and systems (Part IV).
- Two chapters on countries neighbouring the Asia-Pacific, for contrast and because of their strategic importance: India and Saudi Arabia (Part V).

Part II: Worldwide and Regional Perspectives

Part II consists of chapters at the level of the Asia-Pacific region as a whole.

Chapter 2 by Simon Marginson introduces global higher education as a strategic space—as considered through the eyes of the presidents of research universities from 12 countries. Eight of the university leaders are located in the Asia-Pacific and three in the Pacific Americas. The presidents talk about how they gather global information and how they see global convergence, relations of power, research and global rankings. They discuss the cross-border strategies they use to further the impact of their institutions at national and global levels.

In Chap. 3 Simon Marginson sets out to explain the extraordinary dynamism in East Asia (China, Hong Kong China, Taiwan China, Korea, Japan) and Singapore in Southeast Asia. These systems have found a way to expand tertiary participation towards universal levels, lift the quality of institutions, grow research systems and universities and nurture global science at scale, all within the framework of a low tax fiscal environment. The keys to success are strong effective nation-states and a broad-based commitment to household investment in tertiary education, grounded in Confucian tradition and bedded down by universal examination systems. Private investment frees up state resources for research building and the formation of a layer of world-class research universities.

In Chap. 4 Lijing Yang investigates the relationship between educational finance policy and higher education access in a group of Asian and Pacific nations, compared with the global trends. The author uses panel data models to analyse the 9-year data (1998–2006) of 98 countries worldwide and 21 Asian and Pacific countries, to explore whether education finance policies have promoted access, after controlling for national economy, basic education, and population characteristics. It finds that public education expenditures had less effect on access in the 21 Asian and Pacific countries, than in the world as a whole. The growth of national average income can explain higher education expansion in the region.

Chapters 5 and 6 are complementary. In Chap. 5 Grant McBurnie and Chris Ziguras discuss transnational education in the Asia-Pacific nations. In transnational education programs the provider institution crosses the border and sets up campus on foreign soil. The Asia-Pacific has been the main region for the development of this form of educational globalization, which is potentially transformative. In Chap. 6 the same authors explore patterns of student mobility with reference to the region. Approximately half of all of the world's international students are from Asia-Pacific countries and Japan, China, Malaysia and Singapore have become significant exporters of education to students from other countries, as well as their continued role as export nations.

Part III: Institutional Perspectives

Part III consists of studies of global perspectives and strategies in individual Asia-Pacific universities—all leading institutions within their own national systems but located in nations with sharply varying levels of resources, different languages of use and uneven forms of global engagement. In glonacal fashion they must respond to both global elements and national policy system requirements. National government approaches seek to articulate globalization and position the university as a tool of national strategy at world level. But the direct global-local reading of globalization, and its national reading, are not always the same.

Chapter 7 is about Tsinghua University in Beijing in China, the most internationalized of China's research universities. In striving for the global "gold standard" in its research university sector in rapid time China has made an unprecedented transformation of higher education. Rui Yang draws out the issues in a flagship institution in which government has provided the resources to underpin change but the process is complex and demanding. Tsinghua must meet global requirements while developing a Chinese model of the research university and sustaining a principal role in a nation now moving to global leadership.

In Chap. 8 David Howes and David Ford provide the opposite case, the Royal University of Phnom Penh (RUPP) in Cambodia, one of the poorest nations in the Asia-Pacific, where a whole generation of academic staff was decimated by the Khmer Rouge regime and the University itself lay derelict and abandoned from 1975–1979. Resource levels remain low but higher education is again flourishing in Cambodia. As in many nations, part commercialization of educational activity provides one way forward, despite the dilemmas. Like all Asia-Pacific universities but under particularly difficult circumstances, RUPP must negotiate a relationship with global higher education, sustain its identity and also modernize itself.

Chapter 9 moves to Universiti Sains Malaysia (USM) in Penang. Sarjit Kaur, Morshidi Sirat and Norpisah Mat Isa describe the history and activities of Malaysia's first university in the Accelerated Programme for Excellence (APEX), which like Tsinghua is marked down for a flagship role as Malaysia builds R&D and its role as a global educational hub. The authors explain USM's response to globaliza-

tion as a product of global transformations including competition, in the context also of national policy requirements, local market forces and community needs. The University's leadership plays a key role in steering USM through.

In Chap. 10 Simon Marginson and Erlenawati Sawir compare readings of and responses to globalization at two national research universities: Universitas Indonesia (UI) in Jakarta and the Australian National University (ANU) in Canberra. Both want to be globally effective. Both are handicapped by resource bases that given national capacity to pay are less than generous. But they are at different points of organizational development—NPM reform came to ANU 15 years before UI—and different levels of resources and global engagement. Global openness creates more difficult cultural issues for UI than for ANU.

Part IV: National Perspectives

In Part IV the emphasis swings to national policies and systems of higher education in global context. Here again the glonacal character of higher education is apparent. National policies are designed to respond to global systems and shifts, but the fit between dimensions is not easy to achieve. It requires continuing adjustment. Local-global connections are not always congruent with national strategies. Some policy approaches are more obviously nation-bound in their perspectives and objectives than others. In some nations, such as Singapore and for different reasons Cambodia, the nation has decided it has no choice but to get to grips with global issues. In some other cases, it seems government has the illusion that it can shut out globalization at will and respond exactly as it pleases.

In Chap. 11 Gurnam Kaur Sidhu and Sarjit Kaur provide an overview of the Malaysian government's strategic approach. Like all Asia-Pacific nations Malaysia must both democratize education for the masses and achieve globally defined standards of excellence. This chapter explains the means the nation has chosen to become more globally competitive while meeting economic and social needs at home, via international education, the hub strategy and human capital development, and raising the level of English proficiency among Malaysian graduates and academic staff. Like many governments Malaysia focuses on key performance indicators and pushes for efficiency, transparency and accountability.

Global strategy depends on national and local capacity to carry it out. In Chap. 12, Koo Yew Lie and Vincent Pang address the continuities and gaps between on the purposes and rhetoric of the Malaysian Ministry of Higher Education's Strategic and Action Plans, and the perceptions and capacities of the academic faculty positioned as reflexive agents of internationalization. This chapter investigates the orientations of academic staff in Malaysia in terms of their contexts, backgrounds, expertise, requirements, work roles and literacies.

Chapter 13 shifts the focus to the contrasting case of the nation once part of the Malaysian federation, Singapore. With its Global Schoolhouse strategy the island city-state has become a byword for knowledge-intensive economic develop-

ment. The education hub is much imitated in Asia and the Middle East. Ravinder Sidhu, Ho Kong Chong and Brenda Yeoh analyse two key Global Schoolhouse initiatives—the alliance between Singapore and MIT (Massachusetts Institute of Technology), and the institutional restructuring aimed at re-modelling the National University of Singapore into a “global knowledge enterprise”. More than an effort to re-structure the mission and governance of Singapore’s universities, the Global Schoolhouse can be read as part of a broader initiative to re-engineer the institution of national citizenship.

In Chap. 14 Natt Pimpa analyses a decade of government-induced reform in higher education in Thailand. The Thai Government has identified five key areas for reform: teaching and learning, finance, human resources, research, and administration. But there are capacity and organizational obstacles, including the quality of human resources. Thailand needs more consistent and coherent policies and institutions marked by flexible management and transparency; and needs educational systems that are more responsive to global factors.

In Chap. 15 Cate Gribble considers the issues invoked for emerging nations by cross-border student and graduate mobility, focusing particularly on Vietnam. With the growing number of students undertaking degrees offshore Vietnam has devised policies of retain, return and engage which it hopes will both increase re-entry and tap into the mobile graduate labour pool so as to turn “brain drain” into “brain circulation”. Much depends on the character of professional work and the structure of opportunities available to the Vietnamese diaspora back home.

Chapter 16 takes the reader to China. As in the regional Chaps. 5 and 6 of Part II, Mei Ling and Yongjun Zhang focus on global flows of students and graduates, this time from the single-country perspective. Increasingly, China’s flows are two-way in character. The country is actively engaged in both sending students abroad and receiving international students from all over the world, and moving to a more central role in the global network of international student mobility. This chapter describes the historical trajectory of China’s student flows since the open door policy began in 1978. It compares the characteristics of international students in China with Chinese students abroad, by destination and source countries, level of study, field of study, and financial sources of support; and discusses the issues involved in two-way flows.

In the first of two chapters from Japan, in Chap. 17 Aki Yonezawa is also interested in internationalization and its national meanings. In Japan, policy and practice in relation to internationalization are affected not only by a strong sense of nation based on an advanced higher education system, but also the development of neighbouring countries, in relation to both science and technology capacity, and the industrial and service economies. The Japanese government and the nation’s higher education institutions are still discovering their identities amidst changing regional circumstances. The direction of national and institutional strategies often appears unsettled and inconsistent. This chapter emphasizes the need for autonomous initiatives on the part of universities and academics themselves.

Chapter 18 by Kazuhiro Kudo and Hiroko Hashimoto examines the current status of the internationalization of Japanese universities by focusing on the multiplicity

of its connotations and practices from a Japanese socio-historical perspective. It illustrates what the authors call “stratified diversification” of internationalization by modelling five distinctive approaches of Japanese universities toward internationalization (global, innovative, ad hoc, pseudo-international and no-international), and discusses the implications of the model for future research and development of higher education.

Chapter 19 is the second chapter focused on higher education in a country emerging from relative impoverishment, after the chapter on Cambodia. Ravi Rena notes that Papua New Guinea (PNG) is strenuously working to improvise its higher education in accordance with global changes. This chapter discusses the impact of globalization on higher education, regulation and culture; and explores Papua New Guinean higher education and its challenges. It argues that higher education has been significantly impacted by globalization but institutions in PNG need to go further in making structural changes in response to it.

In Chap. 20 Simon Marginson dissects the global position and positioning strategy of Australian higher education. Full fee-paying foreign students constitute one fifth of on-shore enrolments. Education is Australia’s third largest export. Positioned as an Anglo-American system on the edge of Asia, Australia has differentiated itself from education in the USA and UK on the basis of price, location, safety and climate, not academic content. International student growth has been driven primarily by a prolonged reduction in the public funding of universities. The global position of Australian higher education is less strong in research and doctoral education than in the global market in vocational degrees. Australia’s national positioning strategy may have negative implications for the effectiveness of its knowledge economy and limit the position-taking strategies available to its research universities, unless public reinvestment takes place.

Part V: Neighbouring Perspectives

Part V provides a useful contrast with the country chapters in Part IV. It introduces two Asian systems outside East Asia both often described as emerging knowledge economies: India and Saudi Arabia. Here the developmental dynamics are very different to those on display in the Confucian zone. In India, universities and research face many problems and the forward path is unclear. India is a reservoir of talent on a global scale, but this is despite rather than because of its universities. Compared to the Confucian systems, the missing element is the centralized nation state, national policy coherence and serious national investment. In Saudi Arabia government has the will and is investing heavily but as yet higher education and graduate employment are only weakly embedded in the national population.

In Chap. 21 Binod Khadria situates India’s higher education system in the context of the global competition for talent and the great role played by diasporic Indian labour in the United States. He discusses the problems and opportunities that this creates for India, and then reviews the domestic supply of science and technology

labour, the outputs of higher education and the problem of matching India's participation in both the domestic and global labour markets with an uneven higher education sector that is as yet insufficiently coordinated and developed.

In Chap. 22 Abdullah A. S. Al-Mubarak describes the trajectory of higher education in the kingdom of Saudi Arabia, where the nation has set out to create a group of World-Class Universities. Policies and strategies are shaped by, and in response to, the challenges and opportunities generated by both global openness and trends in higher education and demands for a high-qualified workforce. The desire to move Saudi universities up the global rankings is impelling national policies to reform existing higher education institutions and establish new ones.

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Part II
Global and Regional Perspectives

Chapter 2

Asia-Pacific Universities in the Global Space: Visions of University Presidents

Simon Marginson

Introduction

All research universities are steeped in globalization, which is the process of partial convergence and integration on the world scale. This is directly apparent in the power of the global research system in local affairs. The drive to publish in journals with international standing is now universal to the science disciplines in research universities. Another global system is apparent in the impact of university comparisons and rankings on the local and national status of universities. A comparative survey by Hazelkorn (2008) for OECD showed that comparative rankings and research output metrics have been quickly adopted in the visions, performance measurement systems and policy goals of both national governments and institutions. They enter the funding decisions of corporations and donors, and affect student choices. Globalization is also apparent in the growing mobility of students and faculty (Enders and de Wert 2009). Between 2000 and 2007 the number of cross-border students increased by 59%, an annual rate of 7% and is now 3 million a year (OECD 2009, p. 312). Doctoral student mobility and the short-term movement of faculty are growing, though the trend in long-term academic migration is less clear (Marginson 2009). The growth of policy borrowing and the convergence in policy frameworks and organizational templates, albeit accompanied by national and local rhythms and variations (King 2009), constitutes another form of globalization in higher education.

As noted in the Introduction to this volume, universities do more than respond to globalization. They are also primary drivers of global flows in knowledge, communications and people movement. Leading research universities are among the most

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internationalized and cosmopolitan of all human organizations. They constitute a worldwide network in which the Internet presence of each is visible to all the others. Rankings create the sense of a single common environment in education and research and ensure that all can be compared with each other. Meeting in conferences and on the web, working together in personnel exchange and joint activities, research universities are continually reminded that they share essential attributes. Everywhere university leaders instinctively understand—and tend to sympathize with—their counterparts across the world. Together their cross-border initiatives and strategies are opening up a larger global dimension of action in higher education and research (see Introduction to this volume).

The pattern of global inequalities means that the different national systems, individual institutions and individual university leaders are located differentially within the global dimension of action. Some have more global options than others. Some can work the global dimension as an extension of their local/national space. For others it is much more difficult terrain to navigate. Nevertheless, for all national research universities the global dimension is proving transformational in its effects.

A Note on the Research

This chapter explores the global perspectives and strategies of Asia-Pacific universities by drawing on interviews with presidents from universities in 12 countries, 11 in the Asia-Pacific. In this chapter only the Asia-Pacific region has been more broadly defined so as to include the Americas.

The universities are: Universitas Indonesia, the National University of Singapore, University of Malaya in Malaysia, Chulalongkorn University in Thailand, Vietnam National University in Hanoi, the University of Tokyo in Japan, Australian National University, the University of Auckland in New Zealand, the University of Toronto in Canada, the University of Illinois (Urbana-Champaign) in the USA, the Universidad Nacional Autonoma de Mexico, and two contrasting Netherlands universities (the first a leading research-intensive university, and second a newer technological university of lesser status) included to provide comparison with the Asia-Pacific: Leiden University, and the University of Twente.¹ In each institution between 12 and 20 interviews were conducted. This chapter draws almost solely on the interviews with each university president/rector/vice-chancellor.

The interviews focus on the presidents' imaginings of the global space, how they understand globalization; the tools they use to observe and interpret it; their perceptions of commonalities and differences between countries and universities; how globalization affects the imperatives confronting nation and university; the scope for initiative and response; the global/national/local interfaces, and whether and to

¹ Since the preparation of the chapter there have been further studies in Lao PDR, Cambodia, and China. Additional studies in the Philippines, Taiwan China, Korea and India are planned.

what extent national policy helps or hinders the presidents; and their priorities for development of their own global operations.

The case study program was conducted in institutions broadly similar within their nations: all are leading research universities, and most are generally understood to be number one or number two university in the country. All are national and public sector institutions, and have been historically shaped by government. When compared with each other from a global perspective the individual universities are very different to each other in their levels of resources, research performance and ranking. Differing levels of funding and historically accumulated resources, and different languages of use, all affect the relative position. Because a common template of institutional type is used, these global variations are not so much due to differences in mission or status within the national system. Rather the global variations showing here are shaped by differences between the nations in resources and other factors; and also by various local factors in each institution that can be identified by studying its history and organization. Thus the study helps to map the global dimension of action in higher education. The place of the national system within the global setting is clarified, and various locally specific factors are made visible during the research.

Local factors like history, organizational cultures, systems, policies and leadership all affect institutions. For example, the Universities of Tokyo and Indonesia, Vietnam National University and Chulalongkorn all train capital city elites, but only Tokyo was built by the nation into a global research powerhouse. The National University of Mexico (UNAM) plays the overwhelming role in Mexico; in a country with a population the size of Japan's it conducts 30% of all research. It is often closely affected by national politics. At the same time it is less global in orientation than some other universities in the group. Leiden in the Netherlands is very international in mission. Within the Australian system, the Australian National University has specialized in both research and international networking since its foundation in 1946.

World-Class Global Research Universities (WCGRUs)

At institutional level the creation of global activity seems to proceed through three phases, sometimes pushing together. First, the institution or nation concerned builds the *capacity* to operate globally, for example, in research. Second, it focuses on improving global *connectivity*, not just electronically but through partnerships, networks and the ongoing exchange of personnel, staff and students. The third phase is global *activity*. University executives sometimes see building capacity and connectivity as ends in themselves. But capacity and connectivity are also conditions for global activity. Once global capacity and global connectivity are established, the institution (or national system) has the freedom to act globally.

To be fully effective in the global setting the university needs to be a World-Class Global Research University (WCGRU). In the interviews with Asia-Pacific presidents the aspiration to be a WCGRU was strongly felt in those universities most marginal to the global metropolis in the Atlantic countries: Universitas Indonesia, Vietnam National University and the University of Malaya. It was also a concern at the University of Auckland in New Zealand, which nursed a sense of inadequacy, though that institution was in the top 300 on research performance

Our ambition is to meet international standards. To be in the top 200 universities in the world. Of course, this is the long-term vision. Not in one day.... Our mission is to become a research university that meets international standards. We focus all our efforts to achieve that.

(Mai Trong Nhuan, President, Vietnam National University Hanoi)

The dividing line between WCGRU/not WCGRU is more than a crucial distinction within each national system. It demarcates the global sector from the rest of the institutions. It is also expressed within institutions, in the distinction between on one hand research and graduate research or doctoral education, on the other first-degree teaching and medium-level graduate professional programs (Horta 2009). Several of the presidents emphasized that building global research activity in their institutions was central to their aspirations to WCGRU status. English language publication had become more important than before:

Q. What impact has globalization had on a public research university like the University of Malaya?

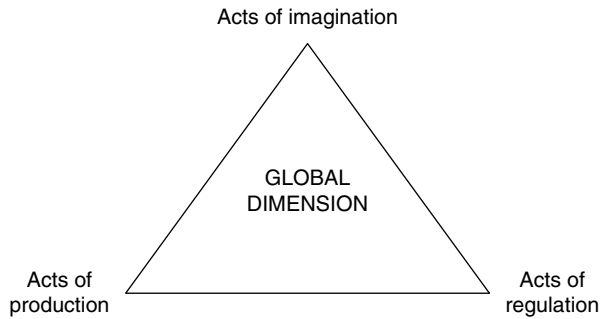
A. We are now putting a lot of effort, money and resources and manpower into the research field... promotion to professor and associate professor now depends largely on publication.
(Hashim Yaacob, Vice-Chancellor, University of Malaya)

Research development was touched in one way or another by all presidents. At the Universities of Toronto, Illinois and Tokyo, Australian National University and Leiden University, all located in the Shanghai Jiao Tong University top 100, leaders were secure about their standing as research universities but took for granted the need to continually improve research outcomes.

Acts of Imagination

The global dimension of higher education is being formed by three kinds of action. First, *acts of imagination*. Leaders imagine the global dimension as a field of action, and they imagine their institution's global activity prior to the attempt to create it. Second, the global dimension involves *acts of production*. It entails global outputs such as global dissemination of research knowledge, messages, open courseware and other web postings, and global teaching programs like commercial degrees and e-U.s. Third, the global dimension involves *acts of regulation*. Governments set many of the conditions of global activity, through the regulation of national systems, and via bilateral and multilateral negotiations (Fig. 2.1).

Fig. 2.1 Shaping of the global dimension by nations and institutions



Sources of Imagination

Interviewees were also asked how they gathered information about global trends and developments on a continuing basis. For the most part, the presidents emphasized networking with other presidents, consortia and other international meetings, and data gathered by their own personnel working on international matters. In person contact was seen as more effective than videoconferencing. The Tokyo Executive Vice-President was a member of the OECD committee for Science, Technology and Policy. ‘That is a very big source’. Only a small number were extensive readers, but all were regular and active users of email, and most also used the Internet directly and frequently for media and other sources.

Now it is the era of information. We get lots of information from personal networking, and university organizations overseas, which always conduct workshops about the development of universities in the era of globalization. We also get information from the Internet, and journals of higher education, which can give us perspective. Next week I go to England for a meeting of Indonesian rectors on university management. We have been invited by the British Council.

(Usman Chatib Warsa, Rector Universitas Indonesia)

The trick of course is to filter out what’s good and useful. You have to be careful not to be too driven by your own prejudices. To some extent you talk to people with whom you’re comfortable. So it’s a matter of trying to step away from that and think about different ways of doing things.

(Stuart McCutcheon, Vice-Chancellor, University of Auckland)

It’s absolutely astonishing how much one now draws information from all over the world in making any decision, about any aspect of the university...I’m old enough to remember when travel was quite exotic, when colleagues would come back with slides from some remote place. In the small town where I grew up, you would have the high school auditorium filled with travelogue presentations where some individual would present a speech and show slides. This was remarkable and highly entertaining, and would keep an audience spellbound. And now of course airplane travel is not a romantic or glamorous luxury, it’s a nuisance, a necessary nuisance. Electronic communication occurs instantly, and you have information and embedded slideshows on every imaginable structure and institution. You can do a virtual tour of half the universities of the US.

(David Naylor, President, University of Toronto)

For these university leaders it was crucial to maintain an open outlook, to imagine what was a potentially very heterogeneous set of strategic options. This created problems of monitoring and selection, however. ‘Our fundamental problem is that we try to do too much’ (Stuart McCutcheon, Vice-Chancellor, University of Auckland). An issue alluded to by several presidents was the need for strategic focus. Only National University of Singapore (NUS), with its fully crafted global strategy replete with active portfolios in each selected part of the world, seemed to be fully on top of this problem. Another problem mentioned by several presidents was a lack of discretionary time in which to imagine, speculate and explore the different strategic options.

Understandings of Globalization

The most common definition of globalization related to convergence and integration on a world-scale. The communicative aspect was emphasized:

Globalization to me in general terms is the increasing convergence and interdependence of economies. In higher education globalization is the increasing convergence and interdependence of higher education systems.

(Frans van Vught, Rector, University of Twente, Netherlands)

The term ‘globalization’ connotes an array of outcomes going far beyond the conventional view of closely linked world markets. In tandem, leaps of technology and the Internet have shrunk time and space as well as levelled the global playing field. We live in a shrinking, flattening world.

(Shih Choon Fong, President, National University of Singapore)

The president of Vietnam National University noted that globalization could not be measured. ‘It is not scientific, not exact’. It was a ‘feeling’.

Globalization makes the world more connected, more collaborative, more flat. That’s my feeling about globalization. Reducing geographical boundaries. No geographical boundaries. Making the distance less. And you cannot live and work alone. Before you could. Now you cannot. You cannot do everything your own way.

(Mai Trong Nhuan, President, Vietnam National University Hanoi)

A sense of ‘one-worldism’ came through in several interviews. In both Mexico and at the University of Tokyo globalization was discussed in terms of global ecology. The President of Chulalongkorn University in Thailand stated that:

The world will become one. It’s not that countries disappear or that the barriers between them will go away, no. But the system of the world will be more of a unified system. People can reach each other.

(Khunying Suchada, President, Chulalongkorn University)

In Thailand ‘Chula’ graduates could be expected to work in many countries and should be prepared for that. Graduate labour mobility was a key aspect of globalization for several presidents. Most stated that globalization created a more competitive, a more open and a more opportunistic environment for graduates and for

universities. Half of the presidents noted that global competition in higher education had a downside. Some referred to the 1990s definition of globalization as world economic markets. One president said that while he was strongly in favour of ‘internationalization’, which was central to the mission:

I don’t actually see globalization as a universal good. It has created more problems than it has given value in many instances. For us it means potentially hugely increased competition and a level of uncertainty that adds an unnecessarily difficult dimension to managing complex institutions.... I do see benefits from freeing markets from unnecessary constraints but you can’t make them totally free. For a university like this, I’m confident that we could survive in a much freer more competitive environment. But if it’s totally deregulated no Australian university would survive.
(Ian Chubb, Vice-Chancellor, ANU)

Similarly the Provost at the University of Illinois, Linda Katehi, defined ‘internationalization’ as learning from other countries and cultures, changing one’s own outlook, and acquiring a sense of living in ‘a much larger world’; whereas globalization meant ‘assimilating others to what we do rather than changing ourselves’. Other nations saw the global expression of their own national cultures in positive terms. They wanted to be more globally influential. The Rector at the University of Indonesia and the President of Chulalongkorn in Thailand both felt that the positive potentials of globalization lay in the possibility of bringing distinctive attributes associated with their nations to the larger world setting.

I think the Thai people are special in the way they behave...we are considerate of other people’s feelings. I think that is a unique Thai way. We smile a lot, we are courteous, and we work very hard. Those that work offshore, they are mostly smart, and they work hard, and at the same time they have these interpersonal skills that can work with other people. I would love to think that my students also have morals and good governance in their heads and the integrity of being a good citizen of the world.
(Khunying Suchada, President, Chulalongkorn University)

At the University of Toronto there was Canadian enthusiasm for cultural openness, mixing and cosmopolitanism. Within the case study group this was shared, in more muted fashion, by Australian National University (ANU), Illinois and Leiden. ‘I think there is optimism about globalization in Canada that is probably greater than in any other nation’ (David Naylor, President, University of Toronto). But global openness was often seen as threatening for non-English-speaking cultures (see below).

The Global Higher Education Sector

The global dimension was imagined above all as a sphere of comparison. Perhaps the most important single influence in shaping the global sector was university rankings, except in the USA and Mexico. A bad ranking hurt the university with national government, though a good ranking did not necessarily help. At Chulalongkorn in Thailand a high ranking in the *Times Higher* table one year (121) might even have contributed to the University’s continued funding problems.

Yeah, that's what they said. Even though we don't give Chula lots of money they can still do well, they can survive. Don't worry about them.
(Khunying Suchada, President, Chulalongkorn University)

In Malaysia a declining ranking in the same *Times* collection generated public disquiet and may have contributed to the decision of the government not to reappoint the Vice-Chancellor. Certainly, the Vice-Chancellor felt this to be the case. Some presidents focused on the biases inherent in the rankings process. Regardless, the presidents fed a strategic approach to rankings into their internal priorities and incentive and reporting systems. A small number of presidents emphasized the need for them to secure greater steering capacity in relation to academic units and behaviour, so as to promote global activity. This was a particular concern for President Takeshi Sasaki at the University of Tokyo. However, most presidents seemed to be generally comfortable about their capacity to influence the international activities of the university.

When considering the global dimension of higher education as a whole, all leaders emphasized the standing and influence of the American sector. When asked to name the institutions that most impressed them as models, they listed Harvard, Stanford, MIT, Caltech, Berkeley and/or the University of California system as a whole, and sometimes large public research universities such as Wisconsin. Cambridge in the UK was also mentioned several times. The major European universities were rarely acknowledged by name, except by the Rector at Leiden; but in the non-English-speaking countries in Asia there was a strong desire, albeit expressed in general terms, to source models of universities from Europe (especially Germany) as well as the USA/UK. In addition, it was generally agreed across the whole study that the Chinese research universities would succeed in their ambition to develop as world's leading institutions.

There was general agreement across the study that NUS Singapore was particularly impressive, not just in its international work but in all respects. Nearly every university other had an active partnership with NUS. The second university within the group in terms of the level of global networking was Illinois in the USA, which in the US context is highly internationalized. Illinois had just negotiated a major agreement with NUS and its leaders sang the praises of Singapore.

The National University of Singapore was unique in the extent to which it had devised a detailed global strategy and was implementing it, and in the degree of emphasis placed on the global factors in university development. This advanced global orientation was a function of Singapore's own position as a nation:

Singapore is a tiny island with some big neighbours, e.g. Australia, China, India, Indonesia and Japan. With no retreat or hinterland, globalization is not an option but a necessity for Singapore. We have no choice but to think 'global', breathe 'global' and to be 'global'. We constantly have to ask ourselves: 'How can we build mutual respect?' 'How can we be useful and relevant to the world?'.... Singapore was global before the term 'globalization' became fashionable.... In a global economy characterized by intense competition for talent, ideas and capital, Singapore's universities have also had to re-make themselves to stay relevant and thrive.... NUS has undergone a dramatic transformation, from a predominantly teaching institution training competent manpower for Singapore to a research-intensive

university respected in the global arena, and from a governance and management system closely aligned to the civil service to one based on performance and global best practice. (Shih Choon Fong, President, National University of Singapore)

The universities generally preferred to network actively with like-missioned institutions in other countries of roughly equivalent status to themselves, that is, with other universities of the type researched in the study—leading universities in the state/national/public sector. At the same time all the non-American universities were conscious on global inequalities, which had two vectors. One was linguistic and cultural, the other was understood in terms of political economy.

In relation to culture, a principal concern of the interviewees from non-English-speaking countries was the dominance of the Anglo-American world in higher education. Nearly all stated that rankings criteria favoured the USA.

Q. What do you understand by the term globalization?

A. The unification of culture by the United States. It's a very bad aspect of the present phenomenon of globalization. The idea of globalization should mean that all people can access the Internet equally. Japan is an advanced, developed country. We have a completely different culture from the Western world. I think this is quite special. (Hiroshi Komiyama, Executive Vice-President, University of Tokyo)

Globalization has brought Indonesia into a big arena where the countries become borderless...globalization comes into all countries. The problems are different from country to country. Other countries may be more prepared than Indonesia in facing globalization. If Indonesia is not prepared the country will become the consumer of developed countries... Western culture can now easily come into Indonesia. (Usman Chatib Warsa, Rector, Universitas Indonesia)

The President of Vietnam National University made a similar point about the openness of Vietnam to American media and the potential for regressive cultural transformation, especially in the rural areas and among the uneducated. He was less worried about the university, with its longer history of cross-border flows.

The economic form of inequality was felt in each of Malaysia, Thailand, Indonesia, Vietnam and Mexico. In Indonesia and Vietnam the university could not afford subscriptions to basic journals. In Malaysia, which saw itself as an emerging economy, the financial firepower of Singapore was a constant reminder that the university was not yet a World-Class Global Research University:

Globalization [ideally] would be a world without borders. But we must always be aware than in the globalized world the field has not developed this way. The players are not the same size. What will be good for the bigger power may not be good for the smaller power.... What we are looking forward to in the globalized world is that things become freer and things become shared, but they must be shared...if it is rules of the jungle, best man wins, we are all dead.

(Hashim Yaacob, Vice-Chancellor, University of Malaya)

Globalization affects differently each country and each group of countries. It has a completely different impact in the strongest economies such as the United States and many of the European countries, and the newly developed Asian economies, than it has in countries such as Mexico, and the effect it may have in the least developed countries. It has an impact that really increases inequities. That has made very difficult the dialogue at global and inter-

nal institutions, because the effects are perceived by government and society in one country as different from the effects that are perceived in another country.
(Juan Ramon de la Fuente, Rector, UNAM, the national university of Mexico)

Relational Geographies

It was noticeable also that nearly all presidents discussed the significance of proximate neighbouring countries. For the Dutch universities European developments were crucial. Leiden itself had initiated the League of European universities, a consortium of most of the strongest research-intensive institutions. At both Toronto and UNAM in Mexico, higher education in the USA exerted the main outside influence on faculty work. At UNAM, where there was always a choice in regionalization strategy between looking north and looking south, the Rector felt that Latin America had been neglected. Very few UNAM students went to Spanish-speaking countries, aside from Spain. He was hopeful that a small-scale regional scholarship scheme might start to shift the field of vision. All of the Southeast Asian institutions networked within the ASEAN group. At both Tokyo and Vietnam National University the presidents discussed the regular meetings of East Asian presidents. At ANU in Australia one of the four founding research and graduate schools was the Research School of Pacific and Asian Studies.

Internationalization is important for us because we're a small country stuck at the bottom of the world with many more populous neighbours around us and if we don't have good relationships with our region life is problematic.
(Ian Chubb, Vice-Chancellor, ANU)

Beyond proximity, globalization was associated with a broadening of international ties to include most world regions. Thus, for example, the University of Auckland in New Zealand had traditionally related primarily to the UK. In the 1980s it broadened to North America; in the 1990s it belatedly discovered Asia. However, all four English-speaking countries in the study acknowledged that their personnel and students were not sufficiently effective in working in studying in non-English-speaking contexts because of language factors. The mono-lingualism of those countries prevented a more reciprocal pattern of people flows and retarded university collaboration. The spread of facility in Chinese national language, especially, was seen as a priority for development. However, no large-scale schemes to achieve this were underway.

Acts of Production

All presidents discussed research collaboration, staff exchange, foreign student enrolment, local student exchange abroad, and partnerships and networking. But the other universities' productive global activities were dwarfed by the NUS. NUS had

more than 30 joint degrees with 19 partner universities around the world; and 220 student exchange agreements in 38 countries with over 1,600 student places per annum. The goal was to send 20% of undergraduates abroad for one semester each. There were also summer programs or field trips in China, Indonesia, Belgium, USA and Australia. There were five joint research laboratories as well as numerous research collaborations.

People Mobility

Most interviewees mentioned a recent growth in cross-border people traffic. This applied to both official visits, and ongoing faculty activity at discipline level.

Individual level exchange has become much more intense and extensive.
(Hiroshi Komiya, Executive Vice-President, University of Tokyo)

A diverse student body was universally seen as positive. Nearly all the presidents could name the number of countries from which their students had come. At Leiden the Rector Douwe Breimer talked of creating ‘a mini global environment’ inside the university which would expose the student to ‘different views and different opinions’, thereby becoming ‘more of a global citizen’. A similar concept was mentioned by Richard Herman, Chancellor of the Urbana-Champaign campus of the University of Illinois. Sending local students abroad for part of their studies was much more difficult, except at Leiden and Twente in Europe; and NUS in Singapore. NUS aimed to ensure that at least one fifth of all first-degree students spent a semester abroad as part of their studies. It had established a worldwide network of study centres and partners with WCGRU status. Elsewhere, the barriers to outward mobility were cost and in the English-speaking nations, lack of student motivation and foreign language capacity.

Issues related to the global mobility of talent—how to stop researchers from leaving after graduation, how to draw high-quality people from abroad, and how to keep them happy once inside the university—preoccupied all the presidents:

In today’s knowledge-driven global economy, talent, ideas and intellectual capital have taken centre stage.... NUS has to compete in the global arena against universities with access to broader and deeper talent and resource pools. We believe that the quality of faculty is the single most important determinant of the quality of education and research.
(Shih Choon Fong, President, National University of Singapore)

There were many unresolved issues in relation to people movement that affected global capacity. These issues absorbed a significant portion of the interviews. Lack of sufficient scholarship money was a constant across the case studies. Lack of student accommodation was mentioned at Tokyo and Leiden in the Netherlands. At Illinois there was much concern about a recent slowdown in the supply of international graduate students from China. In engineering and the technologies foreign graduate students were an indispensable component of staffing. At a number of universities brain drain and unequal inward/outward flows were burning issues. In

Mexico a large proportion of the best doctoral and post-doctoral personnel were lost to the USA every year. The rector at UNAM wanted the government to introduce a 'brain gain' program that would bring in high-quality academic labour to compensate for the outward movement. In New Zealand Auckland was losing staff to better paid and more globally metropolitan locations. There was no apparent solution to brain drain at Vietnam National University and Universitas Indonesia given the rates of pay; though some researchers and professors stayed in the country, or returned from working abroad, because of their commitment to the nation and its educational development.

A principal problem was the difficulty of attracting and/or employing foreign researchers. Inward mobility was often retarded by national regulation and in some countries this was joined to traditional academic protectionism. When pay rates were fixed centrally presidents had little discretion. In most countries it was difficult for foreigners to obtain permanent employment. The other issue was relative salaries. For example, at Malaya faculty were locked into public service salary levels and it was impossible to offer foreigners a permanent position. The best they could obtain was a 3-year contract. The salary level meant that Malaysian employment was attractive to staff from poorer nations such as Indonesia, and to some extent to staff from India, but has limited pulling power in the Middle East and none in Europe or the English-speaking world. Meanwhile neighbouring Singapore was paying US-level salaries, five times the level of Malaysia, and recruiting vigorously from everywhere including the University of Malaya. In Thailand pay rates were again too low to be globally competitive. In the Netherlands, there was political ambivalence about immigration. Visa delays were a key issue. In Japan the language factor inhibited potential recruits. This was an open concern at the University of Tokyo which wanted to grow foreign professors. The universities in the settler societies of Canada, the USA, Australia and New Zealand were better off because they could be readily accessed by foreigners, but the pulling power of the USA overshadowed the others.

Borrowing

However, global openness had an upside for Vietnam, and to some extent Thailand and Malaysia. It was seen to facilitate improvements in higher education quality. The National University of Vietnam sourced approaches to teaching, research and governance from across the world, particularly the USA.

The College of Science has requested the University of Illinois to assist with the teaching of chemistry. We submit the curriculum and subject requirements [for consideration for the Illinois science faculty]. Physics uses the Brown University teaching program. Mathematics has gone to Wisconsin. The College of Economics draws on the Haas business school. We adapt the curricula of the best universities for implementation here. Of course we adapt it to suit our conditions. We also use their teaching technology, with modifications—that's very important. Also our staff go to the American universities to be trained and learn new

ideas...every university has unique conditions and values/it is not so easy to follow a whole university. But it is possible to learn from part of their activities. For example, in relation to the links between universities and industry, we have learned a lot from the Taiwan universities. For information technology I visit Carnegie-Mellon. For social sciences and law, Harvard. For applied technology, MIT. So each university has very specific value. By adapting all of these examples we can make our own pathway.

(Mai Trong Nhuan, President, Vietnam National University Hanoi)

Global linkages thus utilized could enhance the university, if it worked out as planned, provided local strategic and organizational coherence were maintained.

Acts of Regulation

From the viewpoint of national authorities, the global dimension of higher education creates a dilemma. All national governments want 'their' universities to be outstanding on the world scale. Most governments believe that strong research universities are essential to economic growth, because research powers innovation, and strong universities attract talent, build gravitational power of cities, and synchronize the nation with the global knowledge economy. But these economic payoffs are long-term and indirect. Further, good graduates and new research may leak offshore without being captured by local business. Most research becomes open global knowledge. It is impossible to target investment in universities for optimal national returns. Governments may feel that they can better achieve direct objectives by investing in schools or industry training. There is an ongoing tension between the national and global roles of universities.

The fit between government policy and institutional strategy seemed almost seamless in Singapore. Because both parties shared an unusually strong focus on the global dimension. NUS had been engineered as an instrument of national policy, with a principal role in shifting Singapore to a focus on knowledge-intensive products and services, and in attracting high skill global labour to the island.

I don't see a contradiction between the global mission and our national mission.... We call ourselves a global knowledge enterprise.... We have to be global and national. I see that as our destiny.

(Shih Choon Fong, President, National University of Singapore)

Elsewhere there was a weaker fit between government and university agendas. A typical concern across all universities in the study except NUS was that government was insufficiently focused on the global dimension of university activity, and its regulation of higher education was less the optimal for global work. Government expect the university to perform but provided insufficient support; or its regulatory requirements created barriers, particularly to foreign recruitment.

There was variation across the study in the degree to which the university and its executive leaders were free to act globally on their own behalf.

If the university has freedom it can develop knowledge without limit.

(Usman Chatib Warsa, Rector Universitas Indonesia)

The capacity of the president (or rector or vice-chancellor) to act separately from government was enhanced if the leader was not appointed directly by government but was chosen by the university's governing body or community. This was true for NUS in Singapore, Tokyo, the Dutch and the USA, Canada and Australia. In Thailand government appointment was a formality after the main recommendation occurred at university level. In Malaysia government exercised direct control through the appointment and this affected leader behaviour. The term of office was 3 years. There was provision for reappointment, but vice-chancellors regarded by government as too independent were not appointed for a second term. In Vietnam President Mai Trong Nhuan did not question the process of government appointment, but focused on the need for executive autonomy:

When I met the president of Vietnam I said: 'I do not ask you for more money. Give me more autonomy'. More freedom. More responsibility. More transparency. More flexibility to meet the requirements of our society and globalization. More autonomy. We have full autonomy in teaching and research. But not in staffing and finance.
(Mai Trong Nhuan, President, Vietnam National University Hanoi)

All of the universities in the study had been touched to some degree or other by New Public Management (NPM) reforms instigated by government. In Indonesia, Malaysia and Japan the university had been newly modelled as entrepreneurial and encouraged to seek private funds. At the time of interview in Indonesia and Japan the process of change was incomplete and still seen as in doubt. At Chulalongkorn in Thailand a reform to enhance university autonomy had stalled. NPM Systems were well established at NUS in Singapore and at Auckland and the ANU.

Global freedom was greater if the university could generate its own resources at scale and was not wholly dependent financially on national government. In all universities in the group, there had been an increase in private income in recent years. But in most cases this trend had been accompanied by constraints or reductions in government spending, and continued controls over government-funded activity. In Singapore government funding continued to increase but that case was unique in the group. Cuts to the state budget were hurting in Illinois though this was less of an issue in Toronto. ANU and Auckland were sharply constrained financially. On the whole private income raising was more strongly established in Australia, New Zealand and the United States than elsewhere in the case study group; though ANU in Australia was not a major player in the commercial international market in which most Australian universities were very active. ANU received special research funding from government.

All of the case study universities were partly or wholly constrained in their capacity to vary tuition charges to domestic students, which set a limit on their capacity to be a quasi-private university as imagined in corporatization reforms.

Overall NPM reform had left all but Singapore worse off in financial terms, especially given the expansion of subsidized global activities. It is ironic that the National University of Singapore, the one institution with especially strong public financing, was also the institution where imaginings of higher education as a capitalist economic market were more pronounced than elsewhere.

Conclusions

Global activities have different space-making effects. They create relationships of varying shape. Some open a new global zone of activity that anyone can enter, like open source publication (such as MIT's open courseware initiative). Others build more bounded spaces within the global dimension, but spaces that multiply, as in the commercial market in degrees. Some global activities involve the same institution moving across or between different country sites, as in transnational education. Some create world spanning networks with no intrinsic centre; others are grounded, working outwards from a single national location, such as the hubs. Some work with a small slice or corner of the global dimension, such as student exchange with proximate neighbours. A few global moves set out to reconstitute the whole of global higher education as a single space, such as e-universities, and the process of WTO-GATS negotiations, and global university rankings.

The global dimension of higher education is a collective work in progress. There is much freedom for action and innovation, especially where universities act by themselves without direct regulation by governments. But university capacity and freedom to act, and national capacity, are notably unequal. Universities need a minimum threshold capacity to be global players. Those with advanced capacity, many in North America, have more strategic options than others. A primary issue of global public good is the need to develop WCGRUs in developing countries.

This is a 'glonacal' era (Marginson and Rhoades 2002) in which universities are active in the local, national and global dimensions together. Action in one dimension can affect the potential for action in the others. Doing well in global rankings may strengthen the position at home with government and local students. A local restructure of curriculum might make the university more attractive to global partners. National governments can build global capacity, or strangle it in red tape. Government funding enables local modernization and augments global research capacity. Universities that effectively coordinate action in all three dimensions tend to benefit. In this study those universities include NUS in Singapore, the University of Toronto in Canada, and Leiden in the Netherlands.

Some global strategies in higher education have been more successful, and will have longer lasting and deeper effects, than others. Much of the global activity is superficial. Of the global strategies listed in Chap. 1, national capacity building in research can only lift the *relative* global position of when it is on a large scale, as in China, Taiwan China, Korea and Singapore. Networks only have lasting effects when collaboration becomes embedded in longer-term arrangements such as combined degree structures. Of the three attempts to remake the whole global dimension, the WTO-GATS initiative to turn higher education into a world trading system appears to have had only modest impact. Nations retain policy control of their protected and regulated national systems. The second attempt, the global e-universities, has failed spectacularly. For most students, virtual degrees are unattractive. But the third attempt, global university ranking and research comparison systems, has changed everything.

Some global strategies in higher education are brilliantly imaginative. When they first emerge they can be as creative as works in the arts and sciences; though their originality is soon hidden by all the imitators. Examples are Singapore's hub strategy; transnational education by Australia and the UK; the Shanghai Jiao Tong University ranking system when it first appeared in 2003; the CHE web-based design-your-own university comparisons; the webometrics ranking. Leaders and organizations need certain skills for this kind of creativity. They need imagination, the ability to see the 'big picture' and reconcile the different trends, contexts and changes. They need a long-term view in a short-term world. They need to be outstanding macro communicators and interpersonal networkers. They need a grasp of science, culture and business. They need to be cosmopolitan, while maintaining a strong sense of their own identity, agenda and goals. They need to be politically astute because it is likely that national/global tensions will worsen. Good presidents need to be both dreamers and realists.

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Chapter 3

The Confucian Model of Higher Education in East Asia and Singapore

Simon Marginson

Introduction

Starting with Japan in the 1970s the nations of East Asia and Singapore have devised a distinctive form of modernizing higher education system, here designated as the ‘Confucian Model’. In the last decade in China, Hong Kong China, Taiwan China, Singapore and Korea this Model has become associated with extraordinary rates of development in both educational participation and research. As Chap. 1 noted it is in these systems, above all, that “the East is rising” in higher education. It is notable that *all* of the nations shaped by the Confucian tradition of education have shared in this same dynamic growth of education and knowledge, except for Vietnam. And at the same time no non-Confucian education system has evolved in this manner. Regardless of whether their nations are designated as capitalist or socialist, one party or multi-party, the systems in this group share a unique and generative character.

The nations of East Asia and Singapore are by no means alike in all respects. They have different languages, national traditions and political systems. The term ‘Confucian’ is not used here in a generic sense to refer to Sinophile nations; and not all of the group can be designated Sinophile. But there are similar approaches to organizing education, joined to what is for the most part a common system of writing, with roots in Confucian teaching and scholarship in China, and to the examination system that became associated with Confucian education in China.

The influence of Confucian education has spread beyond China and its outriders and offshoots in Hong Kong, Macau, Taiwan and Singapore. Confucian education entered Japan via Korea in the third century AD, not long before Buddhism made the same journey, and was consolidated in the next three hundred years at the time when Chinese influence in Japan was at its height. Later, neo-Confucianism, which entered Japan in the twelfth century AD, was deployed as part of official

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state ideology during the Edo/Tokugawa period of 1603–1867 (Marginson 2010a). Confucianism reached Vietnam during Chinese colonization of Annam, second century BCE to the tenth century CE. Annam was the far southern province of China, situated in the Red River valley, where Ha Noi is now located, and in the north and central coast of Vietnam (Gernet 1982). The Viet eventually threw off the Imperial yoke but by then had adopted Confucian education, along with many other features of Chinese culture.

The dynamics of the Confucian Model differ in key respects from those of higher education in Western Europe, the UK and the United States where the modern research university was incubated. The Confucian Model has different laws of motion to those of the private Ivy League university and public flagship university in the USA, the state managed and (until very recently at least) primarily state-funded, regulated and autonomous British university, the state administered and funded Humboldtian institutions in Germany and the Nordic countries, and the open and politicized Bonapartist mega-universities of Latin Europe and Latin America (Ordorika 2003).

Elements of the Confucian Model

Confucian systems of higher education have four interrelated features:

- Relatively close national supervision and control, with more detailed shaping from above of both the system as a whole and individual university executive agendas, and educational priorities and research creativity, than is the case in the English-speaking systems and most of Western Europe.
- The rapid growth of tertiary participation beyond 50% and towards universal levels; simultaneous with a continuing increase in the proportion of tuition costs that are funded by households rather than the state.
- “One chance” national examination systems at the end of schooling, which differentiate entry into tertiary education on the basis of status of institution, with the national research universities on top and low-cost private (and often commercial) vocational colleges at the bottom. The examination mediates social competition in education and focuses the investment by families, while legitimating the university hierarchy and harmonizing educational/social outcomes on behalf of the state.
- A high and growing public investment in research science, using fiscal resources freed up by the part private funding of tuition, rapid growth in and improvement of research activity, and the formation of layer of leading research universities.

The Confucian Model systems are characterized by accelerated development in *both* educational participation and research quantity at the same time, while also improving the quality of the leading institutions and research. In contrast with some European systems such as those in the Nordic countries, uniformly high-quality institutions are not achieved. A standard feature of Confucian systems is the long

“tail” of lesser-quality private institutions. Here the marked differentiation in quality and status characteristic of the Confucian systems is closer to the USA than to Western Europe. But remarkably, Confucian Model systems have managed the accelerated development of both educational participation and research at the same time, *and* they have done this within the bounds of low tax fiscal regimes, freeing up resources for capitalist growth. The knowledge economy, finance and industry seem to move forward together. Central government spending is under 15% of GDP in Taiwan, Hong Kong China, Singapore and Japan, and under 21% in China and South Korea (ADB 2010).¹ Yet high and growing tertiary enrolments and rapid research growth are expensive when funded simultaneously. How can these statist knowledge economies pay for their comprehensive investments in knowledge and learning while maintaining a low tax regime, something no other system achieves?

The key to fast-track all-round evolution in East Asia and Singapore is the growing popular investment in tertiary education. This is sustained by desires for education stronger at the level of the whole population than elsewhere in the world, and a growing middle class able to translate those desires into investments. The political economy of the Confucian systems is bedded down by cultural values, which are much older than human capital theory with its actuarial projections of the lifetime earnings accumulated by degree holders. The state contributes to educational supply. In the early and middle stage of the Model, nation-state tuition subsidies foster participation and extend it to the under-represented. State investments in secondary and tertiary infrastructure are also essential. But the state has less work to do on the demand side than its Western counterparts. Confucian subjects desire education.

Each of the four elements—the role of the nation-state, educational participation and tuition funding, examination systems, and research—will be examined in turn.

Nation-State Steering and Control

The pivot around which the Confucian Model turns is a strong state able to direct resources on the basis of performance goals and capacity-building objectives, and to steer system evolution by drawing on both private and public resources. In East Asia and Singapore the state has translated both the long-standing family commitment to education and the traditional mode of educational administration into modernizing systems. These systems have radiated Confucian practices outwards from the upper echelons of society to the population as a whole. In the past most people, while committed to the Confucian educational values that permeate society, did not have the resources to fully share in learning and scholarship. Economic growth and state-created mass education, partly adapted from Western models, have changed that.

For the most part Confucian states use the standard neo-liberal forms of modernization (Mok 2009). Systems of higher education are refashioned as quasi-markets

¹ In the case of China the figure includes provincial government (ADB 2010).

and universities are remodelled as quasi-firms while central control is maintained. Thus the familiar new public management (NPM) reforms are rolling out in East Asia and Singapore, such as the corporatization of institutions—including devolution of financial responsibilities to institutions, and an emphasis on entrepreneurship (Huang 2006; Oba 2007)—a partial shift to Mode 2 conceptions of research (Gibbons et al. 1994); and the use of quality assurance, audit and accountability mechanisms to entrench performance cultures and steer activities in a more indirect fashion (for a case study at Peking University see Yang 2009). Compared with the UK version of the NPM, Confucian states place less emphasis on university executive autonomy and the devolution of policy responsibility.

Singapore seems to take autonomy further than do the other systems. In some other countries the capacity of university presidents to take strategic initiatives is less developed. For example, in some institutions in Japan research university presidents continue to be elected and lack executive training (Oba 2007; Newby et al. 2009; Ohmri 2009). In China presidents are appointed by government rather than selected by university-governing bodies, compromising their scope for initiative. Despite the use of indirect NPM steering, states often continue to exercise detailed controls over programme contents, personnel management and research (Huang 2009; Newby et al. 2009; Oba 2007; Yamamoto 2007, p. 82), though East Asia is not alone in that.

The continuing close relationship between Confucian educational government and the universities, very different to the critical distance maintained by American institutions, has longstanding roots. The notion of East Asia and Singapore without strong nation-states is almost a contradiction in terms. “The development of the political sphere in the Chinese world and its pre-eminence over all the other (military, religious, economic) is one of its most characteristic marks” (Gernet 1982, p. 28). Historically, when the state has not operated as a powerful centralizing and centripetal force, there has been fragmentation and chaos. The American state is also strong, but monopolizes activity in a smaller number of areas, with a larger reliance on patriotic consent. Higher education is folded into the inner workings of the state in East Asia and Singapore in a way without parallel in the USA. It is unsurprising to find that higher education and research are central to the present global strategies of these nations. It was always thus. The first centralizing states emerged in the Warring States period in Wei and Ch’in in China from the fifth to third centuries BCE. They were marked by the separation of civil administration from military power, the formation of a caste of officials, and the codification of written language at the end of the third century which became central to the formation of the first all-inclusive Chinese nation, that of the Ch’in (Gernet 1982, p. 32, 65). From then on scholarship, books and a caste of scholar-administrators—which was progressively expanded and later systematized on the basis of meritocratic examinations—were integral to the state.

Later, many European nations also defined scholar-teachers in universities as members of the public service and subject to state control. The Humboldtian model contained traces of the Confucian Model. In the Latin American Model the University functioned as a public sphere designed to provide an on-going critical re-

flexivity in relation to the nation-state (Ordorika 2003). But NPM reforms are now taking those European and Latin American systems closer to the Anglo-American model of an autonomous faculty. In contrast, in the Confucian systems the state is more deeply involved. The present success of those systems in the growth of education and research will probably further entrench the role of the state. State-driven momentum provides much of the capacity of the Model, and most of its inner constraints. (The potential downsides for research are discussed below, under ‘Limits to the Model’).

Tertiary Participation and Tuition

In 2007 the tertiary gross enrolment rate (GER) was 96% in South Korea and 58% in Japan. It reached 87% in Taiwan in 2009 (see Table 1.2 in Chap. 1). China is on the same trajectory but at a lower point of the curve. Despite regional unevenness adult literacy in China was 93% in 2008; and between 1990 and 2007 China’s tertiary GER rose from 4 to 23% and may now be near 30%. Participation is also growing rapidly in Hong Kong and Singapore.

Some commentators refer to “the rise of China-and-India” as if all are one, but the patterns of tertiary participation in South Asia are different. In 2008 adult literacy was 66% in India and 55% in Pakistan. In 2007 the tertiary GER was 13% in India, 5% in Pakistan and Bangladesh. Participation is increasing in India but less rapidly than in the Confucian zone. There are endemic political and fiscal difficulties in financing education and science (Agarwal 2009).

While the levels of public tuition subsidies vary by nation and by type of institution, a feature in all Confucian systems is the willingness of middle-class families—and in some systems, most families—to invest privately in secondary and tertiary education, and especially in private tutoring designed to best position their children for the one-off contest for university entry which determines their life chances. Some East Asian families spend as much on education as Western families spend on housing. In 2006 the proportion of tertiary education funded by households in Japan in 2006 was 51% and in Korea 53%. This compared to 3% in Norway, 10% France, 15% in the Netherlands, 34% in the USA and 38% in Australia (OECD 2010, p. 235).

The share of funding carried by households in China was 35% in 2005 (Rong 2009), suggesting a convergence between China, and the USA and Australia. But this appearance of convergence is misleading. In China the government share of funding is on a sharp downward trajectory. It fell from 96% in 1978, the year that Deng Xiaoping focused on the four modernizations (Zha 2009, p. 46), to 45% in 2005 (Rong 2009). Moreover, the roles of public and household funding of higher education in the USA differ from Confucian norms. Some US private funding is sourced from philanthropy not households, especially in the Ivy League. Government supports a large layer of lesser-status public institutions in the USA (the community colleges) and Australia (Technical and Further Education). But in the Confucian systems the low-status institutions tend to be privately maintained and funded;

the public subsidy is lowest in these institutions and often falls to zero. In Japan, which has the most mature Confucian system, 72% of students receive no state support in the form of grants, scholarships and loans. The corresponding figure in the USA is just 24% and in Australia 20% (OECD 2010, p. 256). The USA provides higher effective public subsidies to its private institutions and students—whether in low- or high-prestige institutions—through student loans, research grants and other means of indirect funding, than do the Confucian nations (OECD 2009, p. 260).

Korea, Japan and Taiwan have majority private sectors. This facilitates state policies that favour high private investment. In Hong Kong the expansion of participation is primarily not in state subsidized research universities but in 2-year colleges largely financed by private tuition (Kember 2009). Yet in China most students are in the public sector where they typically pay part of the cost. One suspects that in the public institutions in China the proportion of tuition paid by families will keep rising, except in the case of the top scholars. As is also shown by the examples of the UK, parts of the US state sector and Australia it is possible to charge relatively high tuition fees in public sector institutions. This suggests that the key to the Confucian Model is not private provision as such, but household funding.

This is reinforced by the massive household investment in private tutoring outside the bounds of formal schooling, throughout the Confucian zone. Private tutoring, which is often provided by public sector teachers working in a second job in the marketplace, is focused on preparing students for successive examination and selection hurdles at the beginning of each stage of secondary and tertiary education. The double pressure of schooling and tutoring intensifies the “examination hell” of many students, for whom Confucianism is less about the intrinsic value of self-cultivation and more about instrumental rewards. (Thus the universal mechanisms of modern social competition mobilize all other values and habits in their service). In Korea, with its near 100% participation in the contest for elite university places, national spending on private tutoring has been estimated at the extraordinary level of between 1% and 2% of GDP (OECD 1998, 2001). The average OECD nation spends just 1.5% of GDP on all of tertiary education (OECD 2010, p. 218).

The foundation of all of this is the traditional Confucian respect for education which is 2,500 years old. It long predates the Roman household tutor, the medieval clerical scholar, the early modern schooling systems in the eighteenth century Prussia and Britain, and 1960s human capital theory. The life of Confucius has been dated as 551–479 BCE (Roberts 2006, p. 14). In the Confucian worldview self-formation through learning is an act of filial piety, an aspect of the child’s duty to his/her parents and the duty of parents to the ancestral lineage of the family. An educated child brings honour to the family and better protects continuity with the ancestors, thereby locating the family both in and beyond time. For most humans there is no greater aspiration than this, whether it is expressed through a code of honour or the code of career and wealth. This is what Confucian education offers. (Here we see that Confucianism, while closer to a moral code than a religion in the Western sense, and less pervasive and insistent than the evangelicals, goes just as deep as the religions of the book). At the same time Confucian education also connects the household to the larger social order supervised by the state, via examination competition.

In continuity with the long tradition of state-supervised preparation of the scholar-elite, the Mandarins, in Confucian systems government subsidies for tuition are disproportionately allocated to bright students in selective institutions (Yang 2009), the same universities now earmarked for a “world-class” research role. As has been the case for the last century many graduates of the University of Tokyo in Japan and Peking University in Beijing head to leading positions in the state apparatus. Of course, non-Confucian systems also subsidize an intellectual elite educated in leading universities and disproportionately drawn from socially advantaged families. The difference is that Confucian subsidies are more concentrated at the top end of the pyramid. Most OECD nations support lower-status public institutions and target students from poor backgrounds. China provides some equity-based subsidies but the distribution of state support is more lop-sided than in OECD Europe and most English-speaking nations (see below). As noted the role of household funding is maximized in the lower reaches of Confucian systems, the non-selective and vocational institutions, often commercial in character, although families using those institutions tend to be poorer than families using selective and academic institutions.

The dependence on private funding in low-status institutions does not seem to impair high participation overall. This shows the extent of compliance with the Model.

Relationship Between Household Funding and Growth of Tertiary Enrolments

A quantitative study by Yang (2011, see next chapter) considers the question of the respective roles of public and private funding in the expansion of participation. Yang used panel data models to analyse patterns for 1998–2006 for 98 countries worldwide and within that, 21 Asia-Pacific countries. She wanted to know whether public education financing promoted access to higher education, after controlling for economic development, levels of basic education and population characteristics.

For the 98 countries in the world group there was a significant positive association between public expenditure per secondary student as a percentage of GDP per capita, and tertiary enrolment rates. However, public spending per tertiary student as a percentage of GDP per capita was not a significant predictor of higher education enrolment, as private financing plays a greater role in tertiary than secondary education. Strikingly, Yang’s findings change when she moves from the world (the 98 countries) to the Asia-Pacific (the 21 countries). In the Asia-Pacific—where Confucian systems constitute about half the tertiary enrolment—there was no statistically significant relationship between public spending and tertiary enrolment. This was true of secondary as well as tertiary education. Yang concludes that the growth of GDP per capita, not states, has driven the expansion of access. “Higher education expansion in the Asia-Pacific area can be almost ‘solely’ attributed to the portion of college costs covered by private resources, in particular, student families.” In Confucian nations at least, more public investment is not essential to the expansion of access. But in many other nations, public investment *is* essential to access.

Social Equity Concerns

Nevertheless, the Confucian Model has social downsides that may breed trouble in future. It is difficult to lift quality in the long ‘tail’ of lower status private institutions that fall outside the ambit of state funding and responsibility. The Confucian combination of steep university hierarchy, the concentration of poorer families in low-status institutions, and intensive selection and one-off examination hell that reward families with economic advantages that can afford private tutoring, together generate social inequity problems. Yang makes the point that: “The overdependence on student family contribution, coupled with the lack of effective government intervention, may result in great inequality among students in obtaining higher education opportunities.” Inequalities are manifest on the basis of income, ethnic category and region.

In Confucian systems there is less emphasis on compensatory financing than in Western Europe and the English-speaking world. Nor is there enough focus on the need to facilitate more diverse and second chance entry routes into the top universities, notwithstanding some attempts to implement this strategy in Japan.

The findings of a large-scale survey of student aid in China by Yang (2009) are consistent with this picture of the Confucian Model, including the social inequities it fosters. Yang notes there are three types of student aid in China: fellowships, grants and loans. Fellowships, received by 3% of undergraduates, are targeted to high achievers. Grants are received by 20% of undergraduates. There are four types of loans with a ceiling of 6,000 RMB per annum. Repayment takes place 6–14 years after graduation and interest is subsidized. Grants and loans are meant to assist students irrespective of academic performance. But loan allocation tends to favour high achievers in high-quality institutions. According to Yang: “To control default rate and improve loan repayment rate, China Development Bank and other commercial lenders prefer to give credit to students in high-quality institutions who have a higher than expected future income and a lower probability of default.” The needs principle is over-determined by the merit principle.

Yang finds that total aid was positively correlated to attending a selective institution, high academic performance, father with higher education, being from a poorer household, female gender, and membership of the Chinese Communist Party. The effect of party membership was double that of selective institution. Yang finds those benefiting most from student aid are low-SES students in selective institutions. They receive more in aid than low-SES students in less selective institutions. Because other selective students were also assisted, 28% of students in very selective institutions received government aid, compared to 15% in less than 4-year vocational colleges—and on average students in selective and very selective institutions received three times as much money as students in less selective and vocational institutions.

Po Yang suggests that government should (1) target less selective 4-year and vocational institutions for more aid, and (2) “expand needs-based programmes and control the growth of merit-based ones”. But distributional patterns deeply rooted in social tradition govern the notion of fairness, making the allocation difficult to change.

The Examination

In the Confucian systems formal schooling is positioned in a social and institutional hierarchy mediated by examination competition. Confucian social harmony is based on universal acceptance of this hierarchy, moderated by the glimmer of hope that exceptional diligence at school will earn an honoured place on the upper rungs of the social ladder. The “one-chance” examination provides the state with a mechanism for social sorting which can be adjusted to permit variations in the extent of merit-based upward mobility, according to whether the regime needs to be reproduced or refreshed, and whether dominant groups can manipulate the system in their own interest. It is a powerful legitimating device for both the reproduction of elites and the maintenance of a hierarchy of tertiary institutions, led by the layer of “world-class” universities where popular aspirations are centred. Through the filter of Confucian values, coupled with the long struggle to succeed in these universalizing education systems, all families commit themselves to the examination mechanism. And in this way its outcomes, its acts of fate that decide the social order and set ultimate limits upon people’s lives—for there are few second chances, few alternate ways in to Seoul National, Tsinghua or the University of Tokyo—become internalized as the decisive consequence of individual effort and virtue.

These mechanism and values took shape in China in the first millennium CE. The first imperial academy and examination was created in 124 BCE to serve the need of the Han dynasty that followed the Ch’in, for candidates for official posts who had been schooled in the Confucian classics. Thus Confucian education was put to the service of the state, though at first the academy numbered only 50 students (Roberts 2006, p. 30). The scholarly caste expanded, though for a long-time examinations and tests played a fluctuating and secondary role. In the sixth century AD the Sui dynasty established three grades of credential. Examinations were conducted by the Board of Civil Office. “The most prestigious degree, the *xiucaï*, or ‘cultivated talent’, assessed the candidate’s broader learning” (Roberts 2006, p. 48). However, it was China’s one ruling Empress Wu Tse-t’ien (624–705 CE) who fully systematized the role of the examination in the training, recruitment and promotion of administrators—in 669 CE, at the peak of the great Tang Dynasty, more than four hundred years before Oxford University was founded in England. The size of the civil service was much expanded under the Song dynasty that followed (Ebrey 2010). Though the examination system and the mandarinates varied in the succeeding centuries, on the whole both grew in importance. Through her reform of education and the examination system Wu Tse-t’ien’s fashioned an instrument of rule under her direct control, the civil service, which she used to undercut the power of the noble families (Gernet 1982, p. 257). The examination embedded higher education within the state in an instrumental role. We again see the knowledge-power nexus, another coupling of scholarship and the state, in the project of building “world-class” universities with global reach.

Japan imported both the Confucian commitment to social harmony and the notion of education as self-formation. Under the Edo regime after 1600, the state built educational participation so successfully that by the mid nineteenth century, prior

to the forcible intervention in Japan by the USA and European powers, the level of participation was as high as anywhere in Europe. Initially, Japan's commitment to upward social mobility via examinations was less strong than that of China. Scholars selected on merit were subordinated to hereditary aristocrats. The universal exam system was finally consummated only when the samurai caste was disbanded after the Meiji restoration of 1868 (Marginson 2010a). But the same "examination hell" is now central to life in Japan as it is in all Confucian systems. This underlines the point that while modern universities in East Asia and Singapore were mostly founded in the twentieth century, their sustaining tradition is much older than that of medieval Western European universities.

Research

The high and growing level of funding of tuition by households frees governments in East Asia and Singapore to invest selectively in infrastructure, research and top universities so as to pursue global research capacity; and to continue the increases in research funding over time. Strong to very strong state support for research is a hallmark of Confucian systems. All except Japan, which has had a mature research system for 30 years, continue to drive research funding upwards.

In 1998 the then President Jiang Zemin announced China's goal of building a group of world-class universities. The transformation of sites and growth of research in the next decade was extraordinary. China continued to increase funding during the global financial crisis of 2008–2009. American universities remain well ahead but few doubt that China will achieve its 1998 goals. In Hong Kong China leading research universities recruited vigorously during the financial crisis, enhancing their capacity to draw staff from American public institutions affected by spending cuts (Hvistendahl 2009). In South Korea, the Brain Korea 21 plan of 1998 concentrated research power in the traditional doctoral universities, underpinning basic research. The grants covered the sciences and technologies, social sciences and humanities, and professional graduate schools, over a 7-year cycle. In Taiwan the Development Plan for University Research Excellence concentrated support in areas where Taiwan could exercise world leadership (Salmi 2009). Singapore is now building global strength in bioscience alongside longer-term programmes in engineering and technologies (Sidhu 2009).

Given their role in research funding it is unsurprising that the central governments at the head of the Confucian systems are closely shaping research priorities. Policy strongly favours the sciences and technologies over the humanities and the social sciences; and applied and commercial research are strongly favoured over academically controlled 'basic' research. While many other nations evidence similar priorities, in the Confucian zone the skew away from basic research (except in Japan and Korea), and the skew away from the humanities, are both pronounced. The proportion of R&D investment located in industry is high by world standards.

Accelerated Research Performance

The world has three primary zones of research and development (R&D), each accounting for roughly one third of activity: North America (\$ 393 billion in 2007), Europe (\$ 313 billion) and Asia and the Pacific, including West Asia (\$ 351 billion) 32.6% of the total, including 148 billion in Japan and \$ 102 billion in China (NSB 2010, pp. 4.33–4.34). The shift in the global balance of power is signified by the spectacular growth of research in the Confucian zone. In 2007 national investment in R&D was 3.5% of GDP in Korea, and 2.6% in Taiwan and Singapore, comparing favourably with investments in Western Europe and the USA (2.7%) (See Table 3.1). In China investment in R&D climbed from 0.6 of GDP in 1997 to 1.5% in 2007, growing by 19% per annum in the first half of the 2000s.

Has Confucian investment in research capacity translated into a growing presence in world science? Yes. The number of internationally published papers in science and technology has grown at about the same rate as R&D investment (Table 3.2). According to the U.S. National Science Board, between 1995 and 2007 the number of papers produced by Chinese authors grew by 16.5% a year, South Korean by 14.1%, Singaporean 10.5% and Taiwanese 8.6% (note also the growth of 14.5% in non-Confucian system Thailand, albeit from a small base. Between 1995 and 2007

Table 3.1 Investment in R&D, Asia-Pacific and other principal nations, 2007. (Source: NSB 2010, p. 4.34. R&D spending in India for 2006 has been estimated at 1.03% of GDP (Agarwal 2009, p. 252))

	General expenditure on R&D, all sectors	
	<i>\$ s million PPP</i>	<i>% of GDP</i>
USA	368.8	2.68
Germany	71.9	2.54
France	43.2	2.08
UK	38.9	1.79
Canada	23.8	1.82
Russian Federation	23.5	1.12
Italy	19.7	1.13
Spain	18.0	1.27
Sweden	12.1	3.60
Switzerland	10.9	1.70
Japan	147.8	3.44
China	102.3	1.49
South Korea	41.7	3.47
Taiwan China	18.3	2.63
Australia	14.9	2.01
Singapore	5.9	2.61
New Zealand	1.4	1.20
Other Asia-Pacific	55.7	–

PPP=Purchasing Power Parity

Table 3.2 Science and engineering papers in all fields, all nations over 10,000 papers and Asia-Pacific nations over 1,000 papers (excluding West Asia), 1995 and 2007. (Source: NSB 2010)

	Number of science and engineering papers ^a :		
	1995	2007	Average annual change 1995–2007 (%)
United States	193,337	209,695	0.7
United Kingdom	45,498	47,121	0.3
Germany	37,645	44,408	1.4
France	28,847	30,740	0.5
Canada	23,740	27,799	1.3
Italy	17,880	26,554	3.3
Spain	11,316	20,981	5.3
Netherlands	12,089	14,210	1.4
Russia	18,603	13,953	−2.4
Brazil	3,436	11,885	10.9
China	9,061	56,806	16.5
Japan	47,068	52,896	1.0
South Korea	3,803	18,467	14.1
India	9,370	18,194	5.7
Australia	13,125	17,831	2.6
Taiwan China	4,759	12,742	8.6
Singapore	1,141	3,792	10.5
New Zealand	2,442	3,173	2.2
Thailand	340	1,728	14.5

^a Includes social sciences

China's number rose from 9,061 to 56,806, moving past the UK and Germany. In 1995 the output of international science and technology papers in India and China was about equal. By 2007 output in China was three times that of India, and South Korea had moved past India.

Comparative Research Quality

At this stage Confucian universities are more impressive in research quantity than quality (Altbach 2009). The Leiden University rankings, which draw on both principal bibliometric systems, Thomson-ISI and Elsevier-Scopus, make this distinction. The ranking lists the world top 250 universities based on publications and citations for 2003–2007. Columns 3 and 5 of Table 3.3 focus on the absolute number of papers. Here eight Asia-Pacific universities were in the top 50: four from Japan and one from each of Korea, Singapore, Taiwan and China—all Confucian systems.

There were 19 Asia-Pacific universities in the top 125 (15%), mostly from Japan (8), Australia (4) and China (3). But once total papers for the top 250 universities are adjusted using citations per paper (column 6), the Asia-Pacific universities

Table 3.3 Asia-Pacific universities in the Leiden ranking listed in first half of the world top 250 for publications, publication and citation data for 2003–2007. (Source: CWTS 2010)

1. University	2. System	3. Total publications 2003–2007 ^a	4. Citations per publication (unadjusted for field)	5. World ranking in total publications	6. World ranking in terms of citations per publication normalized for field	7. World ranking in citations per publication normalized for field
U Tokyo	Japan	35,622	4.78	2	10	160
Kyoto U	Japan	25,905	4.51	8	27	180
Osaka U	Japan	22,049	4.65	17	36	171
Tohoku U	Japan	21,260	3.51	21	45	202
Seoul National U	Korea	19,590	3.34	27	57	203
National U of Singapore	Singapore	16,494	3.40	43	63	164
Singapore						
Tsinghua U	China	16,300	1.83	44	136	239
National Taiwan U	Taiwan	15,567	2.72	50	110	227
U Sydney	Australia	15,419	4.05	52	72	175
U Melbourne	Australia	14,757	4.54	58	70	154
Kyushu U	Japan	14,384	3.49	63	120	225
Hokkaido U	Japan	14,232	3.00	65	146	232
Nagoya U	Japan	13,707	3.77	70	119	216
U Queensland	Australia	13,268	4.17	73	88	159
Peking U	China	13,177	2.98	75	145	228
Tokyo Institute of Tech.	Japan	12,256	3.21	89	128	200
U New South Wales	Australia	11,164	3.90	107	125	163
Shanghai Jiao Tong U	China	10,996	1.49	110	202	234
U of Hong Kong	Hong Kong	10,616	4.39	116	114	117

Columns 6 and 7 rank the universities listed in column 5, i.e. the world 250 (first half only are listed here) on the basis of the highest number of science and technology papers.

^a The leading university in the world in publication volume is Harvard which is well ahead of the field with 57,124 papers over the 5-year period. Harvard's average citations per publication 10.46 is also the highest in the world

Table 3.4 Comparative performance of selected countries and regions in relation to share of publication volume and share of highly cited articles, all fields, 1998 and 2008. (Source: NSB 2010, Appendix Table 5.44)

	Share of all articles		Share of 1% most cited articles		Index of highly cited articles ^a	
	1998 (%)	2008 (%)	1998 (%)	2008 (%)	1998 (%)	2008 (%)
United States	34.0	28.9	62.0	51.6	1.83	1.78
European Union	34.6	33.1	25.1	29.6	0.73	0.89
China	1.6	5.9	0.1	2.5	0.07	0.42
Japan	8.5	7.8	4.3	4.5	0.50	0.58
Asian-8 ^b	3.6	3.6	0.3	2.2	0.08	0.32

^a The index of highly cited articles is the share of the world's top 1% cited articles divided by the share of world articles. 1.00 = a share of the world's most highly cited articles that would be expected given the share of all articles. An index number of more than 1.00 constitutes relatively high-quality performance

^b Asia-8 = India, Indonesia, Malaysia, Philippines, Singapore, South Korea, Taiwan, and Thailand

move downwards, aside from Hong Kong. To the extent that citation impact is a proxy for quality, this metric measures each university's 'firepower'—its quantity of high-quality research work—in the knowledge system. Citations per paper in column 7 is a more pure measure of quality alone. Here Asia-Pacific universities look weaker than in column 6. Note that in column 7 the University of Hong Kong moves to first in Asia, Tokyo second and NUS Singapore third (CWTS 2010).

The US National Science Board also compares research systems and regions in relation to their share of highly cited papers. Again the data show the Confucian systems are weaker in research quality as distinct from quantity. From 1998 to 2008 China's share of world science papers rose from 1.6 to 5.9%, underlining the rapid growth of research. China's share of the top 1% most highly cited papers in 2008 was 2.5%, compared with its publication share of 5.9%—though between 1998 and 2008 China's share of the top 1% of papers rose sharply, as happened in other Asian nations (NSB 2010; Table 3.4).

Between 1998 and 2008 the United States' share of world top 1% papers fell from 62.0 to 51.6% but remained dominant (NSB 2010). Why? In part because of system size, in part because American researchers tend to cite Americans and are less likely to read foreign papers than their counterparts in most other countries (Altbach 2005).² It also reflects two other factors. First, there are time-lags between investment in R&D and the output of papers, between the output of papers and

² The Carnegie survey of the academic profession found that whereas more than 90% of scholars from other nations believed that it was necessary to read foreign books and journals, only 62% of American scholars agreed (Altbach 2005, pp. 148–149). "American academics do not often cite works by scholars in other countries in their research. The American research system is remarkably insular, especially when compared to scientific communities in other countries.... The American system accepts scholars and scientists from abroad, but only if they conform to American academic and scientific norms" (Altbach 2005, p. 149).

citation performance, and between citations and the effects in rankings systems. It will be 15–20 years before today’s new R&D investments show up fully in rankings performance, but eventually they will generate more top 100/200 research universities in China, Korea, Taiwan and Singapore. Second, the US research system, and research in Canada and much of Western Europe (though less so that of Australia) place a relatively high emphasis on peer-reviewed basic science, more so than the Confucian systems. Basic science is a stronger driver of publications than are applied and commercial science. Intellectual Property arrangements can slow publication. A possible third advantage enjoyed by the USA is that its civic as well as university settings encourage open discussion, debate and criticism across all fields, and this might be more conducive to creativity (see the next section).

On the second point, compared to the United States the Confucian “innovation tigers” in Asia conduct a lower proportion of their research in universities. Apart from Korea they also have a lower ratio of basic (discovery) research to applied and commercial work. In 2007 basic research was 0.47% of GDP in the USA, 0.40% in Japan, 0.26% in Taiwan, just 0.05% in China though 0.49% in South Korea (NSB 2010, p. 4.37). The proportions of R&D conducted in higher education in 2007 were 13.3% in the USA, 12.6% in Japan, 10.7% in South Korea and 8.5% in China. In both Korea and (especially) China a higher proportion of R&D was conducted in government scientific institutes than in universities. China also had the highest proportion of university research funded by business—35%, compared to less than 6% in the USA (NSB 2010, pp. 38, 44). This underlines the manner in which R&D is more closely supervised and rendered utilitarian by the state in East Asia than in Western Europe and North America, by subsidizing applied research for industry.

Confucian research is also uneven by discipline. It is strong in engineering and technologies. China has seven schools of engineering in the Shanghai Jiao Tong top 100 schools, Japan five, Taiwan four, Korea three and Singapore two. Japanese universities also stand out in the physical sciences, especially Tokyo and Kyoto. The Confucian systems are not as strong in medicine and life sciences—though recent investments may change this—and weaker in the social sciences where the USA has 70% of the top 100 schools (Table 3.5; SJTUGSE 2010).

Individual Asia-Pacific universities are ranked in the world top 50 by field and subject area as follows:

- *Field of Physical Sciences*: Tokyo Japan 8, Kyoto Japan 16, Australian National University 35, Tohoku Japan 39, Tokyo Institute of Technology Japan 46 and Nagoya Japan 50
- *Subject of Mathematics*: Kyoto 33, National University of Singapore 48
- *Subject of Physics*: Tokyo 7, Kyoto 32, Tohoku 35, Australian National University 41, and Osaka Japan 47
- *Subject of Chemistry*: Kyoto 7, Tokyo 10, Tohoku 28, Nagoya 32, Tokyo Institute of Technology 34 and Kyushu Japan 48
- *Field of Engineering*: Tohoku 20, National University of Singapore 21, Kyoto 26, Tokyo Institute of Technology 33, Hong Kong Science and Technology 36, Cheng Kung Taiwan 37, Tsinghua China 44, and Chiao Tung Taiwan 45

Table 3.5 Asia-Pacific universities in the top 100 universities in each of five broad disciplinary fields, plus all nations with more than ten such cases, 2009. (Source: SJTUSSE 2010)

	Physical sciences	Engineering	Life sciences	Medicine	Social sciences	Total
United States	54	43	58	55	70	280
United Kingdom	8	8	10	11	11	48
Canada	2	5	5	5	8	25
Germany	7	1	6	5	0	19
Netherlands	1	3	2	4	4	14
France	6	2	1	2	0	11
Switzerland	3	2	4	2	0	11
Japan	6	5	3	2	0	16
Australia	1	3	4	3	1	12
China	0	7	0	0	0	7
Taiwan China	1	4	0	1	1	7
South Korea	1	3	0	0	0	4
Singapore	1	2	0	1	0	4

- *Subject of Computer Sciences*: Chinese University of Hong Kong 24, Hong Kong University of Science and Technology 27, Chiao Tung 38, and National University of Singapore 46
- *Field of Life Sciences*: Kyoto Japan 28, Tokyo Japan 30, Australian National University 42, and University of Western Australia 44
- *Field of Medicine*: Kyoto Japan 42
- *Field of Social Sciences*: nil

Apart from the Australian institutions all of the universities listed above are part of a Confucian Model higher education system.

A Note on Vietnam

Vietnam's absorption of Confucian education ethics was profound and long-lasting, as wide and deep as in the other Confucian heritage countries. In a prominent place in the Temple of Literature in Ha Noi, where a proto-university was created in 1076, there is an inscription urging respect for self-cultivation through education. The founder of the modern nation, Ho Chi Minh, always saw the Confucian tradition as an asset (Brocheux and Duiker 2007) and the post of teacher as an especially honoured one. 'The teacher' was one of his own pseudonyms. Vietnam uses universal examinations for educational and social selection. There is a strong normative commitment to schooling and respect for the teaching profession; a burgeoning private tutoring industry; and a broad commitment to household investment, expressed primarily through the financing of private tutoring, international study and attendance at foreign institutions inside Vietnam. Since 1986 fees have been charged in public education, though schools and universities are subsidized by the state. Those who invest in extra tuition enjoy an advantage (London 2006, pp. 13–14).

However, of the four elements of the Confucian Model—strong state steering, growth of participation underpinned by growing household spending, universal examinations and accelerated research development, only the second and third are present in Vietnam. In other words, the essential cultural conditions are present but the political conditions are absent. Vietnam has half the per capita income of China and at this stage the state is unable or unwilling to commit to an accelerated development of tertiary participation, quality of provision, and research. There has been considerable growth in lower secondary participation but upper secondary participation rates were still only 37% in 2002 (London 2006, p. 11), slowing tertiary growth. In the universities, policy makers are as yet little focused—at least in a systematic and realistic way—on the global comparisons of performance that drive reform in the rest of East Asia and Singapore. Modernization is partial in many tertiary institutions. Research languishes. Many policy problems remain to be addressed (Harman et al. 2009). Nevertheless, the central Vietnamese state has shown a formidable military and administrative capacity in other domains. It seems to be as strong in the nation as ever, while economic growth at 5–10 per annum is steadily transforming national resource capacity. It may be only a matter of time before Vietnam adopts the Confucian Model of knowledge economy.

Limits of the Model?

One tension in the Confucian Model is the potential conflict in research between on the one hand the priorities of governments; and on the other hand the judgments of peer-based discipline groups, which at best work to the world literature, at worst are self-serving and isomorphic. Second guessing by governments and the insistence that inquiry must have a visible utility and often a potential commercial application tend to inhibit the academically controlled research programme which is the best potential source of long-term innovations, whether curiosity-driven or use-driven as in research in ‘Pasteur’s Quadrant’. This suggests that the high percentages of research (a) not basic, and (b) located in industry not universities, may limit the Model.

In a recent editorial in *Science* the deans of life sciences at China’s two leading universities, Peking (Yi Rao) and Tsinghua (Yigong Shi), were highly critical of the handling of the state’s role in decisions about research funding. As they saw it the problem was not simply state-controlled instrumentalism, but that this has slid into a corruption of the merit principle in decisions about intellectual questions:

...rampant problems in research funding—some attributable to the system and others cultural—are slowing down China’s potential pace of innovation.

Although scientific merit may still be the key to the success of smaller research grants, such as those from China’s National Natural Science Foundation, it is much less relevant for the megaproject grants from various government funding agencies, which range from tens to hundreds of millions of Chinese yuan (7 yuan equals approximately 1 US dollar). For the latter, the key is the application guidelines that are issued each year to specify research areas and projects. Their ostensible purpose is to outline “national needs.” But the guidelines are often so narrowly described that they leave little doubt that the “needs” are anything but

national; instead, the intended recipients are obvious. Committees appointed by bureaucrats in the funding agencies determine these annual guidelines. For obvious reasons, the chairs of the committees often listen to and usually cooperate with the bureaucrats. “Expert opinions” simply reflect a mutual understanding between a very small group of bureaucrats and their favorite scientists. This top-down approach stifles innovation and makes clear to everyone that the connections with bureaucrats and a few powerful scientists are paramount, dictating the entire process of guideline preparation. To obtain major grants in China, it is an open secret that doing good research is not as important as schmoozing with powerful bureaucrats and their favorite experts.

...overhauling the system will be no easy task. Those favored by the existing system resist meaningful reform. Some who oppose the unhealthy culture choose to be silent for fear of losing future grant opportunities. Others who want change take the attitude of “wait and see,” rather than risk a losing battle. Despite the roadblocks, those shaping science policy and those working at the bench clearly recognize the problems with China’s current research culture: It wastes resources, corrupts the spirit, and stymies innovation. The time for China to build a healthy research culture is now, riding the momentum of increasing funding and a growing strong will to break away from damaging conventions. A simple but important start would be to distribute all of the new funds based on merit, without regard to connections. Over time, this new culture could and should become the major pillar of a system that nurtures, rather than squanders, the innovative potential of China. (Shi and Rao 2010, p. 1128)

Much depends on the state of academic cultures. As Shi and Rao imply, where these are merit-oriented this can partly balance interventionist governments. But when shaping by government is accompanied by conservative academic cultures, a high level of social conformity and near closure to foreign talent—as now may be the case in Japan (Newby et al. 2009)—there is a danger that the Confucian Model will be insufficiently alive to global intellectual currents and to local potentials for creativity (Marginson 2010a). Closure to foreign talent is a limitation also in Korea. Perhaps Singapore, China and Hong Kong China evidence greater academic mobility and openness to new ideas, with feisty academic cultures in some institutions. But state political control remains the final authority in the background in Singapore and Hong Kong; so the imaginative capacity of the universities remains crucially dependent on continuing nation-state acumen and restraint. And state control is exercised up front in China, where the university president shares authority with the party secretary.

Unlike the regulatory state in America that evolved against a liberal market economy context, the regulatory state in Asia has emerged from a context of a combined strong state and a free market economy, by which the state ideologically commits to an “authoritarian mode of liberalism”. (Mok 2009)

An element common to higher education systems in both capitalist and socialist countries in the Confucian zone is that they have sprung from centralizing states with a history of authoritarian rule. Nevertheless, the examples of democratizing Korea and Taiwan—places where civic culture can be more open and critical than the universities—and also the evolution of single-party Singapore, where the state has shaped a regulated freedom and scope for criticism in many spheres including the universities and civil society (Sidhu 2009; Kong et al. 2006)—all show that marked variations in governance are possible within the terms of strong nation-

states. This same scope for variation suggests that one possibility is self-managed universities.

Perhaps the big question for the Confucian Model is about China. China is slowly liberalizing. Higher education is a principal medium of liberalization. Higher education is forming a mass population in the capacity for public action and global awareness. Graduates from higher education in China have an enhanced capacity to handle information and will expect greater transparency in the operations of government. In building high participation in higher education the Communist Party government has deliberately been fostering its own on-going modernization. It has created a reciprocal relation between the nation-state and the evolving public sphere enabled by the knowledge economy (a public sphere that extends well beyond the national border). In other worlds the state is using higher education as an instrument of continuing renewal of the society, economy and the government/party apparatus. Whether this will lead to the successful evolution of the existing system of rule or to a political break and a challenge to party authority cannot be known at this time. It is clear that it will lead to a different kind of China and will facilitate a larger world role for the nation.

For the most part the leading research universities in China exhibit academic freedoms in the sciences, and in most of the social sciences, similar to those found in much of the world. In many places there are feisty academic cultures and free criticism of government policy, albeit criticism generally couched in constructive terms that stops short of contesting national leadership. The barrier to university creativity in China is not so much the one-party regime in itself but the limits on communicative freedom in the civic environment outside the universities, particularly in relation to social and policy issues, the humanities and the arts. The underdevelopment of civic freedoms inhibits the potential connectivity and effects of the universities.

A strength of American creative cultures is the scope for criticism and innovation in civic, communicative and business forums (which are often ahead of the universities). Arguably, edgy university ideas and off-the-wall invention achieve their full potential only when discussion and debate can also flourish. Moreover stellar creators stimulate each other, across fields, and typically renaissance cultures are strong in the arts and humanities as well as sciences and business (Marginson et al. 2010; Murphy et al. 2010). And modern Confucian scholarship needs room to breathe, grow and reinvent if it is to sustain an evolving East Asian identity. Yet in all Confucian systems university strategy and research priorities are constrained by the all-pervasive state instrumentalism. It does not necessarily inhibit most science but it increases the dependence of economic innovation on top-down forms and it probably retards the broader economic, social and cultural contributions of higher education. State instrumentalism might constitute a limit of the Confucian Model.

How limiting? Can it evolve into something looser and more enabling? Time will tell. The jury is still out. Many in the Confucian systems are aware of the dangers of over-determining states and the potential of political objectives and risk-aversion to cut across intellectual merit and the fostering of creative cultures. The capacity of the Model for reflexive self-improvement should not be underestimated.

Conclusions

Higher education and research are “rising” rapidly in some but not all Asia-Pacific countries. The main action is in systems most closely affected by Confucian values (with the exception of Vietnam): Japan, Korea, China, Hong Kong China, Taiwan and Singapore. These exhibit or have exhibited a special developmental dynamism, one that continues to play out in all of except Japan. The Model rests on specific conditions—the economics of high GDP per capita or a high rate of growth that will lead to that outcome, the politics of a centralized nation-state with effective mechanisms of focus and steering, and the culture of Confucian respect for learning, scholarship and research and for social judgments made on educational grounds.

The Confucian systems have created a distinctive model of higher education and university-based research whose achievements many emerging nations would like to imitate. The Confucian Model constitutes an alternative developmental path to North American or Western European models. Yet few nations share the cultural, economic and political conditions underpinning the Confucian systems (just as few share anything like the American circumstances). For example, rapid economic modernization and capital surplus are not available to all higher education systems.

Confucian higher education rests on a long tradition of respect for education and scholarship. It is also modern. Every Confucian nation wants to catch up with Western science and technology. Policy makers implement American system organization, based on vertical diversity topped by high-quality research universities. The neo-liberal forms of governance and NPM reforms pioneered in the UK and spread throughout the world are marching through East Asia and Singapore. But the Model is not a simple adaptation of the Western university in Greater East Asia. This is not the splicing of Confucian tradition with Western modernization. It is an organic hybrid of old and new, and East and West: a distinctive Confucian form of modernization in the knowledge economy.

The four aspects of the Model are interdependent. The core of the model is the role of the nation-state, which frames the examination system, steers the patterns of public and household investment and funds and drives the accelerated programme of research. Selected state investment provides infrastructure and subsidizes tuition so as to push forward the boundaries of participation. Confucian traditions in education provide the essential cultural conditions that support the roles of state, household and examinations. Confucian scholarship is the foundation of the respect attached to scientific research. Private household funding frees state resources for infrastructure and research. Examinations lock in the population, drive household funding and legitimate the Model and the social competition that sustains it, on behalf of the state.

This Model is changing the global balance of power in higher education—because it works. Together private funding of tuition, public funding of research, and economic growth, enable the Confucian systems to lift mass participation, university quality and R&D all at the same time and at unprecedented speed. No other developmental model of knowledge economy is associated with progress at this rate. And there is a danger that the phenomenal achievements of the Model will

blind policy makers, media and academic communities—not to mention scholars of higher education—to its specific economic, political and cultural conditions. Its success is more visible than its limitations and downsides, including social inequities in participation, and authoritarian state constraints of university autonomy, executive leadership, academic creativity and free global interactions beyond the borders of the nation-state (Marginson in press). Arguably much of this is inherent in the Model, given its high dependence on private funding of tuition, targeted investment in talent, and state direction. The current stagnation of the one mature Confucian higher education system, Japan, is of concern (Marginson 2010a). Yet these limitations are also not inevitable. Rather they mean that it is necessary to factor correctives into the Model.

On present trends the level of education and research infrastructure across the whole of East Asia and Singapore will reach that of Western Europe within a generation. This outcome has already been achieved in Singapore and Hong Kong China and has long been the case in Japan. Whether the Confucian systems can match the fecundity of the USA, by far the most important zone of intellectual creativity in the last 150 years (Murphy 2010), remains to be seen. If a renovated and modernized hybrid Confucian intellectualism develops, alongside the Western tradition, anything is possible. Arguably, this will only happen if the Confucian systems develop research and scholarship in the humanities and social sciences as strong as their science and technology. And it will be augmented if these systems find a way to establish a zone of autonomous creativity, able to interact directly with both communicative civil society and industry without the relationship being articulated through the machinery of state.

The question before the nation, always the dominant player in the Confucian zone, is how far it can devolve science and culture to independent thought. A Confucian model without the nation-state is inconceivable, just as it could not exist without family commitment. The task of the nation-states will be to ensure that their institutions of higher education and research can sustain the exceptional dynamism of their learning and knowledge production, while the independence of the universities in content grows incrementally *and* they also become globally integrated. The hope for the state in East Asia and Singapore is this: if it achieves the right devolution in higher education, it optimizes the influence of the national culture at global level. To achieve their full global effectiveness national cultures must be both self-determining and engaged. At their best research universities are very good at this combination of qualities. They are powerhouses at global level as the Humboldt and Harvard models show—and in an age of global interdependence, global influence is what matters.

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Chapter 4

The Disappearing Role of Education Finance Policies in Higher Education Access: Panel Data Analysis of 21 Asia-Pacific Countries in a Global Setting

Lijing Yang

Introduction

Over the last decade, higher education in the Asia-Pacific area (East Asia, Southeast Asia, South Asia, Oceania, and the west coast in North and South Americas) and other countries around the world in general has generally expanded from the elite (under 15% of the relevant age group participating in postsecondary education) to the mass (20–30%) access.¹ This expansion occurred not only because of growing individual demand but also because of national goals to achieve social justice and enhance competitiveness in a global economy (Johnstone 2004a; Premfors 1984). Along with the expansion, a key issue now, however, is how to fund access to higher education in light of diminishing public resources (Chapman and Greenaway 2003), as governments no longer can afford to subsidize mass higher education and the traditional approach of low or free tuition was considered a regressive use of taxpayers' resources (Barr 2002, 2005; Chapman 1997; Johnstone 2004a). Since the 1990s, many countries in the world have developed their education finance policies, or adopted policies of other countries, to maximize the utilization of scarce resources to provide access to higher education.

Given the huge investment in higher education and the tension between the growing demand and reduced public support, it is reasonable to ask: Have the recent education finance policies across nations—represented mainly by the public/government resources on education—promoted access to higher education in general? Since the Asia-Pacific region has gained attention in terms of the rapid change in higher education systems and the rise in the global economy, it is also relevant to ask: How does the Asia-Pacific area differ from the global trends in financing their education to promote higher education expansion? This chapter uses econometric

¹ The cut-off points of elite and mass higher education was defined by Trow (1972, 1973)

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methods to investigate the relationship between public finance on education and college access in both the Asia-Pacific area and a broader world setting. The study will provide timely, important implications for policymaking, implementation and adjustment for countries and international agencies involved in the on-going international adoption and adaptation of higher education policies.

Theoretical Framework and Worldwide Practices

In this section, the literature on theoretical foundations and the rationale for government or public spending on higher education is reviewed, followed by a summary of the international trends and practices of education finance policies in the Asia-Pacific area and other regions in the world.

Public Financing, Higher Education Access, and Economic Growth

Many economic studies have reported a generally positive correlation between education and economic growth (e.g., Barro 1991; Bils and Klenow 2000; Diamond 1989; Mincer 1995; Patrinos 2000; Temple 2000). According to new growth theory, technological change—improvement in the instructions mixed together with raw materials—lies at the heart of economic growth, and that it arises in large part because of intentional actions taken by people who respond to market incentives and translate new knowledge into goods with practical value (Romer 1990, 1994). Thus, the long-run economic growth is not the result of exogenous technological changes or forces that impinge from outside, but an endogenous outcome that is driven largely by intentional decisions of human capital investment made by profit-maximizing agents. However, since individuals do not fully capture the technological advance and social benefits that research may lead to, they tend to spend too little time acquiring knowledge and underinvest in education relative to the socially optimal outcome (Rustichini and Schmitz 1991). Given that underinvestment in education may deliver slower growth, Temple (2000) and Kopf (2007) suggest that governments subsidize not only R&D but also certain kinds of education—particularly higher education—to lead technological changes and advances in R&D. The new growth theory suggests that, in searching for the determinants of growth, it is important to examine policy on providing higher education.

Despite the acknowledged importance of higher education for fostering growth, there remains controversy as to which education sector—higher education or basic education—should receive a greater allocation of public resources. The key issues in the controversy involve the efficiency and social return of the two sectors and equity among different income groups. Some scholars (e.g., Psacharopoulos et al. 1986; Psacharopoulos 1994) have found that basic education yields higher social

rates of return than higher education, tending to benefit the poor more than the rich, and that therefore allocation of scarce government funds should favor the former. In contrast, Birdsall (1996) encouraged a reallocation of public resources for primary (and secondary) levels to higher education, as the social return of higher education would be higher than that of basic education if many unmeasured spillovers of higher education that were underestimated in the previous research were taken into account. Furthermore, Birdsall indicated that the social benefits to primary and secondary education may be declining in developed and developing countries as more students complete these levels and do not achieve advantages in the job market.

Similar to Birdsall's (1996) argument, Patrinos (2000) noted that government recognition of education for economic and social development is an underlying rationale for investing large shares of GDP in education. Having been increasingly regarded as the engine of economic growth in the information economy, higher education seems to be gaining increasing priority for receiving government funds among all education sectors largely due to its recognized importance.

Global Trend and Policy Practices of Privatization and Cost-Sharing

The recent comparative literature has widely reflected the trend of privatization and cost-sharing as the two most important characteristics of the higher education finance policies worldwide. Privatization and cost-sharing both refer to the shift of the burden of bearing college costs from the government or taxpayers to their parents and students, the introduction of tuitions and fees to maintain the institution operation, a reduction of government grants, the replacement of grants with student loans, and the increase of tuition-dependent private sectors.

Asia-Pacific Countries. Many developing and least developed countries in Asia introduced tuition fees and student loans as a means of financing higher education while overcoming public financial austerity. In India, due to the continual financial constraints on government, higher education has been increasingly subsidized by nongovernment money, including household expenditures, fees, student loans, and voluntary contributions (Tilak 1993). In Southeast Asia, five states (Indonesia, Malaysia, Philippines, Thailand, and Vietnam) have expanded private higher education institutions to open up access. As a result, their high fee levels preclude enrollment by the poor, who are now also being squeezed by rising fee levels at public higher education institutions (Welch 2009). In the least developed countries such as Bangladesh, more than half of the enrollment has been absorbed by the private sector of higher education since the mid 1980s (Tilak 1991). Meanwhile, it is reported that private institutions experienced remarkable growth in Cambodia to meet the urgent need for higher education (Altbach 1999).

On the west coast of North America, the reduction in grant to higher education and the replacement of grants with student loans have been the long tradition. In the United States, some scholars have criticized the negative effects of higher education

privatization and discussed the positive effects of some components of financial policy, particularly need-based grants, on college enrollment. For example, according to Heller (1996), tuition increases negatively influence college enrollments, especially for low-income and minority students, while some student financial aid programs have a positive impact on college access. Specifically, government need-based grants have a much greater effect on enrollment than student loans. St. John and Noell (1989) estimated the effects of student financial aid offers on student enrollment decisions for three US high school classes in the 1970s and 1980s. They separately analyze the effects of each type of financial aid (grants, loans, and work study), along with a combination of two or more types of aid, controlling for students' social background, academic achievement, high school experience and post-secondary aspirations. They found that all forms of financial aid offers had a strong positive impact on the students' decision to enroll in college.

Privatization of higher education is also prevalent in Latin American countries on the west coast of Pacific Ocean. For example, public universities in Mexico began the privatization or commercialization process since the 1980s, and introduced student loan programs based on market interest rate and adopt philanthropy strategies to attract donations and other private sources to higher education (Delgado-Ramos and Saxe-Fernandez 2005). In Colombia, financial constraints and student unrest during the period of the National Front (1958–1974) led to an increase in private higher education to meet the sharp increase in demand that followed. The public universities did not expand at the same time however. Therefore, as admittance into the elite private universities is associated with family income, students from the lower middle class have recently been channeled into low-cost, low-quality institutions of higher learning. In the early 1980s, the Chilean government changed procedures for financing public universities to encourage income-generating activities and cost savings, requiring public institutions to impose fees (Eisemon and Holm-Nielsen 1995). Consequently, such changes in Chile greatly expanded the number of tuition-charging private colleges and universities, led to the establishment of a loan scheme for students in public institutions, and gave “vouchers” to the most talented secondary school graduates negotiable at either public or private institutions.

Other Regions of the World: Although many European countries remain bastions of “free” higher education, depending heavily on public financing, increased privatization and cost-sharing have become evident in recent decades. In the early 1990s, in Germany, Denmark, Greece, and Luxembourg, free access to college was common and grants were the commonest form of basic assistance (Eurydice European Unit 1993; Psacharopoulos 1992). However, the recent decade has witnessed an operation of a mixed system of grants and loans in Germany, Luxembourg, and Greece; unconditional loans in 18 other countries; and means/merit loans in seven countries. More countries are charging or increasing tuition for domestic students or students within the European Union (Vossensteyn 2004). For example, in 1998 the UK introduced tuition fees and income-contingent loans² for higher education

² Income contingent loans are different from ordinary loans to students in having no fixed interest and repayment terms. If loans are not income contingent, then they lack means of equalizing opportunity (Lleras 2004)

(Barr 2004). Against this trend in the last decade, Sweden was the only country that increased the availability of grants, without charging tuition or fees (Vossensteyn 2004). In 1985, it introduced income-contingent loans that tied repayment to individuals' income and increased the availability of grants to 30% of the total aid (Reuterberg and Svensson 1994).

Similar to those Asia-Pacific countries, the ideology of free higher education in the rest part of South America has disappeared in recent decades. In Argentina, universities can decide whether they charge tuition, but the number of students in the private sector has still increased 76% between 1985 and 1994, largely due to poor academic quality on the public side (Johnstone et al. 1998). In Brazil, the private universities have become the government's instrument for expanding access to higher education, although they are self-financing and generally provide a lower quality of education (Eisemon and Holm-Nielsen 1995).

Africa has also encountered the problem of inadequate resources to fund the growing demand for higher education, resulting in the introduction of tuition and student loan programs in both developing and least developed countries (e.g., Ghana, Lesotho, Kenya, Uganda, Zambia) (Johnstone et al. 1998; Teferra and Altbach 2004). Johnstone (2004b) reveals that the African governments are increasingly unlikely to raise enough revenue by taxation to meet currently underfunded social needs and simultaneously provide substantially more access in the face of rising costs of higher education. Thus, charging tuition and fees, together with student loan programs, is widely recognized as both necessary and sound (Johnstone et al. 1998). Overall, the implementation of education finance policies in Africa has generally been slow, sporadic and unevenly applied, creating problems for program evaluation and improvement.

In sum, the literature illustrated the trend of increased privatization and cost-sharing accompanied by simultaneous growth in college enrollment in the Asia-Pacific area and other regions. In general, increasing college costs negatively affect access, whereas some financial policy components, particularly grants, positively influence college enrollments, especially for low-income students. In addition, although successfully implemented in developed countries, education finance policies might not be successfully implemented and evaluated in developing and least developed countries, probably due to the lack of a necessary economic infrastructure, and the absence of carefully designed programs.

Research Questions

Despite the important contributions of the aforementioned studies in framing theories and analyzing the worldwide trend, none of the existing research has provided empirical evidence as to whether public expenditures on education has promoted higher education expansion in the past decade in both the Asia-Pacific area and the broader world. This chapter directly addresses these problems. Specifically, the research questions underlying the chapter are:

1. Are education finance policies, such as public expenditure on education as percentage of GDP and public expenditure both per tertiary and secondary students as percentage of GDP per capita, related to tertiary enrollment ratios in the 98 countries from 1998 to 2006, after controlling for national economy, secondary and primary enrollment, and population characteristics?
2. How does the Asia-Pacific area differ from the 98 countries in financing education to promote higher education access?

Methodology

The dataset and analytical methods of this chapter were developed from Yang et al.'s (2007) article illustrating the role of financial aid policy in college access within OECD countries. This study underlying this chapter made changes in the datasets, education finance variables, and control variables.

Datasets

The study built two cross-sectional time-series (panel) datasets drawn from the World Development Indicators (WDI) published by the World Bank.

The first dataset contains 98 countries that have sufficient data from 1998 to 2006 and forms a panel dataset with 882 data points before accounting for missing values. These countries include 25 African, 24 Asia, 32 European, 6 North American, 2 Oceanian, and 9 South American countries across developed, developing and least developed economic levels (see Appendix 1 for the list of the 98 countries). The second dataset is a subset of the first dataset, consisting of 21 countries located in the Asia-Pacific area (see Appendix 1 for the 21 select countries).

Variables

This study selects 13 variables from WDI (See Appendix 2, Definitions of the Variables) for both datasets. The dependent variable is the tertiary gross enrollment ratio (GER), a combination of tertiary-type A and tertiary-type B education. The education finance policy variables include public spending on education as percentage of GDP, public expenditure per secondary student as percentage of GDP per capita, and public expenditure per tertiary student as percentage of GDP per capita.

As the previous literature often suggested that many other factors such as population characteristics (e.g., rural, urban) (e.g., Hu 2003; James et al. 1999), gender

equity issues (e.g., Chanana 2004; Chapman and Ryan 2005), economic level, youth labor (e.g., Justesen 2008), prior education preparation (e.g., Jallade 1989; Young 1993) may also affect higher education access, three groups of control variables were added: (a) five demographic variables: percentage of citizens 65 years and older, population growth rate, female population, rural population, and population size; (b) two economic variables: GDP per capita and employment rates of youth population (15–24 years old); (c) three basic education variables: gross primary enrollment ratios of the school-aged student group (6–11 years old) and the secondary enrollment (12–17 years old) ratios, and sex ratio (girls: boys) in primary and secondary education. Finally, I check the histograms of the variables, and transform the data of the total population and GDP per capita using the natural logarithm to reduce the skewness.

Statistical Models

Two frequently employed models of panel data design include fixed effects model and random effects model. The pooled dataset can capture variations along both group (country) and time, which are both important to the study because: (1) unobservable and time-invariant effects may exist for each country (e.g., national culture, political structure, education values and spending pattern on higher education); and (2) time may have potential influence, as some variables (e.g., total population) tended to increase annually during 1998–2006. Including both the group and time effects into fixed or random effects models could provide a powerful study with both spatial and temporal dimensions, thus enhancing the quality of study.

Both fixed and random effects models have pros and cons. Fixed effects models can capture the time-invariant country-specific effect but may use up a lot of degrees of freedom. Random effects models can capture the between-group variation, and the serial correlation can also be captured if the between-group variation did exist. In addition, unlike fixed effects models, random effects models allow making unconditional inferences to a larger population.

The analytic models in this chapter follow a general equation to estimate the effects of education finance variables and other factors on tertiary enrollment ratios

$$y_{it} = \alpha + \beta_1 x_{1it} + \dots + \beta_k x_{kit} + \mu_i + \gamma_t + \varepsilon_{it}$$

The notations used in this chapter are

- i ($= 1, 2, \dots, N$): the i^{th} country; i_0 is the country excluded as reference group;
- t ($= 9$): the total number of time periods, where $t = 1998, \dots, 2006$, respectively;
- $k = 1, 2, \dots, 13$, denotes the k^{th} independent variables
- β : coefficients of independent variables x_{it} ;
- μ_i , γ_t and v_{it} : error terms. μ_i are country-specific intercepts, γ_t are the time-specific intercepts, and ε_{it} denotes the remainder error terms.

By varying the structure of Eq. 3, the following four models can be specified. I first disregard the time effect γ_t and estimate a one-way random effects model (Model 1) and a one-way fixed group effects model (Model 2). Then, by adding the time dummies γ_t in Models 1–2, a new one-way random effects model (Model 3) and a two-way fixed group and time effects model (Model 4) are estimated.

In this study the results from all the four models are reported, followed by performance of a Hausman test³ to examine which model is preferable. However, some researchers have found that the Hausman test has low power for rejecting the null hypothesis (Lamb 2000, 2003; Nakamura and Nakamura 1985). Thus, this chapter will compare the results from all models instead of relying on just one of them and select a model that best fits the data.

Since this study is rooted in endogenous growth theory and the previous literature often reported endogeneity problem (or bilateral causality) between economic growth and education outcome in time-series analysis (e.g., Barro 1991; Mankiw et al. 1992; Rebelo 1991), I conduct a Durbin-Wu-Hausman endogeneity test for each model. If the tests reveal significant endogeneity, the assumption for ordinary linear regression that explanatory variables are uncorrelated with errors is violated, leading to biased and inconsistent estimates.

A general solution to the endogeneity problem is to apply an instrumental variables (IV) method (Wooldridge 2002). The method relies on finding one or more appropriate instrumental variables that affect the endogenous variable—GDP per capita in this case—but do not affect the outcome variable at the same time. Wooldridge (2002) suggests two-stage least squares (2SLS) estimator is the most efficient IV estimator, conditional on using a linear combination of multiple instruments. In this study, I will use the first lagged GDP per capita as well as control variables indicating basic education and population characteristics as the multiple instruments for GDP per capita.

Using the 2SLS approach, I estimate four IV models that correspond to the four regular panel data models specified earlier. The components of instrumental variables remain the same across all IV models. Hausman tests are followed to choose preferable models. Therefore, I run both the regular panel data models and instrumental variable models for the 98-country dataset as well as the dataset for the 21 Asia-Pacific countries.

³ The Hausman specification test compares the fixed versus random effects under the null hypothesis that the individual effects are uncorrelated with the other regressors in the model (Hausman 1978). Hausman's essential result is that the covariance of an efficient estimator with its difference from an inefficient estimator is zero (Greene 2003). $m = (b_{Robust} - b_{Efficient})' \Sigma^{-1} (b_{Robust} - b_{Efficient}) \sim \chi^2(k)$, where $\Sigma = Var(b_{Robust}) - Var(b_{Efficient})$ and k is the number of regressors.

Limitations

The study has two limitations. First, the dataset contains considerable missing values for some variables. As multiple imputation methods produced many extreme values, I impute 112 (1%) missing points on the 13 variables with means of two available data points before and after, and group means, or adjusted with average growth rate, given that the mechanism of missing data is completely at random. Second, the countries selected having sufficient data are mostly middle- or upper-income countries, with fewer least developed countries. Largely due to incomplete data, some Asia-Pacific countries with large college student population and important contributions to the global economy, such as China, Canada, are not included in the study. The researchers should be cautious about the generalizability of the results to other Asia-Pacific countries or to the entire world.

Findings

Trend Analysis

Table 4.1 and Fig. 4.1 illustrate that tertiary enrollment in the 98 countries from 1999 to 2006 has expanded into the stage of mass access (unweighted mean=32.17%, weighted mean (representing total enrolled students in the entire population of the 98 countries) = 29.42%). The enrollment in general follows a linear trend over the years, varying greatly across regions. Specifically, Oceania, North America and Europe, where developed countries are concentrated, enjoy the highest tertiary enrollment ratios, as high as 75%. In contrast, higher education attendance in Africa and Asia, which includes mainly lower-income countries, always falls below the world average, with Africa at the lowest level. Enrollments in South America are very close to the world mean. Growth rate in enrollment also varied by region, with Europe and South America experiencing the fastest growth and Africa gaining very little. Higher education enrollments expanded steadily in most regions, with Oceania and North America both experiencing a sharp increase in 2002. The enrollment in the Asia-Pacific region is slightly (1–3%) lower than that of the world average.

Table 4.1 and Figs. 4.2, 4.3 and 4.4 show little evidence of an increase in education finance variables that corresponded with the increase in higher education access. The 98 countries spent 4.68% of their GDP on education on average, growing slightly from 2000 to 2003, but swaying greatly thereafter. The public expenditure per tertiary student as a percentage of GDP per capita (mean=82.12) is much higher than that of per secondary student (mean=21.83). The tertiary expenditure per student has fluctuated largely from 1998 to 2006, tending to decrease from 2000 to 2004. Compared with the tertiary level, public expenditure per secondary student has stagnated over the years. Interestingly, the trends in the Asia-Pacific area in terms of the three kinds of educational expenditure almost parallel the world average trend, but at a slightly lower level.

Table 4.1 Descriptive results of the variables

	All countries (N=98, including Asia-Pacific)			Asia-Pacific countries (N=21)		
	N	Mean	SD	N	Mean	SD
<i>Gross tertiary enrollment ratio</i>	849	32.17	24.60	186	32.86	25.05
<i>Population</i>	882	8.34	5.28	189	6.69	3.89
% of 65-year-older						
Annual growth rate	882	1.29	1.25	189	1.50	0.60
Female population (%)	882	50.16	2.50	189	49.85	0.89
Rural population (%)	882	42.57	23.48	189	43.63	24.54
Total population	882	34,320,828	110,860,920	189	99,400,000	223,000,000
<i>Economy</i>						
GDP per capita(constant 2000 USD)	882	7,866.38	10,264.50	189	7,413.54	10,776.98
Employment rates (15–24 years old)	882	42.61	13.51	189	45.70	9.31
<i>Education</i>						
Primary enrollment ratio	876	101.07	14.24	187	106.25	8.83
Secondary enrollment ratio	853	76.65	32.33	187	73.68	29.55
Sex ratio (girls:boys) in primary & secondary education	852	96.75	9.43	185	96.86	7.52
<i>Education, finance</i>						
Public spending on education as % of GDP	759	4.68	1.70	182	4.09	1.45
Expenditure per secondary student (% of GDP per capita)	639	21.83	10.42	166	16.34	7.18
Expenditure per tertiary student (% of GDP per capita)	653	82.18	158.23	162	38.83	38.52

Fig. 4.1 Tertiary gross enrollment ratios (*GER*) by regions from 1999–2006 (Number of countries=98, $N=849$). *GER* are weighted to adjust for the representation of college student population in the entire population of each continent or economic group. The data of 1998 are removed due to missing data, which are vulnerable to the computation of weighted enrollment ratios

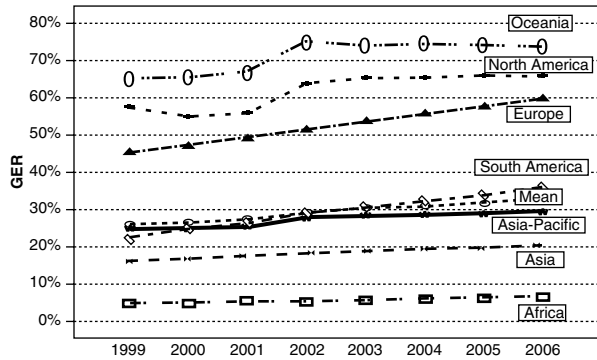


Fig. 4.2 Public spending on education as percentage of GDP

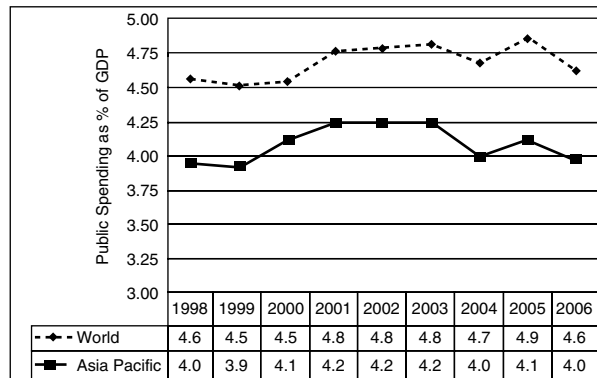
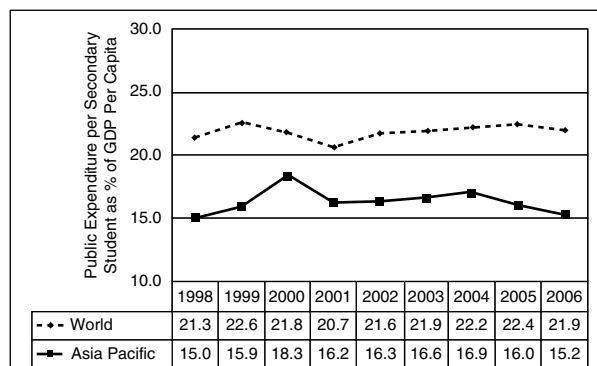
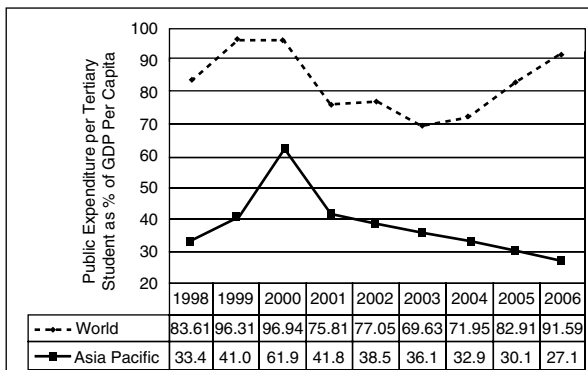


Fig. 4.3 Public expenditure per secondary student as a percentage of GDP per capita



As shown in Fig. 4.5, there has been a remarkable growth in GDP per capita over the 9 years, with the growth rate even greater after 2003. The trend in the Asia-Pacific area still roughly follows the world average but at a lower level. In addition, compared with the larger group of 98 countries, the Asia-Pacific countries are lower in the percentage of people 65 and older population, female population, and

Fig. 4.4 Public expenditure per tertiary student as a percentage of GDP per capita



secondary enrollment ratios, but higher in the annual population growth rate, rural population ratios, youth employment ratios and primary enrollment ratios. More importantly, the average total population in Asia-Pacific is approximately three times that of the world average.

The trend analysis reveals three evident patterns. First, although Asia-Pacific countries achieved approximately same level of college access, the educational expenditures are below the average of the 98 countries. Second, college enrollment ratios grew from 1998 to 2006 accompanied by economic growth, and the increasing rate at different time periods of the former seems to approximately correspond to the latter. Third, there was a shift in public finance strategies for higher education after 2000, including a decrease in the percentage of public expenditure paid for by the government and an increase in the share by the students and their families, strategies typically characterized as privatization and cost-sharing. The trend analysis suggests that both the growing economic development and the movement toward privatization could explain the growing enrollment rates over 1998–2006.

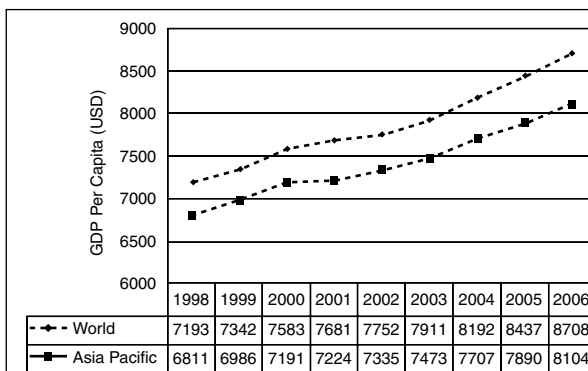


Fig. 4.5 GDP per capita

Results of Fixed and Random Effects Estimation for the 98 Countries

As demonstrated in Table 4.2, all four models for the 98 countries are significant in fitting the data. According to the Hausman test ($\chi^2_{(13)}=160.35$, $p<0.001$), the one-way fixed group effects model (Model 2) is preferred to random effects model (Model 1). After including the eight time dummies, the variance-explaining powers of Models 3 and 4 are both increased by a statistically significant margin, as shown by the combined significance F-tests for the time dummies. Probably due to the finite sample that fail to meet the asymptotic assumptions of Hausman test, a negative Hausman statistics between Models 3 and 4 occurs ($\chi^2_{(21)}=-171.67$) and does not follow a nonnegative chi-square distribution.⁴ In such situation, two-way fixed effects model (Model 4) is selected because it appropriately controls both country and time effects and provides reasonable inference to the selected 98 countries. However, since the potential endogeneity problem was not addressed at this step, scholars should be careful in interpreting these results in Table 4.2.

After conducting Durbin-Wu-Hausman endogeneity tests, we find all models are subject to endogeneity. Thus, instrumental variable regressions are conducted in which the lagged GDP per capita by 1 year and all other control variables are used as multiple instruments for GDP per capita in each model. Table 4.3 shows the results of the instrumental variable regressions for economic and policy predictors. F-test statistics show that adding the eight time dummies significantly boosts the variance-explaining power for all models, which justify the necessity of including these terms in the models.

While Hausman tests between IV Models 1 and 2 ($\chi^2_{(4)}=197.30$, $p<0.001$) indicates the one-way fixed effects model is preferred, Hausman statistics between IV Models 3 and 4 ($\chi^2_{(12)}=-19.40$) obtain negative values once again. In this case, the study selects IV Model 4 to discuss the coefficients of predictors and draw conclusions. Generally speaking, one log unit increase in national income level as indicated by GDP per capita is associated with 14.750% expansion in tertiary enrollment ($p<0.001$). One percent increase in public expenditure per secondary student is related to 0.296% higher tertiary enrollment across the countries ($p<0.001$). The significance of these two predictors is also consistently shown in other three models. Nevertheless, according to IV Model 4, public spending on education as a percentage of GDP per capita and public expenditure per tertiary student do not seem to be statistically significant in promoting higher education access across the four models.

⁴ The interpretation for a negative Hausman statistic is still controversial. The 2005 STATA software user guide noted that a negative Hausman statistics is not an unusual outcome in small samples. The negative result is caused by estimated parameter variance differences that are non-positive semidefinite and cannot be interpreted because the Chi-square distribution is nonnegative (Bhansali 2007). Schreiber (2008) suggests that using the absolute value of the Hausman test statistics be a remedy for a finite sample. However, not many panel data studies have been found to follow Schreiber's suggestion.

Table 4.2 Regression results for the random and fixed effects models on tertiary enrollment ratios for the 98 countries ($N = 612$)

	One-way group effects models				Two-way fixed group and time effects	
	Without time effects		With time effects		Random effects	
	Model 1	Fixed effects ^a Model 2	Model 3	Model 4	Model 3	Model 4
<i>Population</i>						
% of 65-year older	3.815 ^{***b} (0.386) ^c	5.724 ^{***} (0.593)	2.878 ^{***} (0.345)	1.564 [*] (0.648)		
Annual growth rate	2.580 ^{***} (0.598)	1.704 ^{***} (0.559)	2.124 ^{***} (0.492)	0.806 (0.510)		
Female population (%)	-0.480 (0.631)	-5.457 ^{***} (1.688)	0.266 (0.573)	-1.894 (1.585)		
Rural population (%)	-0.102 (0.087)	-0.113 (0.275)	-0.100 (0.079)	0.796 ^{**} (0.260)		
Total population	3.016 ^{***} (0.899)	22.137 ^{**} (8.001)	1.509 (0.833)	-47.827 ^{***} (9.526)		
<i>Economy</i>						
GDP per capita(constant 2,000 USD)	4.578 ^{**} (1.497)	18.507 ^{***} (2.610)	4.529 ^{***} (1.342)	2.888 (2.791)		
Employment rates (15–24 years old)	-0.318 ^{***} (0.074)	-0.485 ^{***} (0.089)	-0.179 ^{**} (0.065)	-0.191 [*] (0.085)		
<i>Education</i>						
Gross primary enrollment ratio	-0.026 (0.051)	-0.114 [*] (0.049)	-0.096 [*] (0.043)	-0.029 (0.044)		
Gross secondary enrollment ratio	0.033 (0.040)	-0.004 (0.038)	0.005 (0.034)	0.030 (0.035)		
Sex ratio in primary & secondary education	-0.448 ^{***} (0.112)	-0.325 ^{***} (0.112)	-0.236 [*] (0.094)	-0.258 [*] (0.101)		

Table 4.2 (continued)

	One-way group effects models			Two-way fixed group and time effects	
	Without time effects		With time effects		Model 4
	Random effects	Fixed effects ^a	Random effects	Model 3	
	Model 1	Model 2	Model 3	Model 4	
<i>Education finance</i>					
Public spending on education (% of GDP)	1.652*** (0.463)	1.194** (0.430)	1.151** (0.387)	0.569 (0.396)	
Expenditure per secondary student	0.040 (0.074)	0.149* (0.074)	0.034 (0.062)	0.166* (0.067)	
Expenditure per tertiary student	-0.010* (0.005)	-0.005 (0.005)	-0.010* (0.004)	-0.003 (0.004)	
Intercept	-10.475 (40.420)	-281.904 (186.085)	-25.612 (36.550)	1074.718*** (208.310)	
Time dummies (F-test for combined sig.)	N/A	N/A	277.99***	15.99***	
Adjusted R^2	0.683 ^d	0.975	0.715 ^d	0.980	
P-value	0.000	0.000	0.000	0.000	

^a Model preferred by Hausman test^b * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$ (two-tailed tests)^c In parentheses are standard errors^d Nonadjusted R^2 produced by STATA

Table 4.3 Instrumental variable regression results for the random and fixed effects models on tertiary enrollment ratios for the 98 countries

	One-way group effects models		Two-way fixed group and time effect	
	Without time effect		With time effects	
	Random effects IV Model 1	Fixed effects* IV Model 2	Random effects IV Model 3	IV Model 4
<i>Economy</i>				
GDP per capita(constant 2,000 USD) ^a	15.344*** (1.050)	41.304*** (2.263)	11.384*** (0.968)	14.750*** (3.105)
<i>Education finance</i>				
Public spending on education (% of GDP)	1.071* (0.500)	1.312** (0.485)	0.513 (0.403)	0.334 (0.429)
Expenditure per secondary student	0.210** (0.078)	0.300*** (0.080)	0.196** (0.062)	0.296*** (0.069)
Expenditure per tertiary student	-0.007 (0.005)	-0.001 (0.005)	-0.006 (0.004)	0.001 (0.005)
Intercept	-98.573 (8.682)	-319.439 (19.009)	-59.874 (8.132)	-89.197 (26.559)
Time dummies (<i>F</i> -test for combined significance)	N/A	N/A	366.84***	160.71***
Adjusted <i>R</i> ²	0.525 ^b	0.964	0.544 ^b	0.974
P-value	0.000	0.000	0.000	0.000

^a Lagged GDP per capita and all other nonpolicy variables are used as instruments for the endogenous variable "GDP Per Capita"^b Nonadjusted *R*² produced by STATA

Results of Fixed and Random Effects Estimation for the 21 Asia-Pacific Countries

Similar to the analysis on the 98 countries, the fixed and random models for the 21 Asia-Pacific countries produced similar results. As demonstrated in Table 4.4, all four models are significant in fitting the data. According to the Hausman test ($\chi^2_{(13)}=29.41$, $p<0.01$), the one-way fixed group effects model (Model 2) is preferred to random effects model (Model 1). After including the eight time dummies, two-way fixed effects model (Model 4) is selected because a negative Hausman statistics between Models 3 and 4 occurs ($\chi^2_{(21)}=-65.43$).

Because Durbin-Wu-Hausman tests indicate the existence of the endogenous variable, four instrumental variable models are estimated. In Table 4.5, the four IV models all indicate that all the three educational finance variables are not statistically significant predictors. While Hausman tests between IV Models 1 and 2 ($\chi^2_{(4)}=36.33$, $p<0.001$) indicates the one-way fixed effects model is preferred, Hausman statistics between IV Models 3 and 4 ($\chi^2_{(12)}=2.12$, $p>0.05$) indicate the one-way random group effects model with time dummies (Model 3) is preferred. According to Model 3, one log unit increase in national income level as indicated by GDP per capita is associated with 12.521% expansion in tertiary enrollment ($p<0.001$). Since this result is drawn from a random effect model, its results may have inference to a larger group of countries.

Control Variables Across Models

Many control variables may also be useful to explain the variation in college access, but scholars should be careful to interpret these results because the potential endogeneity bias was not addressed for all of them. While most control variables appear significant just once for either the 98-country dataset or the 21-Asia-Pacific dataset, it is important to highlight that two control variables consistently show statistically significant relationship with college access in the Model 4 across the two datasets. The consistency not only reduces the bias of favoring only one model but also strengthens the findings and conclusions. For the 98 countries, one log unit increase in total population is associated with 47.827% drop in higher education enrollment ($p<0.01$), whereas 1% greater in the ratio of girls to boys in primary and secondary schools in a nation is associated with 0.258% lower tertiary enrollment ratios ($p<0.05$), after taking other factors into account. The two control variables bear similar relationships with college access for the 21 Asia-Pacific countries, but with greater magnitude (i.e., $\beta_{\text{total population}}=-97.264$, $p<0.01$; $\beta_{\text{sex ratios}}=-0.465$, $p<0.01$).

Table 4.4 Regression results for the random and fixed effects models on tertiary enrollment ratios for the 21 Asia-Pacific countries ($N = 160$)

	One-way group effects models			Two-way fixed group and time effects	
	Without time effects		With time effects		Model 4
	Random effects	Fixed effects*	Random effects	Model 3	
	Model 1	Model 2	Model 3	Model 4	
<i>Population</i>					
% of 65-year older	4.158*** (0.621)	3.714*** (0.623)	-1.575* (0.682)	-0.204 (1.043)	
Annual growth rate	2.306 (1.500)	2.746 (1.441)	0.625 (2.987)	1.464 (1.384)	
Female population (%)	-5.523* (2.763)	-8.719* (3.834)	3.294* (1.522)	-6.411 (3.720)	
Rural population (%)	-0.119 (0.196)	0.519 (0.388)	0.194 (0.126)	0.143 (0.391)	
Total population	-0.215 (1.906)	32.478 (18.241)	-1.783** (0.650)	-97.264** (34.559)	
<i>Economy</i>					
GDP per capita(constant 2,000 USD)	0.185* (0.074)	21.235** (6.851)	6.561** (2.326)	12.543 (7.253)	
Employment rates (15–24 years old)	0.114 (0.072)	-0.340* (0.145)	0.100 (0.123)	-0.018 (0.155)	
<i>Education</i>					
Gross primary enrollment ratio	-0.413** (0.134)	0.083 (0.073)	-0.535** (0.164)	0.002 (0.081)	
Gross secondary enrollment ratio	5.798 (3.866)	-0.037 (0.085)	0.478*** (0.077)	0.094 (0.071)	
Sex ratio in primary & sec- ondary education	-0.200 (0.138)	-0.495*** (0.129)	-0.903*** (0.173)	-0.465** (0.130)	

Table 4.4 (continued)

	One-way group effects models		Two-way fixed group and time effects	
	Without time effects		With time effects	
	Random effects Model 1	Fixed effects* Model 2	Random effects Model 3	Model 4
<i>Education finance</i>	1.311	1.967**	0.976	1.455*
Public spending on education (% of GDP)	(0.738)	(0.721)	(1.083)	(0.706)
Expenditure per secondary student	0.114 (0.167)	-0.094 (0.170)	1.468** (0.309)	-0.130 (0.165)
Expenditure per tertiary student	-0.090** (0.028)	-0.079** (0.028)	-0.367*** (0.052)	-0.055* (0.027)
Intercept	258.519 (146.964)	-258.982 (405.017)	-57.550 (85.095)	2203.186** (736.740)
Time dummies (F-test for combined sig.)	N/A	N/A	5.39	3.32**
Adjusted R^2	0.736 ^b	0.990	0.859 ^b	0.991
P-value	0.000	0.000	0.000	0.000

^a Model preferred by Hausman test^b Nonadjusted R^2 produced by STATA

Table 4.5 Instrumental variable regression results for the random and fixed effects models on tertiary enrollment ratios for the 21 Asia-Pacific countries ($N = 160$)

	One-way group effects models			Two-way fixed group and time effect	
	Without time effects		With time effects		IV Model 4
	Random effects IV Model 1	Fixed effects ^{ab} IV Model 2	Random effects ^{ab} IV Model 3		
<i>Economy</i>	17.128*** (17.128)	39.225*** (4.166)	12.521*** (2.151)	5.805 (8.578)	
GDP Per Capita(constant 2,000 USD) ^a					
<i>Education finance</i>	0.672 (0.672)	1.434 (0.819)	0.732 (0.735)	0.379 (0.814)	
Public spending on education (% of GDP)					
Expenditure per secondary student	0.244 (0.244)	0.124 (0.184)	0.183 (0.158)	0.275 (0.178)	
Expenditure per tertiary student	-0.079* (-0.079)	-0.027 (0.035)	-0.036 (0.029)	-0.022 (0.033)	
Intercept	-105.509*** (-105.509)	-288.502*** (34.173)	-67.716*** (17.546)	-13.218 (70.617)	
Time dummies (F-test for combined significance)	N/A	N/A	63.48***	24.39**	
Adjusted R^2	0.747 ^c	0.984	0.749 ^c	0.986	
P-value	0.000	0.000	0.000	0.000	

^a Lagged GDP per capita and all other nonpolicy variables are used as instruments of the variable "GDP Per Capita"

^b Model preferred by Hausman test

^c Nonadjusted R^2 produced by STATA

Discussion and Conclusion

The analysis of the random and fixed effects models provides conclusive answers to the research questions.

- At the stage of mass higher education access in the world, public expenditure per secondary student as percentage of GDP per capita bears a significant, positive association with tertiary enrollment ratios in the 98 countries between 1998 and 2006, after controlling for national economy, population characteristics, and basic education.
- Public spending as percentage of GDP and public expenditure per tertiary student as a percentage of GDP per capita are not significant predictors for college enrollment in the 98 countries.
- The impact of all the three education finance on college access disappeared for the 21 Asia-Pacific countries.
- For both the 21 Asia-Pacific countries and other regions in the world, the average individual income at national level serves as a significant driver for higher education expansion.

In general, public expenditure on secondary education is a significant predictor for higher education access for all the 98 countries. Its significance may be rooted in the fact that, although primary education is compulsory and subsidized in most developed countries, secondary education is still inadequately funded by the governments and represents a challenging level that has not yet been achieved by most students for some developing and least developed countries. Thus, increasing spending on secondary education will broaden the pool of high school graduates qualified to attend higher education institutions so as to increase college access. The statistical result suggests investment in and adequate preparation of secondary school students are needed in order to foster the expansion of higher education access. The results also lend some support to the claim by several of the aforementioned studies that attach great importance to secondary education investment and argue that social return to secondary education is higher than that to higher education (Psacharopoulos 1994; Psacharopoulos et al. 1986).

The role of public secondary expenditure that was significant in promoting college access for a broader world setting, however, disappeared in the Asia-Pacific area. A plausible reason for the disappearance could be that government spending on secondary students is not adequate to enlarge the pool of the college-prepared population. The overall huge total population, smaller size of the aging population and faster population growth rate all suggest a larger cohort of younger population in the Asia-Pacific area. Because the number of students needing resources is so large and the total amount of public resources has been stagnant, the resources available to each secondary student are too limited to have any impact on adequately preparing them for college.

Given the apparent emphasis of allocating public spending on secondary education versus higher education sector, the nonsignificant association between public spending on education as percentage of GDP and college access for the Asia-Pacific countries and the broader world is not surprising. Other factors, such as the size of the total population in sharing the big cake of education spending and the efficiency of using public resources, may also contribute to this nonsignificant relationship. Therefore, the results still demonstrate certain degree of consistency with the large body of literature regarding human capital investment (e.g., Corrado et al. 2005; Keefer and Khemani 2005; Romer 1990, 1994), and tend to confirm the importance of the efforts that governments have made to invest in education in a purpose to drive economic growth. This finding also implies that to promote college access, governments need to spare no effort to increase educational investment as a whole and improve the efficiency of public spending.

For both the Asia-Pacific area and other regions in the world, the nonsignificant relationship between public expenditure per tertiary student and college access can be reasonably attributed to two reasons. On the one hand, because public spending on all levels of education as percentage of GDP is limited, allocating much public expenditure to college students that involves a much higher training cost may consume a large amount of the public expenditure to secondary or primary students. As the positive effects of secondary expenditure on higher education access have already indicated that the focus of governmental allocation is on secondary education, it is reasonable to conclude that tertiary education may lose ground in competition for resource with secondary education sector. Thus, the resources designated to higher education might be far enough to exert any effect on expanding college access.

On the other hand, the nonsignificant relationship between public expenditure per tertiary student and college access also suggests that the expansion of higher education access in the past decade have largely relied on nongovernment spending. As the literature has repeatedly stated, most governments have faced enormous difficulties in financing mass higher education, and using taxpayer money to fund college access has been regarded as regressive. Thus, the growth of tertiary enrollment worldwide in the recent decade can be explained only by the growth in the affordability of individuals, reflected by GDP per capita, and financing strategies of privatization and cost-sharing (that is, raising the student share of costs and the shift from grants to loans) that were used to promote access since 2000.

It is not surprising that the national economy, reflected mainly by GDP per capita, can strongly foster an increase in higher education access. Such finding is consistent with Freidman's argument (2005) that economic development drives college access. Growth in GDP per capita in the recent decade suggests that the average citizen/household might have more money available to pay for college education, thus increasing college participation. This finding has important implications for national policies on the financing of higher education. It might appear

that the use of privatization and cost-sharing did not mitigate the development of higher education access in general. However, there is a substantial body of research that indicates that privatization and cost-sharing may harm college access, particularly low-income students. Thus, such a relationship may warn that those low-income families in various countries may not afford college education and thus suffer more from privatization and cost-sharing strategies. Because the current WDI indicator of public expenditure per tertiary student as percentage of GDP per capita did not distinguish various types of financial policy programs (e.g., loans, grants), improvement in data collection and exploration of college access for low-income students are needed.

The finding that GDP per capita increases access is particularly alarming for the 21 Asia-Pacific countries given the absence of any significant, influential government intervention via educational finance policy. In other words, higher education expansion in the Asia-Pacific area can be almost “solely” attributed to the portion of college costs covered by private resources, in particular, student families. As has been reported in earlier research (e.g., Ravallion 2001; Yao 1999), income gaps between the rich and poor and across ethnicity groups are enlarging in some Asia-Pacific countries (e.g., China and India). The overdependence on student family contribution, accompanied by the lack of effective government intervention, may result in great inequality among students in obtaining higher education opportunities. Because people who attend higher education often obtain remarkable economic and social advantages over those who do not attend, such unequal distribution of higher education opportunities can certainly be harmful for an equitable society in the long run. Therefore, this study recommends stronger government intervention and increased public resources to attenuate the unequal college access. Further research is also needed to investigate the impact of income inequality on college access. This suggests caution in transferring the general findings from the 98 countries to a smaller, unique area like the Asia-Pacific area.

The regression results on some control variables may also shed light on the whole picture of higher education development. In particular, for both the 98 countries and the Asia-Pacific area, total population and sex ratio in basic education are both negatively related to college access. It is logical that for a larger total population, the public resource allocated to each individual is smaller so as to reduce the likelihood for individuals to pay for college education. A plausible explanation for the negative relationship between the sex ratio in basic education and college access can be that girl education or gender equity in basic education of many developing and least developed countries represents another challenging area in need of financial support. Such financial support, for example, can compensate for parental earnings while their daughters are in school (Hill and King 1995). Thus, again, the allocation to higher education may be reduced so as to negatively affect college enrollment.

Appendix 1

Country list for the 98 select countries by continent and economic development level, based on criteria of the United Nations. The 21 Asia-Pacific countries are italicized and bolded.

	Developed (31)	Developing (49)	Least developed (18)
Africa (25)	N/A	Namibia, South Africa, Burundi, Cameroon, Ghana, Mauritius, Morocco, Mozambique, Swaziland, Tunisia, Zimbabwe	Benin, Botswana, Burkina Faso, Cape Verde, Chad, Congo Rep., Eritrea, Ethiopia, Lesotho, Madagascar, Mali, Mauritania, Rwanda, Uganda
Asia (24)	Cyprus, Israel, <i>Japan, Korea Rep., Kuwait</i>	Armenia, Azerbaijan, <i>India</i> , Iran Islamic Rep., Kazakhstan, Kyrgyz Republic, <i>Lao PDR</i> , Lebanon, <i>Malaysia</i> , Mongolia, Oman, <i>Philippines</i> , Tajikistan, <i>Thailand</i> , United Arab Emirates	<i>Bangladesh, Bhutan, Cambodia, Nepal</i>
Europe (32)	Austria, Belgium, Czech Republic, Denmark, Finland, France, Greece, Hungary, Iceland, Ireland, Italy, Netherlands, Norway, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, United Kingdom	Albania, Belarus, Bulgaria, Croatia, Estonia, Latvia, Lithuania, Malta, Poland, Romania, Turkey, Ukraine	N/A
North America (6)	<i>United States</i>	<i>Costa Rica, El Salvador, Mexico, Panama</i> , Trinidad and Tobago	N/A
Oceania (2)	<i>Australia, New Zealand</i>	N/A	N/A
South America (9)	N/A	Argentina, Bolivia, Brazil, <i>Chile, Colombia</i> , Paraguay, <i>Peru</i> , Uruguay, Venezuela RB	N/A

Appendix 2

Definition of World Development Indicators

	Definitions
<i>Tertiary Gross Enrollment Ratio (GER)</i>	<p>GER is the ratio of total enrollment, regardless of age, to the population of the age group that officially corresponds to the level of education shown.</p> <p>Gross tertiary education enrollment ratio is calculated based on the number of young people in the 5-year age group following the secondary school leaving age.</p> <p>Tertiary education normally requires, as a minimum condition of admission, the successful completion of education at the secondary level. It includes Tertiary-type A <i>education</i> and Tertiary-type B <i>education</i> (See also International Standard Classification of Education (ISCED)).</p> <p><i>Tertiary-type A programs</i> are largely theory-based and are designed to provide sufficient qualifications for entry to advanced research programs and professions with high skill requirements, such as medicine, dentistry, or architecture. Tertiary-type A programs have a minimum cumulative theoretical duration (at tertiary level) of 3 years' full-time equivalent, although they typically last 4 or more years.</p> <p><i>Tertiary-type B programs</i> are typically shorter than those of Tertiary-type A and focus on practical, technical, or occupational skills for direct entry into the labor market. They have a minimum duration of 2 years full-time equivalent at the tertiary level</p>
<i>Population</i>	
% of 65-years older	Percentage of 65-years older in population
Annual growth rate	<i>Annual population growth rate</i> means the annual increase in a country's population expressed as a percentage of the population. The population growth rate is the sum of the difference between the birth rate and the death rate—the natural population increase—and the difference between the population entering and leaving the country—the net migration rate
Female population (%)	<i>Female population</i> is the percentage of the population that is female
Rural population (%)	<i>Rural population</i> is calculated as the difference between the total population and the urban population
Population total	Total population of the country
<i>Economy</i>	
GDP per capita	<i>GDP per capita</i> is the national gross domestic product (GDP) divided by its population in constant 2,000 US dollars. GDP is the value of all final goods and services produced in a country in 1 year. GDP can be measured by adding up all of an economy's incomes—wages, interest, profits, and rents—or expenditures—consumption, investment, government purchases, and net exports (exports minus imports)

	Definitions
Employment rates (15–24 years old)	The employment-to-population ratio is defined as the proportion of a country's working-age population that is employed. A high ratio means that a large proportion of a country's population is employed, while a low ratio means that a large share of the population is not involved directly in market-related activities, because they are either unemployed or out of the labor force altogether. Ages 15 and older are generally considered the working-age population. Ages 15–24 are generally considered the youth population
<i>Education</i>	
Gross primary enrollment ratio	<i>GER</i> is the ratio of total enrollment, regardless of age, to the population of the age group that officially corresponds to the level of education shown. It can be higher than 100% because some students are younger or older than the corresponding age group. <i>Gross primary enrollment ratio</i> is the ratio of primary school enrollment to the number of primary school-aged children (usually children 6–11 years old). Programs are typically 6 years long and represent the beginning of compulsory education in many countries
Gross secondary enrollment ratio	<i>Gross secondary enrollment ratio</i> is the ratio of secondary enrollment to the number of secondary school-aged children (usually children 12–17 years old)
Sex ratio (girls:boys) in primary & secondary education	Ratio of girls to boys in primary and secondary education is the percentage of girls to boys enrolled at primary and secondary levels in public and private schools
<i>Education finance</i>	
Public spending on education as % of GDP	Current and capital expenditures on education (including primary, secondary, and tertiary levels) by local, regional, and national governments, including municipalities (household contributions are excluded), expressed as a percentage of the GDP
Expenditure per secondary student (% of GDP per capita)	Total public expenditure per student in the secondary level as a percentage of GDP per capita
Expenditure per tertiary student (% of GDP per capita)	Total public expenditure per student in the tertiary level as a percentage of GDP per capita

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Chapter 5

Transnational Higher Education in the Asia-Pacific Region: From Distance Education to the Branch Campus

Christopher Ziguras and Grant McBurnie

Introduction

Since the late 1980s, universities and colleges from Britain, the United States, and Australia have been establishing educational programs in the Asia-Pacific region, often in collaboration with local institutions but in recent years full branch campuses of foreign universities are springing up. This phenomenon is usually referred to as “transnational” education, a term which encompasses educational programs delivered by an institution based in one country to students located in another. Such programs proliferated in the 1990s in Malaysia, Singapore, and Hong Kong, as demand for higher education rapidly outstripped the capacity of local institutions, and new private providers in partnership with foreign universities could quickly develop new offerings to appeal to a student body proficient in English. Since then, transnational education has spread to many other countries in the region. In this chapter, we examine the scale and spread of transnational higher education, explore the conditions that facilitated its growth in the Asia-Pacific region, and analyze the responses of governments in the region to this aspect of the globalization of higher education.

Scale and Distribution of Transnational Higher Education in the Asia-Pacific

Although governments collect very little data on higher education programs delivered across borders, we estimate that several thousand such programs are currently on offer, enrolling around 5,00,000 students (Bashir 2007; McBurnie and Ziguras 2007). Most are enrolled through distance education or partner-supported programs but offshore branch campuses have been growing. The major exporting countries

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Table 5.1 Foreign students enrolled in selected countries' transnational degree programs, most recent year available. (Data sources: British Council 2004; Catherwood and Taylor 2005; IDP Education Australia 2007; National Centre for Vocational Education Research 2008; OECD 2004)

Exporting country	Offshore higher education students	Year
UK	2,20,000	2004
Australia	94,321	2006/2008
Canada	36,000	1999
New Zealand	1,385	2004

Notes: The UK and Canadian figures are estimates based on surveys of most but not all providers. Australian data include students enrolled in universities and public vocational education and training institutions

are those English-speaking countries that are also the major destinations for self-funded internationally mobile students—Britain, the USA, Australia, and Canada.

Sporadic and unsystematic data collection makes quantitative analyses very difficult, but is clear from the various discrete sources of available data that transnational provision has grown steadily since its modern incarnation in the 1980s. Australia is the only country that routinely collects data on offshore student enrolments. Figure 5.1 shows a dramatic four-fold increase in offshore enrolments from 15,000 to 60,000 between 1996 and 2004. We estimate at least one-third of offshore students are studying part-time, so this enrolment represents around 90,000 students. Most are studying on campus, sometimes a branch campus of an Australian university, but mostly at the campus of a local partner institution.

Globally, most students studying in transnational higher education are in Asia, including nearly two-thirds of offshore students enrolled in UK universities and



Fig. 5.1 Transnational enrolments in Australian universities. (Data source: IDP Education Australia 2008)

Table 5.2 On-campus transnational enrolments in Australian universities, Semester 1, 2008. (Data Source: IDP Education Australia 2008)

Country in which students are located	Enrolments
Singapore	15,399
Malaysia	12,754
China	6,981
Hong Kong	6,763
Vietnam	3,036
India	1,374
Indonesia	1,115
Other	8,378
<i>Total</i>	<i>55,800</i>

around 95% in Australian universities (Böhm et al. 2004, p. 46; IDP Education Australia 2008, pp. 7–8). Böhm et al. forecast growth in demand for transnational higher education Asia so that by 2020 there will be 6,39,000 students enrolled in foreign programs, with numbers roughly even between South, East, and South-East Asia.

The leading importers of cross-border education are mostly middle-income countries in which the growth in secondary school completions and labor market demand for graduates has outstripped the capacity of domestic higher education. Transnational programs make a significant contribution to the total supply of higher education in some countries, notably Singapore. After 20 years of continued growth, one-third of Singapore's higher education students are enrolled in transnational education programs. We are not aware of similar data on enrolments in foreign programs for any other country.

In terms of total students, China appears to be the largest importer of transnational education, just as it is the largest source country for internationally mobile students. Foreign programs began to be offered in the mid 1990s, and by 2003 there were over 712 approved teaching partnerships between Chinese and foreign institutions, according to the Ministry of Education. The United States was involved in the highest number of partnerships, followed by Australia, Canada, Japan, Singapore, the United Kingdom, France, and Germany (Garrett 2004). By 2006, 352 British collaborative program were offered by 82 UK universities in collaboration with 223 Chinese higher education institutions and organizations (QAA 2006).

These data, patchy as they are, give some indication of the distribution of transnational programs in the region. Next, we sketch the different models of transnational provision.

Table 5.3 Singapore higher education students by type of provider, 2005. (Data sources: Lee 2005, p. 15; MoE 2006, Table 15)

	Students	Proportion of students (%)
Transnational (foreign) programs	80,200	36
Polytechnics	56,048	25
Local universities (NUS, NTU, SIM)	41,628	18
Private institutions' programs	26,500	12
Institute of Technical Education	19,207	9
National Institute of Education	2,282	1
<i>Total</i>	<i>2,25,865</i>	<i>100</i>

Cross-Border Distance Education

At the height of the dot.com bubble in the late 1990s, the potential for a global online mega-university or a global consortium comprising several universities' online programs excited and terrified educational planners and commentators. It was widely prophesied that online courses would create a global distance education market, in which geographical limitations to access would disappear, allowing prospective students to choose between courses offered by providers in many different nations (for example, West et al. 1998). Despite the best-laid plans, fully online global delivery failed to capture the imagination of students and teachers in the same way it excited senior administrators. For example, after decades of investment in online distance programs, in early 2008 Australia's universities enrolled only 10,563 international students in offshore distance/online programs, compared with 55,800 offshore on campus, and 166,639 on campus in Australia (IDP Education Australia 2008).

Millions of dollars invested by universities were lost in a succession of failed online endeavors with global pretensions: the Universitas 21 international consortium, Western Governors University, the Global Universities Alliance, and the UK Open University's efforts to establish the United States Open University all collapsed due to their inability to attract students. Like many failures during the dot.com bubble, the collapse of aspiring global online universities was caused by an overemphasis on how technological changes would affect supply without understanding the nature of demand for the services. The supply-driven focus meant that much energy and resources went into developing standardized curricula, web-based courseware, video-conferencing, and email discussion forums for global providers but very little thought went into understanding students' preferences.

The bulk of students who consider transnational education programs are concentrated in cities experiencing rapid economic growth, notably Singapore, Hong Kong, Kuala Lumpur, and Shanghai. These cities' internationalized economies pay a premium for Western business skills and English language proficiency. Local institutions are often unable to develop new programs to respond to labor market demand as quickly as foreign universities with established programs. Students in most of these emerging global cities can choose from a range of foreign programs with varying levels of local facilities, face-to-face teaching, and support services. These programs are priced according to both the status of the awarding foreign university and the level of service provided by the local partner. The most expensive programs are a small number of "full-service" branch campuses of foreign universities, intended to replicate the learning environment of their home campuses. Most foreign programs compete with one another on price, the status and reputation of the awarding university and the quality of the learning environment provided by the local partner. The cheapest programs are distance education programs with no local partner and little face-to-face teaching or support to students. This model reflects a failure to understand the nature of students' preference for local teaching, peer-contact, and support.

Partner-Supported Programs

Most transnational education involves a partnership between an institution that awards the qualification (usually an Anglophone university) and a local institution. Usually the awarding institution supplies curriculum materials, and teaching staff from the home campus travel to the host country to deliver lectures for a few intensive days. The rest of the time, classes are conducted by local staff, closely following the course materials. In some cases, there is a “twinning” arrangement, whereby the first part of the course is conducted in the host country and students travel to the home campus to complete their qualification.

The type of premises on which programs operate varies, ranging from shop-front counters, to state-of-the-art facilities putting the home campus to shame. Local partners can include private education providers, the commercial arms of public universities, professional associations, and companies whose core business is not education. There is usually a contract between the parties setting out the respective roles and responsibilities, and a formula for apportioning the revenue.

Branch Campuses

A branch campus involves a bricks-and-mortar presence in the host country, fully or jointly owned by the awarding institution. Courses are taught in a similar manner to other campuses of the institution, and usually involve higher proportions of face-to-face teaching from more highly qualified teaching staff than in the case of partner-supported delivery. Branch campuses involve cross-border supply (of curriculum, administrative services, online library resources) and the presence of natural persons (senior management and academic directors seconded from the home campus of the institution).

The Observatory for Borderless Higher Education (OBHE) has published three reports on the number and nature of branch campuses fitting the definition of “an entity trading directly as a branch of the parent institution, recruiting primarily local students, and attempting to replicate breadth of function of the parent institution (e.g., research as well as teaching)” (Verbik and Merkle 2006). The rate of increase has been significant: 24 branch campuses in 2002, 82 in 2006, and 162 in 2009 (Becker 2009, p. 6). The campuses hail from 22 provider countries. Those with ten or more are chiefly Anglophone, including the USA (78 campuses), Australia (14), the UK (13), followed by France and India (11 campuses each). Branches are located in 51 host countries. The largest concentration is in the United Arab Emirates (UAE), hosting 40 campuses (mostly in Dubai International Academic City, set up to attract foreign campuses). Next is Asia, with China hosting 15 international branch campuses, Singapore 12, and Malaysia 5 (Becker 2009, pp. 6–9). The flow is multidirectional. The movement of campuses from developing to developed countries accounts for 51% of branch campuses, the flow between developed countries

accounts for 30%, the flow between developing countries constitutes 16%, and four campuses from developing countries have established in developed countries. Developing country providers include India, Pakistan, Malaysia, the Philippines, and Sri Lanka (Becker 2009, pp. 8–9). Most international campuses are branches of universities but some are polytechnics or vocational training colleges.

For-Profit Foreign Direct Investment

In the past few years, several large American corporations have acquired for-profit universities and colleges outside the USA at a rapid rate, with the potential to change the higher education landscape in many countries. For-profits primarily consist of networks of local institutions linked by common ownership, each with nationally accredited programs. A recent OBHE report lists 18 publicly listed companies described as direct competitors with nonprofit higher education. Most operate within one country (Garrett 2005).

Four USA-based corporations are active exporters through commercial presence. The most transnational is Laureate Education, with over 20 foreign locally accredited private universities. In 2004, it enrolled 1,55,000 students in 11 countries and generated 80% of its revenue outside the USA (including 32% in Mexico, 21% in Chile, and 16% in Spain). Kaplan Higher Education, a subsidiary of The Washington Post Company, owns Kaplan University and the Concord Law School in the USA, the Dublin Business School and the FTC Business School in the UK, Tribeca Learning in Australia, and Singapore-based Asia-Pacific Management Institute (APMI) with operations in Singapore, Hong Kong, Taiwan, and China. The Apollo Group owns the largest private university in the United States, the University of Phoenix, and the Western International University. Both these universities are expanding overseas, the former with operations in Canada, the Netherlands, and Puerto Rico and the latter with joint venture campuses in Beijing and New Delhi. The group has acquired one overseas university, Faculdades Pitágoras in Brazil. Career Education Corporation operates 87 campuses across the USA, Canada, the UK, France, and the UAE. It comprises a diverse range of individually branded institutions offering masters, bachelors, and associate degrees and nondegree certificate and diploma programs in visual communication and design technologies, information technology, business studies, culinary arts, and health education.

There is a considerable body of literature analyzing for-profit higher education in the USA, particularly the University of Phoenix. However, the international dimensions of this growth has been little documented (Berg 2005a, 2005b; Kirp 2003; Kriger and Scheuerman 2000; Newman et al. 2004; Pusser and Wolcott 2003; Ruch 2001). Some insight can be gained from foreign direct investment data. Table 5.4 shows the total stock of foreign direct investment grew enormously between 1990 and 2005. Nearly all of it originated in developed economies, and 94% flowed into other developed economies.

Table 5.4 Estimated world inward foreign direct investment stock in education, 1990 and 2005 (millions of US dollars, 2007 prices). (Data source: UNCTAD 2007, p. 225)

	1990	2005
Developed economies	86	3,300
Developing economies	0	91
South Eastern Europe and CIS	0	108
World	86	3,499

Though the scale of cross-border ownership of educational institutions has grown considerably in the past two decades, the miniscule proportion of foreign direct investment that flows into developing economies is astounding—given the challenges faced by many countries, especially in the Asia-Pacific, in growing capacity to meet demand.

Drivers of Growth

As with other aspects of the globalization of higher education, several interrelated factors have led to the growth of TNE. Most obviously, transnational provision of programs is made possible by technological developments. Low-cost rapid travel allows lecturers to undertake short “fly-in, fly-out” teaching stints and allows managers to visit distant partner institutions to establish and monitor collaborative programs. Information and communication technology advances have led to the weightless portability of curriculum materials, now be shared by student cohorts distributed across the globe (for case studies, see Ziguras 2000).

“Pro-globalization” economic development policies of host countries have also boosted demand. Here patterns of development of international education services in newly industrializing countries have strong parallels with other sectors crucial for integration into the global economy, including financial services, transportation, and logistics. Those countries in Asia where transnational education first developed were those that first adopted export-oriented growth strategies. Employers—both in multinational corporations attracted to countries encouraging foreign direct investment and in domestic firms with eyes on foreign markets—were willing to pay a premium for graduates with foreign qualifications and English-language proficiency. Rapid economic growth in the Asian tiger economies fuelled rapid increases in participation in domestic universities and in outward mobility. In this context, transnational programs played an important demand-absorbing role.

As a second wave of previously inwardly focused Asian economies such as China, India, and Vietnam adopted similar export-oriented economic development strategies, they too saw demand for foreign programs escalate rapidly. Much of the current growth in TNE numbers is in these economies.

Transnational programs have several advantages over study abroad for students seeking international qualifications. Students get the benefits of a foreign qualification at considerably less expense—they save on the expenses of living in a foreign country, airfares, and other transport costs; and tuition fees are invariably lower

than at the home campus of the foreign provider. Transnational study is often also more convenient, as family and work life are not disrupted by prolonged absence abroad. Students can study part-time, whereas visa requirements normally stipulate that study in the provider nation must be full-time. There are two key disadvantages, however: the widely held perception that transnational programs are inferior compared with the home campus, and lack of the international exposure that comes from living abroad. Students often seek the benefits of both forms of international study by doing part of their studies in a transnational program before transferring to the home campus for a shorter period.

What of the provider? For the exporting institution the motivators are financial, academic, and reputational. Transnational activities can bring in revenue beyond the capacity constraints of the home campus (albeit usually at a lower rate than on-campus international students: fees are usually lower and must be split when there is a local partner). TNE can also generate a flow of students who complete part of their degree in the host country and the rest at the home campus.

From an academic standpoint, staff can gain additional international teaching experience by participating in the institution's TNE programs— although in practice there may be some disquiet: there is anecdotal evidence that some staff complain that they are under pressure to constantly disrupt their home life to teach offshore; while some others conversely are resentful that they tend to miss out. There might also be opportunities to undertake research in the host country, perhaps in collaboration with local academics. This is well illustrated in the case of branch campuses where research is part of the mandate and staff can focus on local issues and conditions. For example, the Curtin University Sarawak (Malaysia) campus conducts projects in Soft Soil Research, Palm Oil Research, Renewable Energy, Wireless Communications, and Entrepreneurship. According to the website of RMIT University, RMIT Vietnam undertakes various collaborative projects, particularly relating to environmental quality, such as “providing clean water and improving sanitation in the Mekong Delta during flooding,” “wetland conservation and management in Hanoi,” and “bioaccumulation, transport and impact of agricultural chemicals in the Mekong Delta.” Similarly, for provider-institution students, there may be enhanced opportunities for carrying out studies at the international branch campus.

Finally, in a field that values (at least rhetorically) qualities such as “international competitiveness” and “international profile,” there are reputational benefits. TNE confers the perceived prestige of an international presence.

Unfortunately, much transnational education has failed to live up to these goals. It is more common to read critical accounts of offshore programs than words of praise. Philip Altbach, for example, argues that transnational education, “does not really contribute to the internationalization of higher education worldwide. Knowledge products are being sold across borders, but with little mutual exchange of ideas, long-term scientific collaboration, exchange of students or faculty, and the like” (Altbach 2000, p. 5). The refrain that transnational provision is merely a commercial exchange stripped of the broader benefits of education is frequently heard, and not just from outside commentators. It is not uncommon for academic staff involved in offshore teaching to be ambivalent about the social and educational merits

of their overseas programs. Poor-quality transnational programs may be profitable in the short-term but are rarely sustainable as they are likely to harm the reputation of the provider, divert energy away from more valuable activities, and sap the energy of staff.

Historical Development of Host Government Responses to Transnational Higher Education: Towards Greater Regulation and Quality Assurance

Below we present a four-phase model, showing how the degree and type of regulation of transnational education employed corresponds to whether a government is concerned primarily with quantity or quality of higher education. These broad phases of higher education development can be discerned in many countries in the region since the 1980s. The growth of transnational higher education in Asia has coincided with rapid growth in participation in domestic institutions. Typically, countries experiencing growth in demand for higher education that cannot be met by local providers establish relatively “light touch” regulatory frameworks, aiming to expand the volume of transnational provision and increase the capacity of the system. On the other hand, countries with stable demand and adequate supply of higher education establish more stringent regulatory frameworks. These aim to promote forms of transnational provision that enrich the national system, complementing local providers in ways that create greater diversity and enhanced student choice.

Phase 1: Rapid Growth in Cross-border Consumption of Education Services

With rapid economic development, demand for higher education quickly outpaced the capacity of local public universities to respond, particularly in those fields in demand in increasingly globalized economies. In this first phase, the number of students traveling abroad to study grows dramatically. Taiwan, Singapore, Malaysia, and Hong Kong experienced this growth of outward mobility in the 1980s and 1990s, and currently numbers are growing from those countries whose economic growth has come later, such as China, India, and Vietnam.

Transnational providers are in some ways less constrained by government regulation than local providers. Their cross-border character has allowed them to avoid some of the most restrictive aspects of national regulatory frameworks. Domestic universities across most of the region are subject to detailed bureaucratic direction, and their growth has been limited by other demands on the public purse. Until recently, most public universities in the Asia-Pacific region were limited to teaching in the national language (both by direction from ministries of education and often

also due to the limited capacity of academic staff). Universities in Australia and New Zealand benefited greatly from this, and as well as receiving many more international students, English-language universities were in an excellent position to pioneer the provision of degrees in English in many Asian countries.

Local private colleges were not accredited to award degrees, and so were forced to enter into credentialing partnerships with foreign universities. In many countries, domestic private institutions have been able to enroll fee-paying students but have been restricted to providing diploma-level programs. The early twinning programs in Southeast Asia were structured so as to work around these regulations, by combining the resources of a foreign university not subject to the meddling of the Ministry of Education, with a local private college that could not offer its own degrees but was not prevented from offering someone else's.

Because of the relative novelty of transnational education, until recently most countries had no regulatory or quality assurance frameworks for these programs, and so foreign offerings often fell "between the cracks" of national systems. Some Asian countries are yet to develop any regulations governing cross-border providers, including Laos and Sri Lanka. Similarly, Vietnam's regulations only cover the establishment of foreign-owned institutions, leaving foreign programs delivered through local partners or by distance education unregulated.

An oft-expressed concern is that TNE might fall between the regulatory cracks. That is, it might be unregulated or only poorly regulated in the following scenarios: the exporting and importing countries each regard TNE as the other's responsibility and neither takes action; its place outside the local system causes it not to appear on the state radar; its nontraditional delivery modes causes it to fall into the too-hard basket.

Some governments were initially wary of cross-border supply through collaborations between domestic private colleges and foreign universities because these collaborations were designed to bypass domestic regulatory frameworks which restrict the ability of unauthorized local providers to confer degrees. Private colleges that were not able to confer their own degrees could instead offer foreign degrees. Indeed, many countries, including China and Greece, prohibit or refuse to recognize such partnerships due to concerns about the educational quality or legality of local private colleges, which often have a more overtly commercial orientation than do public and private not-for-profit universities. The broad trend, however, is for governments to move away from restricting the type of institutions able to enter into cross-border supply and to instead establish common quality assurance processes that can be applied to public, private not-for-profit, private for-profit, domestic, and foreign institutions equally. This is a shift broadly from protection of existing domestic providers to protection of students as consumers through quality assurance and accreditation measures (McBurnie and Ziguras 2001).

Middlehurst and Woodfield's (2004b) study of transnational and private higher education in Jamaica, Bangladesh, Malaysia, and Bulgaria found that all four were in the process of either developing or revising structures of regulation and quality assurance. This was happening in parallel to, and possibly in response to, the expansion and diversification of provision. A key concern of the report was whether these

countries have the capacity to develop and effectively implement such regulatory structures. In most cases, governments regulate in response to the unplanned, and sometimes unnoticed, emergence of commercial transnational provision (dos Santos 2002; King 2003). Sometimes there is little option for host country governments but to regulate and recognize transnational provision within their borders. If student demand for foreign programs is strong but they are not regulated and recognized, pressure will mount on the government from a number of directions—sooner or later unfortunate students who are victims of illegitimate or failed transnational programs may ask why they were not warned of the risks, and the appearance of diploma mills will prompt calls by legitimate transnational providers and their local partners for screening measures to reassure the public.

Distance/online education programs, however, are a special case, and are still much less regulated and less recognized in importing countries in the Asia-Pacific region. In many countries, foreign distance education programs cannot obtain formal approval unless they have a local presence. Purely distance learning programs are in most countries able to enroll students and award qualifications, but usually need to seek approval in order to advertise their programs or to engage in any teaching or assessment in-country. Unless there is some local presence, fully online distance education programs are effectively invisible to the host government and very difficult to track (Middlehurst and Woodfield 2004a). For example, in Hong Kong, “purely distance” transnational programs are exempted from registration requirements if they are, “conducted solely through the delivery of mail, transmission of information by means of telecommunication (for example, TV, radio, or computer network), or sale of materials in commercial outlets, etc., but without the institutions, professional bodies or their agents being physically present in Hong Kong to deliver any lectures, tutorials, or examinations” (Ip 2006, p. 23). While this lack of regulation simplifies matters for a university offering online programs to students in many countries, the downside is that because these programs have no legal status in the students’ country, the qualifications are often not recognized for the purposes of public-sector employment or professional accreditation.

Phase 2: Capacity Building and Import-Replacement Strategies

Transnational education has been attractive to many governments as a way to rapidly supplement and assist in building the capacity of the domestic higher education system. While 45% of the relevant age cohort in high-income countries enter tertiary education, only 8% do so in low-income countries, 24% in lower middle-income countries, and 32% in upper-middle income countries (Vincent-Lancrin 2005, p. 9). Increasing the capacity of education systems is a key precondition for many types of economic and social development and so has been a major focus of development assistance. As Vincent-Lancrin points out, countries with few tertiary education graduates face major difficulties in increasing the number of graduates, but increasing the supply of graduates is often a critical precondition both for improving the

competitiveness of domestic firms and attracting foreign direct investment. Even with adequate finances, shortages of suitably qualified teaching staff are common, exacerbated by the flow of the highly trained to more lucrative positions overseas. Some countries with large higher education systems may nevertheless face supply constraints in certain disciplines, such as business administration, agriculture, or engineering, if local institutions have been unable to respond to student, government, or employer demand in some fields.

Host country governments sometimes encourage the development of transnational programs as a way to reduce the number of students traveling abroad to study. This usually goes hand-in-hand with efforts to rapidly grow domestic institutions. In some countries, such as China, the growth of local institutions is funded primarily by governments through public universities; while in others, such as South Korea, the growth has been largely in the nongovernment sector. Foreign universities can play important capacity-building and demand absorption roles, chiefly in partnership with local private providers and public institutions. When students study locally in a foreign program rather than studying overseas, they take less money out of the country, support the growth of the domestic education system, and are less likely to emigrate after completing their studies.

One view is that the best way for governments to encourage the growth of transnational education is to introduce licensing and quality assurance processes, which reassure students and their families of the bona fides of providers and prevent the operation of diploma mills. Most countries in the region have, from the mid 1990s onwards, developed regulations stipulating the conditions under which foreign providers may operate on their soil, and instituted ongoing compliance checks. The majority have relatively liberal regulations requiring initial government approval and regular QA processes similar to those applied to domestic institutions. Examples include Bangladesh, China, Hong Kong, India, Indonesia, Japan, Malaysia, Singapore, South Korea, and most other countries in the region.

While governments may be relaxing market entry restrictions for overseas-based education providers, few have extended the principle of national treatment (treating foreigners and locals equally) to foreign providers. Rarely are government student loans or subsidies available to students enrolled in foreign providers. Even in Australia, which has been a leading proponent of removing barriers to free trade in higher education, government loans are restricted to students studying in providers that have their “central management and control in Australia” (Norton 2008). One college that was previously Australian owned was taken over in 2005 by the Raffles Education Corporation, which owns colleges across the Asia-Pacific region, will need to prove that it is managed and controlled locally in order for its students to continue to be eligible for government loans.

Governments’ wariness about foreign providers stems from widely held concerns about potential for new foreign providers to harm existing providers and to widen sociocultural divisions, especially in developing countries. First, the potential to exacerbate socioeconomic inequalities by further favoring the privileged who can pay the fees. This may diminish the capacity of the public system in the host country by luring away local academics by offering higher salaries, and luring middle-class students by offering higher-quality facilities and educational experiences.

This is exacerbated by the tendency for foreign provider to “cherry-pick,” offering only those profitable programs (such as business and information technology) for which there is demand from fee-paying students but where the cost of delivery is low (such as business and information technology), while leaving less profitable programs (nursing, education, engineering, for example) for domestic providers, thereby reducing the public institutions’ ability to cross-subsidize less popular or high-cost courses. The additional academic employment provided by transnational education may be geared only to a limited range of teaching programs, and without provision of time and resources for staff to carry out research—staff may be treated as semi-skilled workers in a “teaching factory” (McBurnie 2006).

The profit-seeking focus of these programs may result in substandard provision of education if appropriate quality measures are not in place and enforced. Governments in education exporting countries may be concerned about new substandard foreign providers seeking to recruit international fee-paying students damaging the national “brand” (McBurnie 2006). An unregulated open market with high levels of unmet demand may be inundated with low-quality providers, ranging from under-resourced shopfront operations with inappropriately qualified staff, to “degree mills” offering unearned qualifications or outright bogus degrees in return for a fee. From a market perspective, the counterargument is that fee-paying students are concerned with getting value for money; they shop around and are very savvy about the quality (or perceived quality) of what is on offer. Of course, in this market environment it is still a case of *caveat emptor* (buyer beware), even in the case of well-regarded providers. (It should be noted that there is a spectrum of student satisfaction/dissatisfaction even in public systems where the cost is heavily subsidized or free.)

The other major area of concern is that foreign providers may undermine the nation-building role of education, and in particular that foreign curriculum and pedagogy may be simply transplanted without regard for local practices and traditions, which some critics describe as “cultural imperialism.” For this reason, some governments insist on students in foreign institutions studying courses that reinforce the state’s official ideology, including such compulsory courses as “Marxism-Leninism” and “Ho Chi Minh Thought” which have been included as requirements in regulations in Vietnam or “Malaysian Studies” and “Moral Studies” which are required in Malaysia. Foreign campuses and programs present very visible examples of the widespread copying and transplantation of Western models that Mok (2007) observes is unfortunately the dominant form of “internationalization” in Asian higher education today.

Phase 3: Enrichment

A third phase is reached when domestic providers are able to more adequately meet student demand and the number of students seeking degrees abroad flattens out. Several countries in Asia have now reached this phase, most notably Japan, South Korea, Taiwan, and the Philippines. As local institutions become more competitive and governments become concerned with quality over quantity, lower-status

transnational programs get squeezed out. In Singapore and Malaysia, many long-standing transnational programs are being challenged by local private institutions, which are now being accredited to award their own degrees after years of partnering with foreign universities. Simultaneously, the most established local private institutions are offered the opportunity to award their own higher level qualification, the best foreign programs are invited to establish branch campuses, and the others find the market conditions more and more competitive without either their own local accreditation or a full-fledged campus. Local public universities are developing programs in English, particularly at postgraduate level, often in conjunction with foreign universities.

Many governments remain wary of the motives of partner-supported programs, concerned that commercially oriented partnerships threaten quality and undermine domestic providers, and may try to restrict cross-border supply once capacity shortages begin to be overcome. For example, the Chinese Ministry of Education has recently decided to more actively vet foreign program applications, announcing in April 2007 that if a proposed program is “already popular and concentrated among those Chinese institutions, or if its proposed tuition and other charges are significantly higher than the cost, the proposal will not be accepted or approved” (quoted in Mooney 2007). Such policies may be attractive to governments which feel that student demand can and should be met primarily by domestic providers, and who may tolerate an open education market if required to quickly boost supply but seek to restrict the ability of foreign providers (and often also domestic private providers) to enter that market once domestic supply has begun to catch up with demand. One much-discussed way of doing this would be to restrict the market entry of foreign universities that are not highly ranked in one of the major international rankings of universities. Another way to restrict cross-border provision is to allow private colleges to confer their own degrees on condition that they no longer partner with foreign universities to award foreign degrees at the same level, which provides seamless means of reducing supply of foreign programs as domestic capacity comes on stream.

In the last few years, there has been rapid expansion of discussion and activity—both globally and specifically in the Asia-Pacific region—around the “quality” and “quality assurance” of cross-border education. This is one issue on which those promoting and those resisting the growth of transnational education are in agreement. For exporting institutions, gaining an external quality “stamp” can serve as part of a marketing strategy. Favorable reports by national quality agencies or proof that one has met international standards (for example, gaining ISO accreditation) is inherently more credible than advertising copy and self-proclamations. Similarly, for an education-exporting country to maintain its international credibility, there is an expectation that it will have in place a national system of quality review that is respected by its peers (demonstrated, for example, by membership of International Network for Quality Assurance Agencies in Higher Education).

Rather than being neglected by regulatory, quality assurance, and accreditation systems, nowadays transnational provider institutions often consider themselves overburdened by an array of hurdles and reporting requirements. An Australian pro-

gram operating in Hong Kong, for example, will in the first instance be subject to the host government's Hong Kong Education Ordinance. Then there are numerous additional measures including quality audit by the Australian Universities Quality Agency (AUQA), accreditation by professional bodies in both countries where applicable, QA measures by the provider institution and partner institution and, in cases where students carry out part of the course in Australia, the Australian government's Education Services for Overseas Students (ESOS) Act is applicable.

A key regional development in the region was the establishment in early 2003 of the Asia-Pacific Quality Network (APQN) as a sub-network of the International Network of Quality Assurance Agencies in Higher Education. Published output to date includes the *UNESCO-APQN toolkit: Regulating the quality of cross-border education* (2006). Covering both receiving and sending country perspectives, this document discusses problems that can arise with cross-border education, discusses the functions and operation of regulatory frameworks and looks at various examples of frameworks from receiving and providing countries. In early 2008, following a workshop in Japan in conjunction with APQN, the *Draft Higher Education Quality Assurance Principles for the Asia-Pacific Region* (also known as "The Chiba Principles") was released.

Phase 4: Growing Education Exports

A fourth phase involves a country shifting from being a net importer to a net exporter of education services. When domestic capacity and quality is sufficiently established, governments are able to encourage the export of education, primarily by attracting foreign students. In recent years Singapore, Malaysia, the United Arab Emirates, and Qatar have all sought to establish themselves as education hubs, drawing students from the region and beyond. In this phase, governments work to attract branch campuses of highly prestigious foreign universities to be major drawcards. Singapore, for example, now boasts campuses of France's Insead Business School, the University of Chicago Graduate School of Business, the Mumbai-based S. P. Jain Institute of Management and Research, and a long list of prestigious teaching and research partnerships with leading international universities. For the host country, the anticipated benefits are financial and reputational, as well as academic.

While the branch campus has the best chance of reproducing the character of the fully equipped, research-oriented, community-engaged traditional university campus, and is therefore desired by host governments, it is also the most high-risk form of transnational education, because failure of a branch campus can prove very costly both financially and reputationally.

It is not only the unscrupulous and ill-prepared that can fail. Derailments can occur even when there is meticulous planning over several years, strong host country government support, and the enthusiastic involvement of a high-prestige university. An illustrative case is the failure of the University of New South Wales (UNSW) campus in Singapore, which was opened and then closed in a 3-month period early

in 2007. Co-funded by the Singapore government and the UNSW, the campus was required to fill 75% of its eventual 15,000 places with students from outside Singapore. Suffering from a combination of high costs and unexpectedly low enrolment figures, it announced its closure after only one semester. The Vice Chancellor of UNSW noted that the university had invested AUD \$ 17.5 million (USD \$ 14.3 million) in the project, and millions more dollars would be spent on redundancy packages and other exit costs (Macnamara 2007). The well-publicized event caused reputational damage to UNSW and to Singapore, as prestigious foreign institutions may think twice about the attractiveness of that country as a place to establish a branch campus.

Conclusion

The cross-border mobility of educational institutions and programs is a very visible form of globalization of higher education. Over two decades, cross-border programs delivered by distance education, online and through partnerships with local providers grew steadily, first in the former British colonies in South-East Asia and then more widely throughout the region. In recent years, most of the growth in transnational enrolments appears to be in international branch campuses, which are able to provide a more comprehensive range of programs and services and establish the foreign university as a long-term contributor to the development of the host country's higher education sector.

With the rapid growth in tertiary participation rates across the region, improving quality rather than growing quantity is becoming the priority for most importing governments, resulting in considerable cooperation between quality assurance agencies in an effort to build regional capacity in accreditation and quality assurance and to build confidence in transnational qualifications. Despite the minutiae of national differences across the region, shared interests are driving a convergence in the criteria and mechanisms for assuring the quality of transnational higher education. While market-entry regulations are no guarantee of high quality, they do set a threshold of requirements below which quality is unlikely to be achievable. We can see international convergence with the development of the UNESCO/OECD guidelines, and the APQN sets the framework for quality cooperation and development in the region.

Since around 2000, the offshore programs of universities in the major exporters servicing the region, the UK and Australia, have been integrated into national quality assurance and regulatory systems, and as a result universities are much more accountable for the experiences of students in transnational programs. Similarly, as branch campuses grow in number and size, it is likely that they will become established alongside domestic public and private universities with similar rights and obligations. Here Malaysia, with four international branch campuses, is leading the way by granting the newly formed Malaysian Qualifications Authority jurisdiction over all universities whether public or private, local or foreign. In time, we

foresee the growth of consumer-information publications across the region, rating major transnational programs and international campuses alongside local universities across a range of criteria of interest to students, such as student satisfaction, graduate employment outcomes, and so on.

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Chapter 6

International Student Mobility in the Asia-Pacific: From Globalization to Regional Integration?

Christopher Ziguras and Grant McBurnie

Introduction

One of the most striking features of the globalization of higher education has been the rapid growth in the number of students studying abroad. Globally, the number of students enrolled outside their country of origin doubled from 1.3 million students in 1995 to 3.0 million in 2007 (OECD 2009; UNESCO 2009). A majority of internationally mobile students are in university programmes, with smaller numbers in vocational tertiary programmes, intensive language programmes (especially English) and secondary schools.

Most internationally mobile students from high-income countries with high tertiary participation rates study overseas for a few months, for a semester of university exchange or study abroad or to advance their language skills. In effect it is an experience incorporated within the domestic degree. Short-term mobility of one academic year or less is not included in UNESCO data, so we have little way of assessing the scale of this type of mobility in the Asia-Pacific. A smaller number undertake degree programmes abroad, usually at graduate level as high-quality undergraduate programmes are widely available locally. In the Asia-Pacific students from Japan, Australia and New Zealand fit this pattern. The pattern of outward student flows from these countries is similar to the industrialized countries in North America and Western Europe.

Students from low-income and middle-income countries more often travel abroad for several years to undertake whole academic programmes. Most of the international student mobility in the Asia-Pacific region is of this kind. In the last three decades, growth in this kind of mobility out of Asia has fuelled the development of a global higher education market. In many countries in the region, rapid economic and social development has been accompanied by several factors that have combined to raise demand for overseas qualifications. We can distinguish three different ways in which globalization has spurred the rapid growth of international

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student mobility in the Asia-Pacific, by disaggregating the effects of globalization on demand, mobility and supply of international higher education in the region. In this chapter we consider each dimension in turn, before analysing the resulting patterns of cross-border student mobility in the region, the export-orientation of several nations and the tensions created by international marketization.

Globalization and Demand for International Education

Demand for international education is spurred by several factors including rapid industrialization, increased affluence, the lag between local demand and local supply, the role of English as the international business language and the ready employability of business and IT graduates in industrial and knowledge economies.

Demand for overseas study is closely entwined with the broader process of global integration of Asian economies. Rapid industrialization in many countries has been spurred by export-oriented industrialization policies, pursued first by Japan, followed by the “Asian tiger” economies—Hong Kong, Taiwan, South Korea, Singapore—and more recently by China and Vietnam. The resulting economic transformations have created growing labour market demand for tertiary graduates. At the same time, increased affluence has also fuelled student demand. Governments across the region have invested heavily in secondary education. Completion rates have improved in many countries, producing more secondary graduates qualified for tertiary study. But in all of these industrializing economies there has been a lag in expanding access to higher education. This lag has resulted in a period of under-supply, fostering the strong growth in outward student mobility from these countries. Later, domestic (public and private sector) investment in higher education is gradually able to catch up to demand for tertiary qualifications.

Simultaneously, rising incomes have increased the affordability of foreign study, although study overseas is usually a far more expensive option than studying in the home country for the vast majority of international students in the Asia-Pacific region. Viewed in simple economic terms, many families are willing to invest a significant amount of money in foreign education, in expectation of “higher rate of return on internationally recognized qualifications (through higher earnings and migration possibilities)” (Bashir 2007, p. 51). Students and their families see the higher cost of overseas study as being worthwhile given that many employers in low and middle-income countries prefer foreign qualifications, and that international education has become a pathway to migration.

Foreign direct investment and export-oriented development creates demand for qualifications in business, information and communications technology and English language skills. International student mobility can be seen as one mean of transferring skills from high-income countries to emerging economies, alongside transfers facilitated by the relocation of manufacturing operations and the outsourcing of business services. The adoption of such technologically advanced processes requires high levels of skills, and student demand for international study can be seen

as a response by millions of families to the premium paid for such skills in Asian labour markets. International students are in effect buying their way into the global knowledge economy (Gürüz 2008).

Over the past two decades, professional competence in the English language has become increasingly important across the region. English has supplanted other foreign languages, including French, Spanish, Russian, Dutch and Portuguese, each of which was for a time the most commonly studied foreign language in one or more Asia-Pacific countries. English is now one of the most significant determinants of choice of host country, with two-thirds of internationally mobile students from East Asia and the Pacific studying in countries with English language higher education systems (UNESCO 2009).¹

As a result of the role of language in driving demand, combined with a market-oriented philosophy in Anglophone nations, English-language higher education systems and institutions almost always charge international students tuition that covers the full cost of provision—whereas most international students in non-English-speaking institutions and countries are subsidized and pay significantly less than the full cost of provision. In some Anglophone countries, such as Australia, public educational institutions are not allowed to charge below the full cost of provision of education to international students (except those in receipt of competitive institutional scholarships), a rule intended to ensure that international students are not cross-subsidized by funding intended for domestic students.

The dominance of English seems well-entrenched at present, but in future decades it will be interesting to see whether Putonghua (“Mandarin” Chinese), the only other language with over one billion speakers, becomes increasingly attractive to students and employers across the region as China assumes greater economic and political significance. At present many students travel to China to undertake intensive Chinese language programmes but few foreign students enrol in Chinese degree programmes alongside local students. This may change as Chinese universities develop stronger international reputations and the study of Chinese expands in secondary schools across the region. There is enormous scope for growth in student mobility between the Chinese language higher education systems in the region—China, Taiwan, Hong Kong and Macao. Until very recently cross-border mobility between these territories was highly restricted, but since travel has been made easier, student numbers have begun to grow.

Globalization and the Accessibility of International Higher Education

Technological developments and policy decisions have together accelerated the provision and accessibility of international education.

¹ Including, in order of number of students from East Asia and the Pacific, the USA, Australia, United Kingdom, New Zealand, Canada, Malaysia (where nearly all international students study in English-language institutions or programmes), Philippines and Ireland.

Technological developments in transportation and communications have greatly simplified the process of studying in foreign institutions. The gradual reduction in the cost of air travel has made overseas study more affordable. Ease of travel also reduces the isolation felt by international students, by allowing many to return home during breaks in their studies, and making it more affordable for parents to visit during their studies.

The greatest development in communication has been in the use of the Internet by prospective students able to investigate study options online, using institutional websites directly or by exploring options through various portals operated by national authorities such as Japan's Student Services Organization (www.jasso.go.jp) and Education New Zealand (www.newzealandeducated.com), and those operated by a variable range of private marketing agencies, the most established of which is Australia's IDP (www.idp.com). These portals allow students to access information about the range of study options in a particular country, and information about immigration, work rights, cost of living and related logistical issues. Students usually draw upon a range of resources in making the big decision about overseas study, including family and friends, former teachers and recruitment agents; but an increasing proportion of students use online resources to research options and communicate with prospective institutions. Students can directly apply to enrol with a foreign institution, and can expect to receive an offer of enrolment in a matter of days or weeks, rather than the months required by postal application processes. Once students have received an offer from an institution they can access student visa application forms online and may be able to submit a visa application online. During their studies, international students can maintain contact with family and friends back home much more easily through various online channels.

As important as these factors have been, the rapid growth in student mobility would not have occurred were it not for policy changes in key education exporting countries in the 1980s. Within a few years of each other, the United Kingdom, Australia, and New Zealand governments deregulated international student enrolments, allowing institutions to enrol an unlimited number of international students on a user-pays basis, without displacing government-subsidized domestic students. This is the case also in USA, Canada and Ireland. In nearly all English-language higher education systems a vast majority of international students are self-funding (the exception is at doctoral level); and there are rarely caps on enrolments of international students, though domestic enrolments tend to be highly regulated both in terms of student numbers and tuition fees. Anglophone universities have limited capacity to grow in size or income by domestic marketing and must recruit globally where they are much less restricted by national governments. By contrast, in non-Anglophone systems where governments subsidize international students to varying extents, there are usually caps on international student numbers, commonly around 5–10% enrolments, to limit the displacement of local students competing for publicly funded places.

Patterns of Cross-Border Student Mobility in the Asia-Pacific Region

We can distinguish between four types of countries of origin in the Asia-Pacific region:

1. **Low Income+Low Mobility:** Cambodia, China, India, Laos, Myanmar, Papua New Guinea, Philippines, Thailand, Vietnam. These countries all have GDP per capita of less than \$ 5,000 (USD 2008) and less than 0.6% of their tertiary age population studying overseas (2007).
2. **Medium Income+Medium Mobility:** Malaysia, South Korea New Zealand. These countries all have GDP per capita of \$ 8,000 to \$ 30,000 (USD 2008) and between 1.4 and 3.1% of their tertiary age population studying overseas (2007).
3. **High Income+Low Mobility:** Australia, Japan USA. These countries all have GDP per capita above \$ 38,000 (USD 2008) and less than 0.9% of their tertiary age population studying overseas (2007).
4. **Small and Island States+Medium-High Mobility.** These states have widely varying incomes but high-outward mobility due to their small size, including Brunei (6.9% of the tertiary age population studying overseas), Fiji (2.1%), Hong Kong (7.0%), Macao (2.9%) and Singapore (6.2%).²

In low-income countries very few people can afford to study abroad. Many of those who could afford to are likely to enter local elite institutions. As per-capita income increases in middle-income countries, many more families have the capacity to fund overseas study and higher wages rates improve the return on the investment in overseas education. High-income countries usually provide a range of quality education options, and when students travel abroad it tends to be for short periods of time to enrich a programme undertaken at home. For small and island states, local options are limited, even in high-income countries such as Singapore, and so many young people travel abroad for study.

It is significant for future projections that many of the world's largest and most rapidly growing economies, such as China and India, have growing rates of outward mobility. The impacts on the world's international student population could be enormous. For example in 2007 there were 4,21,148 mainland Chinese students studying outside China, equal to 0.4% of the country's tertiary age population of 1,14,945,657. If just one percent of Chinese young people undertook a programme overseas (a significantly lower percentage than most other Asian economies at the stage of development China is fast approaching) we would see over a million mobile students from just this one country. Even larger-scale growth of outward mobility is likely for India, which compared with China has a rapidly growing youth population, greater challenges in growing local institutions and higher levels of English language proficiency.

² GDP per capita data from United Nations, percentage of the tertiary age population studying overseas ("Gross outbound enrolment ratio") from UNESCO.

Table 6.1 Host countries of students from East Asia and the Pacific. (Data source: UNESCO 2009)

Destination	Number of students from East Asia and the Pacific 2007	Regional rank	Global rank
United States	2,48,288	1	1
Australia	1,26,633	2	4
Japan	1,12,257	3	6
United Kingdom	96,671	4	2
Germany	35,959	5	5
France	31,511	6	3
South Korea	26,903	7	15
New Zealand	23,383	8	14
Canada	18,267	9	7
Malaysia	13,149	10	22
Others	75,001		
<i>Total</i>	<i>8,08,022</i>		

Ninety per cent of students from the Asia-Pacific region study in just ten countries, as shown in Table 6.1 below. The list includes the seven top receiving countries globally, plus three significant regional providers in South Korea, New Zealand and Malaysia. China and Singapore would also figure in this list if they provided country of origin data to UNESCO.

In 2007 there were 8,08,022 students from East Asia and the Pacific studying overseas, making it the largest source region for internationally mobile students, 29% of the world total. On the other side of the ledger, 5,14,290 internationally mobile students were studying in East Asia and the Pacific, representing 18% of the all internationally mobile students. This puts the region in third place in terms of hoisting, after Europe (41%) and North America (24%) of internationally mobile students (UNESCO 2009). East Asia and the Pacific is becoming a more important destination for internationally mobile students, having taken an extra 5% global market share between 1999 and 2007 at the expense of Western Europe and North America.

Table 6.2 shows the growing intra-regional mobility of students from East Asia and the Pacific. Two-fifths of international students are now studying in another country within the region. There has also been a rise in the proportion studying in Western Europe and a sharp decline in the proportion studying in North America since 1999. Meanwhile, East Asia and the Pacific has proved increasingly attractive to students from South and West Asia, who now travel East more readily for study. The previously one-way flow to North America has become significantly more reciprocal.

This picture parallels developments in other aspects of the international connections between these regions. Entrenched core-periphery relationships are giving way to a greater degree of multi-polarity and intra-regional relationships (Dicken 2007). A similar growth in intra-regional students mobility has occurred in Latin America and the Caribbean, and Central Asia, with smaller gains in the Arab States, Central and Eastern Europe and sub-Saharan Africa (UNESCO 2009). In part, this

Table 6.2 Inter-regional student mobility. (Data source: UNESCO 2009)

	Destinations of mobile students from East Asia and the Pacific, proportion by world region 2007 (%)	Change in percentage points relative to 1999 (%)	Proportion of mobile students from each region studying in East Asia and the Pacific, 2007 (%)	Change in percentage points relative to 1999 (%)
East Asia and the Pacific	41.8	+6.0	41.8	+6.0
North America	33.0	-10.0	15.4	+6.4
Western Europe	22.9	+4.4	3.7	+1.0
Central and Eastern Europe	1.3	-0.4	1.2	+0.1
Central Asia	0.4	+0.3	3.2	+2.4
Arab States	0.2	-0.3	4.7	+3.5
Latin America and Caribbean	0.2	+0.1	2.5	+0.9
South and West Asia	0.2	-0.1	21.1	+11.5
Sub-Saharan Africa	0.0	0	4.3	+2.4
<i>Total</i>	<i>100.0</i>	<i>-</i>	<i>18.4</i>	<i>+5.0</i>

trend reflects the proliferation of countries and institutions that seek to recruit international students. Students have many more choices closer to home than they had in the past.

The pattern of students moving from across the globe to study in North America and Western Europe has had a long history. It is integrally connected with broader economic and cultural relationships between the world's established industrial powers and developing and emerging economies. The pattern is deeply embedded. As Altbach (1980) showed, the inequalities in access to knowledge and resources that underlie this pattern are resistant to change. But one of the most dramatic changes since the 1970s is the rapid integration of many Asian countries into the global economy, with the shift to export-oriented industrialization. This has increased incomes in the region and hence number of students able to study overseas, leading to the rapid growth in international student numbers from newly industrialized countries, most recently from China and India.

Export-oriented growth in Asia's globalizing economies in many ways reflected longstanding core-periphery patterns of trade and investment. Investment flowed from advanced industrial countries ("core") countries to less industrialized ("periphery") countries that used cheap labour to produce goods for export back to the core. More recently, as Dicken (2007) has shown, Asian economies are slowly becoming decoupled from the United States and Europe, with rates of trade and investment between economies in the region increasing faster than those with the rest of the world. We can see this occurring in education also, as student mobility between countries within the region increases.

Table 6.3 Region of origin of international students in selected East Asia and Pacific countries, 2007. (Data source: UNESCO 2009)

	Arab States	Central & Eastern Europe	Central Asia	East Asia & Pacific	Latin America & the Carib.	North America & West Europe	South & West Asia	Sub-Sah. Africa	not known	Total	Share from E. Asia & Pacific (%)
Australia	4,406	1,524	194	12,6633	2,394	15,912	36,764	6,487	17,282	2,11,526	60
China	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	42,138	42,138	n/a
Hong Kong Ch.	-	-	-	6,026	-	95	40	-	113	6,274	96
Indonesia	18	34	2	2,892	6	25	11	33	2	3,023	96
Japan	564	1,217	1,246	1,12,257	1,288	4,301	4,463	531	10	1,25,877	89
Macao China	-	1	-	11,739	3	93	2	41	51	11,930	98
Malaysia	3,574	207	227	13,149	40	301	5,186	1,680	40	24,404	54
New Zealand	328	350	39	23,383	319	5,472	2,859	256	41	33,047	71
Philippines	156	3	-	2,758	9	1,284	822	93	11	5,136	54
South Korea	112	374	1,293	26,903	171	930	1,123	187	850	31,943	84
Thailand	23	103	44	8,064	35	1,416	1,151	131	-	10,967	74
Viet Nam	3	11	32	3,178	-	6	-	-	-	3,230	98
Total	9,184	3,824	3,077	336,982	4,265	29,835	52,421	9,439	60,468	5,09,495	66
Percentage (%)	1.8	0.8	0.6	66.1	0.8	5.9	10.3	1.9	11.9	100	

International student numbers in many Asian countries have grown in the past decade, including significant growth in China, Japan, Malaysia and Singapore, with a majority of foreign students in each of these countries originating in other Asian countries. Despite the shifts noted above, it is striking how few students from East Asia and the Pacific study outside of their own region and the “Global North”. Only 2.3% of students study in any other part of the world.

Australia, New Zealand, the Cash Cow and the Killing of the Goose

The major host countries for students studying outside the region are the United States and the United Kingdom, especially for graduate-level students. Within the region, Australia and New Zealand have proven to be attractive to many students, as the only countries in the region with higher education systems that operate in English and have excess capacity. From the mid 1980s onwards, following the lead of the UK, both countries allowed educational institutions to recruit unlimited numbers of self-funded international students and actively encouraged growth in incoming students. Previously, international students had been funded by government and numbers were limited. So rather than the role of the state being undermined by globalization as many had predicted in the 1990s, in these countries the nation state played a key role in facilitating and steering (or attempting to steer) global engagement (Martens and Starke 2008).

These countries are among the top five education “exporting” nations in the world. (France and Germany host more international students, but at their own expense, as aid donors rather than exporters). In 2005, the value of education exports for the five exporters for whom data are available was over \$ 28 billion (USD), with the United States accounting for an estimated \$ 14.1 billion, followed by the United Kingdom at \$ 6.0 billion, Australia \$ 5.5 billion, Canada \$ 1.6 billion and New Zealand \$ 1.0 billion (Bashir 2007). Education has become an especially significant export in Australia and New Zealand relative to the economies of those countries. According to Education New Zealand, expenditure from international students accounts for 1.13% of GDP in New Zealand and 1.06% in Australia, higher than the other leading destinations of self-funded students: 0.4% in the UK, 0.25% in Canada, 0.16% in the USA. Considered as a proportion of export income, international education is even more significant. Expenditure by international students accounts for 6.90% of export revenues for New Zealand, 5.60% for Australia. This compares to 1.49% for the UK, 0.94% for the USA, and 0.88% for Canada (Boag 2008).³ Education is the third most valuable export industry in both countries, after coal and iron ore in Australia; and wool and dairy in New Zealand.

³ As well as including tuition fees, such expenditure figures include living expenses in the host country, which typically account for as much or more export income as fees (Kenyon and Koshy 2003).

Educating students from across the Asia-Pacific is a vitally important part of the local economies of those cities where those students are concentrated—especially Sydney, Auckland and Melbourne. Education is the most valuable export industry for the state of Victoria, Australia's second most populous state, where Melbourne is located. Both countries put considerable energy and resources into national branding, industry development, market research and government-to-government relationships with key educational trading partners.

The fable of the goose (or sometimes hen) that laid the golden eggs, attributed to Aesop, is often invoked by commentators concerned by the success of Australian and New Zealand universities in attracting international students. It is worth recounting the fable here for those who may be unfamiliar:

A man had a hen that laid a golden egg for him each and every day. The man was not satisfied with this daily profit, and instead he foolishly grasped for more. Expecting to find a treasure inside, the man slaughtered the hen. When he found that the hen did not have a treasure inside her after all, he remarked to himself: "While chasing after hopes of a treasure, I lost the profit I held in my hands!" (Gibbs 2002)

The critique espoused by higher education researchers such as Marginson (2007a, 2007b) and widely evident in popular media discourse (Benson 2006), suggests that the attractiveness of universities in these countries results from long-term public investment in infrastructure, education for the public good and research. The commercial full-fee provision of education to international students creates pressures to standardize quality and mass-market programmes. These pressures often conflict with and undermine the non-profit teaching and research activities. If the commercial pressures become too dominant, the reputation of the university and indeed the national system can be undermined. Universities have become over-reliant on income from international students' tuition fees. The solution is for governments to increase the level of funding for domestic students and research so that the value of these universities in the international marketplace is not eroded:

Universities are rarely credited for good teaching on a comparative basis, and in building a positive global reputation it is research outcomes that count. For Australia, the worst case scenario is that it becomes locked into the role of global polytechnic by its fiscal settings and business culture, its position-taking strategy becomes a downward spiral, its strong quantity position in the cross-border market is eroded, and the material resource base of Australian higher education is further eroded with it. The way out is public reinvestment at scale and especially in research infrastructure. (Marginson 2007a)

The construction of international education as a business activity has led to regarding students as "clients" or "customers". A recent Australian example helps to illustrate the risks involved for educational institutions heading down this road. In early 2006, international students at the Melbourne and Sydney campuses of Central Queensland University staged banner-waving protests and threatened a hunger strike. It was reported that the students were disgruntled by failure rates of up to 80% in their final taxation law exam, accusing the University of treating them as a "cash cow" and providing poor education services. (Colloquially, a "cash cow" is a part of a business that generates unusually high profit margins). Central Queensland University countered that its services were high-quality, and that the

course was “notoriously a tough one: with high standards expected”.⁴ Commenting on the protests, Central Queensland University Professor Paul Rodan underlined the propensity for some students to seek to negotiate a better result:

...there is the constant danger that “customers” will see everything, including academic standards, as negotiable. All too often, students with borderline fail marks seek a pass, not on any academic grounds, but on the same basis as one might haggle over a price in an eastern bazaar. Given a cultural orientation to regard “no” as merely the start of negotiations, institutions will pay a price if they fail to emphasise that negotiation stops at the classroom door. (Rodan 2007, p. 5)

Rodan characterized some protesting students as “opportunistic types who had attended few classes and done minimal work, but who hoped to manipulate their way to a cheap pass” (p. 2). CQU agreed to reassess disputed results, and noted that the students could have requested a re-mark.

We are not in a position to comment on the merits of either case. The general issue, however, has important implications for student mobility in a higher education market. What is the nature of the relationship between the provider and the client in an educational setting? There is a tension inherent in trying to simultaneously embrace two qualitatively different types of relationship: that between service provider and paying customer (where the old adage is the “customer is always right”); and that between teacher and learner (in which the teacher is the one with the knowledge/expertise, and the student is the empty vessel there to gather the pearls of wisdom). What is the nature of the service the student/client is engaging? A university would normally argue that the student is entitled access to specified resources (such as library materials, lecture and tutorial attendance, and so on) which, combined with successful study on the student’s part, can result in the award of a qualification. Failure to reach a common understanding can lead to accusations that inadequate students are passed (so as to not upset the client or potential clients) or, conversely, that it is in the financial interests of a university to fail marginal students so that they are obliged to repeat studies and pay additional fees.

These tensions are further heightened when substantial tuition fees, foregone earnings, additional living expenses (to cover a longer stay while subjects are repeated) and applications for permanent residency status are also at stake. It is important for students to have proper recourse to grievance procedures and dispute settlement mechanisms. At the same time, it is vital for universities to maintain—and be seen to maintain—high standards of academic quality.

These concerns are most strongly held by critics within research-intensive universities in Australia and New Zealand, concerned by the growth in international student recruitment by teaching-focused universities and vocational education and training institutions. They fear that such expansion is aimed at “lower-quality” students, and this will tarnish the national brand and deter “high-quality” students and doctoral students from studying in Australia. The massification of these countries’ international education industries is seen as detrimental to their international reputa-

⁴ See coverage in the Sydney Morning Herald March 17, 2006, Brisbane Courier Mail March 17, 2006, p. 21; and The Age March 14, 2006, p. 21.

tions in an era in which global league tables of universities based on research output are increasingly influential (Marginson 2007a).

An oft-cited case of market failure in international education exports is the spectacular and destabilizing rise and fall in the number of Chinese students studying in New Zealand in the early years of this decade. After several years of rapid growth in Chinese student numbers, in all types of providers, in 2003, complaints by Chinese students at some private English language colleges in New Zealand led the Chinese Ministry of Education to use its International Education Affairs Supervision and Management website (www.jsj.edu.cn) and official news agencies to advise students not to study in New Zealand (Li 2003). As a result, the flow of Chinese students to New Zealand collapsed, even though the complaints stemmed from students' experiences of a handful of institutions. The New Zealand government used talks during bilateral free trade agreement negotiations with China to have these warnings modified and to have some private providers recognized by Chinese authorities. Since that time Australian and New Zealand governments have been much more responsive to foreign governments' concerns about their students' welfare, but this did not prevent a replay occurring in 2009–2010 when a series of assaults on Indian students in Australia prompted a media storm and strained relations between the two countries.

All educational institutions and academic commentators, perhaps unsurprisingly, are calling for domestic students and research to be more heavily supported by government, so that institutions are not so dependent on international students for discretionary income. It is by no means clear that increasing universities' funding for domestic students and research would lead the institutions to recruit fewer international students. However, such funding increases would likely allow institutions to provide better services to international students (Bradley et al. 2008).

Emerging English-Language Education Exporters: Singapore and Malaysia

As noted, countries with English language higher education systems are more easily able to recruit foreign students. In the past decade Singapore and Malaysia have taken advantage of their English-language institutions by actively marketing their education systems to foreign students.⁵

⁵ The other predominantly English-language system in the region, India, is understandably focused on meeting local demand rather than recruiting foreign students. International students in India numbered just 12,263 in 2003–2004, with over 90% of these coming from other developing countries in Asia. Nepal, Bangladesh, Malaysia and Kenya were the largest sending countries (Agarwal 2008).

Singapore

Singapore's "Global Schoolhouse Strategy", launched in 2003, aimed to establish Singapore as a regional hub for education, with the ambitious goal of attracting 1,50,000 international students by the year 2015. The multi-pronged approach includes expansion of local provision, attracting prestigious foreign education providers in branch campus mode, and enacting enhanced quality assurance and registration provisions for local private providers and consumer protection measures for students. Education is one of several sectors promoted by the government, which presents Singapore as a well-regulated, low-risk location where English is the official language of government, business and education—where one can undertake Western-style education while having the opportunity to be immersed in Asian culture and business practices.

It is clear that Singapore has become a popular destination for international students. In 2003, when the government began marketing Singapore as an education hub, there were 61,000 foreign students. By 2008 international student enrolments had grown to 97,000 (Lee 2009). Chinese students have become the largest group of foreign students in Singapore, overtaking traditional source countries Malaysia and Indonesia (Davie 2005). The Singapore Tourism Board, charged with promoting Singapore as an education destination, is now promoting Singapore in more remote Chinese cities. Small numbers of students from Europe, the USA and Australia are also choosing to study in Singapore. For them Singapore is a relatively comfortable introduction to Asia.

For Singapore, student recruitment is but one strand in an extensive regional hub strategy, the contemporary continuation of the city's *entrepôt* economy. Since its foundation, Singapore has acted as a regional business hub providing a point of coordination for extensive trade and investment relationships across South East Asia. The contemporary approach to Singapore's hub strategy is to draw foreign investment by fostering concentrations of specialized services in fields facilitating international business in the global knowledge economy: research and development, IT, finance, accounting, advertising, property development, and legal services. These knowledge-intensive aspects of companies' operations require a highly trained workforce and links with a range of higher education institutions. One of the Global Schoolhouse strategy's aims is to attract top international student graduates to remain in the country as skilled immigrants—an important consideration for a small nation with a low birth rate. Liberal immigration policies make it easy for international student graduates to stay on, and public institutions offer bonded scholarships to top foreign applicants. However, there are stresses. Just as there is some public concern about the domestic impact of large numbers of international students in Australia, there is anecdotal evidence of some local resentment of "foreign talent" in Singapore. The presence of foreign students (and the allocation of international scholarships) adds to the pressure on locals seeking to enter the already highly selective public university system, which effectively restricts entry to the top quartile. Similarly, the presence of foreign graduates and other skilled immigrants makes the employment market more challenging.

Malaysia

Malaysia's higher education system includes public institutions operating primarily in Bahasa Malaysia, the national language, and private institutions operating in English. Most international students in Malaysia are enrolled in English-medium programmes in private institutions, with a smaller number in English-language postgraduate programmes in public universities. The few international students who study in public universities in the national language are mostly from neighbouring countries and already proficient in Malay.

The Malaysian government has set a target of 1,00,000 international students per year by 2010 and established Marketing and International Education Division within the Ministry of Higher Education. The government's recruitment efforts focus on Islamic countries, primarily North Africa and the Middle East. Private institutions are more active in China and South Asia. Capitalizing on Malaysia's diversity of higher education institutions and cultural diversity, the more active recruitment strategies of both government and private sectors appears to be paying off and the country looks set to meet its 2010 target. By 2007, international enrolments were at 65,000, with 48,000 (74%) enrolled in private institutions. In 2008 foreign students enrolled in private higher education institutions reached 71,000.⁶

The successful recruitment strategies of Malaysia and Singapore demonstrate the competitive advantage of English language institutions when recruiting foreign students, especially when supported by government policy in areas such as student visas, overseas promotion and branding, and quality assurance of providers. As a point of comparison, it is interesting to compare the experiences of these countries with the Philippines, which has a large number of English-language institutions, but lacks a coordinated strategy to increase international enrolments. In both Malaysia and Singapore, education export strategies were promoted by powerful central economic policy units, able to coordinate whole of government responses aimed at recruiting more international students and encouraging institutions to accept them. Meanwhile ministries of education have remained concerned primarily with the education of the local population and the functioning of the public institutions.

Universities in several countries are developing graduate programmes in English, to cater both to local students seeking a more international programme, and international students proficient in English but not in the local language. Significant numbers of these programmes are offered in China, South Korea and Thailand. Many of these programmes are heavily subsidized by institutions and government, as part of a broader internationalization effort. It remains to be seen whether such programmes are sustainable in the longer term. The key reform that led to the huge growth in the number of international students in Malaysia was the liberalization of the private higher education sector in the mid 1990s. Under this policy the government encouraged the development of domestic private institutions and allowed them to teach in English, often in collaborative partnerships with foreign universi-

⁶ *The Star*, March 9, 2008; *The Star*, April 4, 2009.

ties; and invited foreign universities to establish branch campuses. This was possible in Malaysia due to the colonial legacy of widespread English-language use. Politics is also a significant factor. In Malaysia, private education catered largely to ethnic minorities who missed out on places in public institutions due to racial quotas. In India, there has been considerable opposition to liberalizing the private higher education system on equity grounds. For most other countries in the region, the only way to develop English-language institutions is to invite foreign universities to establish branch campuses.

Intra-regional Mobility Outside the Anglosphere

Until around 2000, the bulk of the growth in intra-regional student mobility in the East Asia and Pacific was accounted for by students from Asia studying in Australia and New Zealand. Since that time, as noted above, more East and South East Asian students are studying in nearby Asian countries. Mobility between neighbouring countries in the region is an excellent mean of building long-lasting connections and of sharing expertise between higher education systems.

The student recruitment strategies of the Anglophone exporters are driven primarily by the desire to develop knowledge-intensive export industries. Australia, New Zealand, and Singapore also seek to recruit skilled migrants to fuel the knowledge economy and counteract ageing populations. In most countries across the region the situation is very different. Many non-Anglophone countries are seeking to enhance inward mobility especially between neighbouring countries in order to enhance social and economic regional integration. Across the region, mobility between neighbouring countries appears to be increasing. In 2007 three quarters of the international students in Vietnam were from Laos. Indonesia is by far the most popular destination for students from Timor Leste (UNESCO 2009).

China has enormous comparative advantage in manufacturing, a massive trade surplus, and no shortage of highly trained young people. The Chinese government awards around 11,000 scholarships per year, mainly to students from developing countries, to assist in building political, diplomatic and economic links. Self-funded students are also welcomed by the state as a way of showcasing Chinese achievement and fostering cultural engagement (Ministry of Education [n.d.](#)). According to Chinese government figures, there are more foreign students arriving in China each year than there are Chinese students leaving to study abroad. In 2008, 2,23,000 foreign students entered China while 1,79,800 Chinese students went abroad for overseas studies, 90% self-funded.⁷ However, while most Chinese students studying abroad are undertaking degree-length programmes, only around one-third of the international students arriving in China enrol in degrees. Two-thirds undertake non-award programmes, such as intensive Chinese language studies or short courses for study-abroad students (AEI 2008). Therefore while commencing numbers are simi-

⁷ *People's Daily*, March 26, 2009.

lar, the total commitment of Chinese students outside China remains much greater than the commitment of foreign students studying in China. Nevertheless, the gap appears to be closing.

Around three-quarters of the international students in China in 2007 were from Asian countries (72.5%), followed by Europe, the Americas and Africa. The top source country by a considerable margin was South Korea (33.0%), followed by Japan (9.5%), the United States (7.5%), Vietnam (5.0%) and Thailand (3.7%) (AEI 2008).

While the Anglophone exporters are able to attract students from outside the region, as illustrated in Table 6.3, most countries in the region, including Japan, Korea, Hong Kong, Vietnam, and Macao, recruit nearly all of their international students from within East Asia and the Pacific. Usually the patterns of mobility are quite localized. For example, students from mainland China constitute 64% of international students in Japan, 72% in Korea, 93% in Hong Kong SAR, and 95% in Macao, China (UNESCO 2009). Japan and Korea are striving to increase the number of incoming students. It would seem that closer economic and cultural ties, coupled with linguistic affinities, will continue to make these countries attractive to mainland Chinese students. Within the Chinese language territories, or “Greater China”, the flows of ethnic Chinese students across borders is potentially enormous—given the demand in China, the quality institutions in Hong Kong, and the oversupply of higher education in Taiwan. However, in Hong Kong the government sets quotas for foreign students, most of whom are from mainland China, in order to ensure that local demand is met (Li and Bray 2007). Continuing tensions over the status of Taiwan long made travel difficult, let alone the recognition of qualifications, and student mobility across the Taiwan Strait was non-existent (Republic of China Ministry of Education 2008). However, Taiwan has now announced that it will recruit some mainland students.

Conclusion

Students, institutions and governments across the region have sought to exploit and manage the new possibilities and challenges that globalization has opened up. Until the onset of the Global Financial Crisis it appeared certain the flow of international students from countries in the Asia-Pacific region would continue to grow rapidly—and the crisis may indeed have only brief effects on the trend. Across the region, the growth in student mobility has been underpinned by growing household incomes, government and employer valuing of international education, greater emphasis on foreign language study in schools (especially English), streamlined application processes, and opportunities for students to work while studying and to obtain work experience in country after graduation.

Governments in China, Vietnam, Malaysia and several others have increased their scholarship programmes for research students as a way of quickly expanding the size of the academic workforce. This is a critical ingredient in the drive to boost

participation rates in tertiary education. In future decades we could expect to see student mobility from developing countries follow a similar pattern to that found in some higher-income countries in the region. As participation rates in domestic tertiary education climb, the number of students studying abroad tends to plateau. A smaller proportion of students enrol in undergraduate studies overseas, but higher numbers engage in short-term overseas study and postgraduate degrees.

At the same time, the casting of education as an export has led to tensions between the role of student as learner and as client, and the potential for the quality of education to be undermined (or at least perceived to be undermined) by an overemphasis on the pursuit of revenue at the expense of traditional educational values—for example, concentrating too heavily on the provision of internationally popular undergraduate courses at the expense of research and scholarship. There are also concerns about the impact of foreign students on the domestic system in terms of skewing provision and increasing competition to the detriment of locals. Indeed, problems in the education field—questionable quality of provision, inadequate regulation of providers, mistreatment of students—can become flashpoints that fray international relations. As traditional education-importer countries in the region seek to become major education exporters and regional education hubs, they too will be obliged to deal with these tensions.

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Part III
Asia-Pacific Institutional Strategies

Chapter 7

Advanced Global Strategy in China: The Case of Tsinghua

Rui Yang

Introduction

Tsinghua University (清华大学) was established in 1911, originally under the name Tsinghua Imperial College (清华学堂). The university section was founded in 1925. The name ‘National Tsinghua University’ was adopted in 1928. With the motto of ‘Self-Discipline and Social Commitment’ (自强不息, 厚德载物) and the spirit of ‘Actions Speak Louder than Words’ (行胜于言), the University has a long tradition of dedicating itself to the well-being of Chinese society and to world development. It is in the top tier institutions in China, often being referred to as the ‘MIT of China’. Most national and international rankings place it as a leading university in China. For years, half of the top ten students nationwide have chosen to study at Tsinghua (Wu 2002).

The University was established on the site of a former royal garden belonging to a prince, and funded by the Boxer Rebellion Indemnity Scholarship Program. This consisted of money from indemnities which China paid the United States after the Boxer Rebellion. It was first a preparatory school for students subsequently sent by the government to study in the United States. The faculty members for science teaching were recruited from the United States and students transferred directly to American schools as juniors upon graduation. In 1925, the school started its research institute for Chinese Studies, and as noted it became designated as a university in 1928. In 1937, Tsinghua, along with Peking and Nankai Universities, merged to form Changsha Temporary University in Changsha, and later National Southwestern Associated University in Kunming. In 1946 it resumed its operation in Beijing after the end of the war against Japan.

As one of the most important parts of China’s world-class university policy, Tsinghua has set its own goals and timetable: to transform itself into a comprehensive research university during 1994–2002; to rank among world-class universities

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during 2003–2011; and to comprehensively uplift its overall level to world-class standards during 2012–2020 (Chen and Li 2007, pp. 44–45). Internationalization is strategically important for Chinese universities. This reflects China's national open-door policy. At present, the central focus of internationalization for top Chinese universities such as Tsinghua is to achieve a status that is internationally recognized. Tsinghua's efforts involve almost every aspect of the University. Due to space limitations we will focus selectively on its policies and practices in teaching, research and technology transfer.

Strengthening Academic Disciplines and Teaching Quality

Immediately after China's education returned to normal after the devastating Cultural Revolution of 1966–1976 Tsinghua began to rebuild itself into a truly multidisciplinary research university. It was recognized that the construction of academic disciplines was fundamental and strategic in the development of the university, to a certain extent determining its characteristics and level, as expressed by Wang (2002) who presided over Tsinghua from January 1994 to April 2003. The construction of the disciplines was a core part of Tsinghua's bid for world-class performance. The university took the opportunity provided by the national policy of rejuvenating China through science and education. Projects 211 and 985 set out to lift the nation's universities as multidisciplinary and research-intensive so as to emulate the world's best universities.

During its earlier period, Tsinghua was comprehensive, with academic programmes in science, engineering, arts, law, and management. After the creation of the People's Republic of China, Chinese higher education institutions were reorganized in an attempt to build a Soviet-style system, with individual institutions tending to specialize in a certain field of study. Tsinghua was disassembled, losing its schools of law, agriculture, sciences and the humanities, and became a polytechnic engineering university. But from the 1980s, Tsinghua began to incorporate a multidisciplinary system. Many schools were built and rebuilt. The School of Economics and Management was established in 1984. One year later, the School of Sciences was rebuilt. In 1993 when Tsinghua set world-class status as its target, a multidisciplinary research-intensive model was formally adopted. Schools of Humanities and Social Sciences, Law, Public Administration, and Journalism and Communication were founded. In 1999, the Academy of Arts and Design was built through amalgamation of the previous Central Academy of Arts and Design. From 2001 onwards, Tsinghua had a School of Medicine.

By 2002, Tsinghua had 12 schools and 48 departments covering sciences, engineering, arts, law, economics management, arts and design, and medicine. It had 24 first-level disciplines, 49 national key subjects, 12 post-doctoral stations, 107 doctoral programmes and 139 Master's programmes (Gu 2008a). It had roughly completed the transformation from a polytechnic into a comprehensive university. The next stage of measures included the further development of the traditionally strong

disciplines, the rapid strengthening of programmes in natural sciences and emphasis on cross-disciplinary programmes. Tsinghua University now has 13 colleges, 55 departments and 183 laboratories. In September 2006, Peking Union Medical College was renamed Peking Union Medical College, Tsinghua University. The University offers 62 undergraduate programmes, 198 Masters programmes and 181 doctoral programmes, and 34 post-doctoral stations. It is the first Chinese university to offer a Master of Law programme in American law, through a cooperative venture with the Temple University Beasley School of Law.

Social Science and the Humanities

One of the central themes of comprehensive disciplinary construction has been to re-establish and build schools in social sciences and the humanities. Tsinghua set up a leading team in 1984 to specifically oversee social sciences and the humanities. In November 2000, the University's Social Science Administration Office was formally established. A series of documents regarding social sciences and the humanities were issued including research assessment, teacher recruitment, research funds regulations and reward and sanction of research outputs. Within social sciences and the humanities there are doctoral programmes in philosophy, economics, law, sociology, Marxist theory, Chinese language and literature, journalism and communication, theory of art, management science and engineering, business administration and public administration (Xie 2006). Tsinghua has gradually built certain strong disciplines and programmes. In 2004, quantitative economics, art design, management science and engineering, and technoeconomics and management, were selected by the Ministry of Education (MoE) as national key subjects. Already in the nationwide disciplinary assessment during 2003–2004, Tsinghua's theory of art and business administration were ranked number one; management science and engineering were number two; and sociology and journalism and communication, were numbered at three. Research capacity in social sciences and the humanities has been enhanced and in 2005, research funding reached 87 million yuan. The number of research projects has also been increasing. From 2001 to 2005, 79 were at the national level.

During the second stage of the Project 985, Tsinghua's construction of eight national-level bases for philosophy and social sciences has been moving smoothly. The University has three bases for social sciences and the humanities designated by the MoE. It has worked with the State Development and Reform Commission, Ministry of Science and Technology, MoE, Chinese Association for Science and Technology, General Administration of Sport of China and Beijing Municipality to build a variety of research institutes in social sciences and the humanities. Nevertheless, the gap between social and natural and technological sciences remains wide; the gap between Tsinghua's social science and humanities achievements and those in other universities is obvious, especially at the international level; and much more needs to be done to increase the international visibility of Tsinghua's research

in these disciplines. While Tsinghua's bid for world-class status might depend much on its achievements in natural and technological sciences, no matter how brilliant is its work in those disciplines, without the success of social sciences and the humanities, one must wonder whether it is possible for Tsinghua to claim the status of comprehensive research university of world-class level.

There is no sign of dramatic improvement in the near future. The author once travelled with a deputy minister for education who had previously been Tsinghua's Dean of Studies and vice president. During that trip he made the comment that to become an excellent social scientist all it needed was a good memory. While the deputy minister's understanding was a shock, such thinking is not exceptional even within today's Tsinghua. Simply buying state-of-the-art research facilities is not sufficient to truly uplift Tsinghua's social research to world-class level.

Teaching

Another major aspect of disciplinary construction is teaching. Compared with the hubble-bubble of higher education reforms in many Western countries, Chinese universities pay much more attention to teaching especially at undergraduate level. As noted by Shi (2008), the reform and innovation of undergraduate teaching has always been a core part of the enhancement of university research and service as promoted especially by Projects 211 and 985.

Teaching reforms are oriented to general education, flexibility and innovation. In this regard, Tsinghua has a long historical tradition. By the late 1940s, Tsinghua was already one of the best comprehensive universities in China, greatly influenced by Western culture, while also attaching importance to the balancing of Chinese and Western learning, in both sciences and the humanities. Today a variety of measures and approaches are being introduced, experimented with and promoted. Students have been given more time and choices. New methods and contents have been introduced into classes. These include freshmen seminars, senior seminars and seminars on specific topics; discovery learning, as advocated by Michael Gibbons; students' research training; undergraduate research opportunities programmes, based on the MIT experience; summer undergraduate research fellowship programmes, as borrowed from Caltech; undergraduate research apprentice programmes, as learned from UC-Berkeley; and research experiences for undergraduates, to name but a few.

Tsinghua adopted a policy to "stress improvement and grow while improving" (Shi 2008, p. 63). At undergraduate level the focus has been on quality rather than scale. This approach was furthered when the University decided to aim at world-class status in the 1980s. It is now at the late period of stage two (2003–2011) of its institutional plan as outlined above. The work focus is on breakthroughs in selected areas on the basis of comprehensive improvement of educational quality. From 1999 onwards, new admissions of postgraduate students have outnumbered those of undergraduates. The number of undergraduate students has increased only

moderately, from 10,857 in 1995 to 13,861 in 2002. In contrast, postgraduate student numbers have risen from 435 in 1981 to 12,784 (including 5,051 doctoral students) in 2006, with another 5,000 enrolled in non-degree course programmes. The growth of postgraduate students especially in science and technology areas demands more research projects, better facilities and more capable supervisors. Most of the financial support for such developments has come from outside the University, usually in the form of research funds. This further strengthens the stress on research in these academic fields, confirming Boyer's (1990) description of how ever-increasing postgraduate education, an emphasis on research and the reliance on external funding contributed to the shift of focus in American universities from teaching to research and from undergraduate to postgraduate.

Tsinghua's teaching reform is part of its transformation from a polytechnic to comprehensive university, with careful attention to the combining of traditionally strong science and engineering with the new focuses on the humanities, social sciences and management. Teaching reform is also closely linked to the University's long-term development goals including the restructuring and construction of various academic disciplines. In 2007, 16 out of Tsinghua's 19 disciplines were ranked in the top five among all Chinese universities, and eight were ranked number one, making Tsinghua the highest performing university on the nationwide scale. In the new round of assessment of national key subjects, Tsinghua had 22 first-level national key subjects, which again ranked first nationally, with 15 second-level key subjects, and two designated by the central government as the programmes to be fostered with special attention.

In terms of postgraduate education, in 1999 Tsinghua had 11 doctoral theses included in the lists of the national best and 8 theses were so listed in the following year (Wu 2002). In 2007 three Tsinghua professors were listed as national masters of teaching, 19 courses were included in a list of 'national treasures', and 11 doctoral theses were ranked as among the national best. Overall, Tsinghua housed 38 so-called teaching masters (10 national and 28 Beijing municipal); 131 courses as 'treasures' (61 national and 70 municipal); and 73 best theses, which made up one-twelfth of the national total (Zhou 2008). As shown by Table 7.1, Tsinghua housed 49 national key subjects, which was 7.21% of the national total.

Unlike other Chinese universities, in which undergraduate and postgraduate education are separated, Tsinghua plans them both as a whole. For both levels, much emphasis is placed on the basic knowledge structure including a wider range of disciplines, such as natural, technological and social sciences, as well as economics, management and law. Meanwhile, students are given much flexibility in further development based on both social demands and their personal interests. While the

Table 7.1 Tsinghua's key subjects as announced by the Ministry of Education, November 2006. (Source: Geng 2008, p. 12)

Economics	Literature	Science	Engineering	Management	Total
1	1	7	38	2	49

number of postgraduates has been increasing fast, much attention has been paid to quality, especially at doctoral level. Tsinghua has always been ranked highly in the assessment of its graduate training. A 1995 national survey organized by the MoE reported that Tsinghua ranked third best in the nation in terms of doctoral student results; the second best in curriculum development and in supervisors' quality; and the first in SCI (Science Citation Index), EI (Engineering Index), and ISTP (Index to Scientific & Technological Proceedings) articles, in research prizes and in the administration of postgraduate education. In a variety of other rankings, Tsinghua's postgraduate training has been consistently ranked as the nation's top. One reason for these achievements is the University's insistence on combining the training of talent with national and regional socioeconomic development, which has proven to be particularly effective at doctoral training level. Students not only participate in research projects but receive relevant training and often find themselves the employment they need.

It is widely recognized within the campus that quality teaching, especially at undergraduate level, is the key to preparing talent. Tsinghua has carried out various teaching evaluation exercises designed to ensure teaching quality, including visits by experts, self-assessments by teachers, and student evaluation. Starting from 1998, Tsinghua conducted a large-scale survey which lasted for two and a half years. More than 130,000 questionnaires were sent to students with a return rate of 83%. Findings from the survey were used as a basis for the development of policies on teaching reform. During 2000–2001, 55,400 questionnaires were sent covering 639 courses, with 44,256 effective returns. About 76% of all respondents were very satisfied or reasonably satisfied. Only 4% expressed dissatisfaction. Similar results have been repeatedly confirmed by investigations conducted by students or by external agencies. In 2000, the Tsinghua students association surveyed 2,504 students and 81% expressed satisfaction, with only 2.44% unhappy at all. In 1998, the Beijing municipal government conducted a survey at Tsinghua covering 35 courses; 84% of responses were very positive (Wu 2002, pp. 18–19).

However, Tsinghua's achievements in teaching pale into insignificance when the frame of reference is broadened to the international. According to a recent study by Ross et al. (2008), Tsinghua's requirements were lower than those of the top 10% of American universities. In terms of students' active, collaborative learning, Tsinghua is substantially behind the top 10% American universities, especially during the period of senior grades. For example, 23% Tsinghua undergraduate students reported that they had not raised a single question or participated in class discussions, and 35% had never done a class presentation. It is not surprising then that Tsinghua students were far behind their American peers in interacting with teachers: 31% of them had never received comments, written or verbal, on their performances from their teachers; and 38% had never shared their views of the world, society and life with any one of their teachers. However, the study confirms the aforementioned survey results in that compared with their American peers, Tsinghua students were much happier with the support they receive from their teachers and their university.

Targeting on the Basis of National Strategic Needs

China is determined to become an innovation-oriented country. Self-innovation is the core of China's future construction. Within the national innovation system, universities play a crucial role, creating a win-win situation for both sides. Through proactive participation in the system, Tsinghua enhances its research and by extension improves its teaching and services to the society. The most prominent feature of Tsinghua's successful development is targeting on the basis of national strategic needs. Meeting national priorities coincides with Tsinghua's own preferred institutional strategy based on its own priorities and strengths.

As the senior managers of Tsinghua see it, meeting national strategic needs, and contributing to the rejuvenation of the Chinese nation by building world-class universities, are the first priorities for the University. In contrast with the practice in most Western universities where, at least to some extent, researchers choose the topics they are interested in and apply for funding, Chinese researchers are usually guided on the basis of specific topic areas. Topics are specified at various levels from institutional to ministerial and national, arranged around the needs of national development. Given the University's status in the Chinese higher education system, this is especially the case at Tsinghua. For instance, on 15 February 2008, the State Council discussed and approved Tsinghua's project on a nuclear energy station, defining it as "one of the symbolic projects to build an innovative country" (Yang 2008, p. 1). Even projects regulated at Tsinghua's institutional level are always based on the needs of national economic and social development.

This approach has been well recognized by Tsinghua's presidents. It is one of Tsinghua's longstanding traditions. According to the current President Gu Binglin,

With the strong support from our country, for ten years, Tsinghua has been developing fast. It is Tsinghua's important mission to accomplish the key projects designated by our country. It is also our best opportunity to promote cutting edge research and to train high quality talents (Yang 2008, p. 1).

Likewise Kang Kejun, the vice president in charge of research administration, has stated:

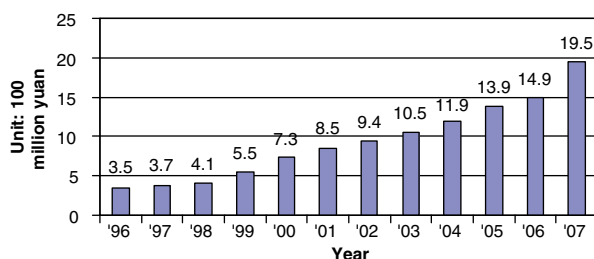
Our University pays close attention to national needs and the international cutting edge, and brings every positive factor into play to conduct basic research, tackles key technical problems, and synthesises various systems, so that the investment from our country would gain the best possible result (Yang 2008, p. 1).

Tsinghua has completed a range of world leading projects with great practical significance for China's national construction, including China's HTR-10 High Temperature Gas-Cooled Reactor, which was completed as a key project of the prestigious State 863 Plan and highly praised by researchers from many countries including leading MIT scholars working in exactly this area.

During 2002–2003, while discussions were being carried out at Tsinghua concerning future research in science and technology, China was drawing up its medium to long-term science and technology development plan, and formulating the policy on independent innovation. Tsinghua then took the opportunity to become a

Table 7.2 Increase of numbers of SCI, EI and ISTP articles, 1996–2005. (Sources: Gu 2008b, p. 3; Jin 2008)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
SCI	273	407	424	598	1,054	1,427	1,899	2,212	2,321	2,915	2,866
EI	511	829	576	1,324	1,418	1,449	2,094	2,584	2,299	3,242	3,317
ISTP	238	393	263	372	410	765	1,144	1,303	1,288	1,768	1,579

Fig. 7.1 Increase of research funds (Source: Gu 2008a; 2008b, p. 3)

part of the national innovation system, opening up new prospects for the University. Tsinghua is now the only Chinese higher education institution that has chaired one of the 16 assigned medium to long-term national key projects.

In the past 5 years, Tsinghua submitted 4,314 patent applications and 2,728 of them have been approved. From 2003 to 2006, its publications, including both domestic and international, increased by 20%. Its numbers of SCI publications and citations were increased by 85% and 135%, respectively, as shown by Table 7.2.

During 2003–2005, the per capita SCI and SSCI (Social Science Citation Index) publications of Tsinghua were 1.56. While this was far ahead of all other mainland Chinese universities, it was behind five universities in Hong Kong and three in Taiwan (Li 2007, p. 97). The total number of SCI and SSCI publications produced by the mainland universities has increased rapidly since the 1990s, reflecting the result of recent human and financial investments. The relatively low per capita output, however, demonstrates urgent need for more effective development.

With scientific and technological breakthroughs come financial resources. Tsinghua's research funding in 2007 was 900 million yuan more than that of 2003. Its internationally contracted research funds increased from 38.9 million yuan in 1997 to 235.6 million yuan in 2005, which in the latter year was 17% of the total contracted research funds of the University (Hu et al. 2006, p. 13). In 2006, Tsinghua received 222 million yuan in internationally contracted research funds (Gu 2008a).

In recent years there have been increasing numbers of Chinese scientists working as leaders of international research teams, with foreign researchers coming to work in China. Among the research outputs produced jointly by Chinese and foreign researchers, most of them have Chinese scholars as the first authors. Of the co-authored publications with US and Japanese researchers, 61.4 and 61.0%, respectively had Chinese first authors in 2006. Of the 18,846 internationally joint publications nationwide in 2006, 10,331 (54.8%) had Chinese first authors (Wu 2007). Within this national context, Tsinghua's achievement is evident. With the strengthening of

its research capacity, there have been corresponding changes in the way Tsinghua collaborates with its international partners. Previously international collaboration was mainly confined to personnel and information exchange, for example by sending Tsinghua researchers overseas to attend conferences and to participate in research projects led by foreign scholars. However, the number of international joint projects chaired by Tsinghua researchers increased from 93 in 1997 to 323 in 2005. Other changes have included: (1) a much broader range of areas of international collaboration, increasing from ten departments in 1996 to 32 in 2005; (2) a wider range of collaboration modes from previous personnel and information exchange to commissioned research, joint projects, joint research institutes, technology transfer and technical services; (3) rich contents of collaboration with increasingly large amount of research funds; and (4) a growth in the range of international partners, from 19 countries/regions in 1996 to 29 in 2005, mainly from renowned universities such as Harvard, MIT, Stanford, Oxford and Cambridge, and from companies including Intel, Toshiba, Siemens, Panasonic, Microsoft and Motorola (Hu et al. 2006, p. 14).

In order to encourage its members to publish internationally, especially in the journals indexed by SCI, SSCI, EI and ISTP, Tsinghua, like many other Chinese universities, requires its schools and/or departments to implement their own reward and punishment policies. For example, the biology department links the impact factors of the journals in which one publishes his/her articles to the timing of his/her award money (Wang et al. 2005, p. 137).

An overemphasis on performance in international publication data bases, especially the SCI publications, has created gaps between researchers from different disciplinary areas and even between those within the same schools/departments. This is because for several reasons, researchers in certain fields are more likely to produce such publications than researchers in others. This is indicated by Table 7.3. The requirement to publish in English also leads to disparities within those in the same departments/schools. Some are more favoured winners than others.

More obvious losers are the scholars from social sciences and the humanities. From 1997 to 2004, a total of 509 SSCI publications were produced by Chinese universities. Tsinghua contributed 109, second only to Peking University's 264 items (Cheng 2005). Within social sciences and the humanities, the disciplinary dispari-

Table 7.3 Rankings of SCI Publications by Tsinghua among Chinese Higher Education Institutions, 2002–2003. (Source: Wang et al. 2005, p. 138)

	2002	2003
Mathematics	1	1
Physics	1	1
Chemistry	5	5
Astronomy	–	–
Physiography	8	–
Biology	2	3
Medicine	–	–
Agriculture	–	–
Materials	1	1
Environmental	4	1

Table 7.4 Disciplinary distribution of SSCI publications by Tsinghua, 1997–2004. (Source: Cheng 2005, p. 38)

Discipline	Number of publications
Engineering	30
Management	19
Economics	16
Natural resources and protection	9
Mathematics	7
Urban studies	4
Education	3
International relations	3
Anthropology	2
Psychology	2
Regional studies	1
Public administration	1
Journalism	1
Law	1
Sociology	1

ties were also striking, with 42.8% of the total coming from economics, medicine and psychology. The distribution at Tsinghua is illustrated by Table 7.4:

Although seven out of Tsinghua's ten listed subjects are in social sciences and the humanities, the number of international publications in the social sciences and the humanities is a far cry from that in science and engineering. As shown by Table 7.5, Tsinghua's relative strength in social sciences and the humanities is in management. Compared with sciences and engineering, Tsinghua's social sciences and the humanities are especially weak measured by SSCI publications, just like the situation in other Chinese universities. When there is little visibility, the respect of international peers is an extravagant hope. While reasons for this are many, including historical factors, language restrictions and possible biases (Cheng 2005), the actual imbalance in Tsinghua's development, between social sciences on one hand and natural and technological sciences on the other, will affect its quest for world-class status in the long run.

Increasing the Effectiveness of Technology Transfer

Technology transfer refers to the process by which knowledge in the forms of understanding, information and innovations moves from a university to individuals or firms in the private and quasi-private sectors (Parker and Zilberman 1993). In a knowledge-based economy, technology plays a significant role in economic development. In the last two decades there has been increasing interest internationally in technology transfer from universities to industry (MacBryde 1997; Liyanage and Mitchell 1994; Mian 1994). The importance of technology in national economic development cannot be over emphasized. Universities are a major source of technological advancement (Liu and Jiang 2001).

Table 7.5 Some comparisons between MIT and Tsinghua, using selective indicators. (Source: Gu 2008b, p. 4)

Indicators	1995		2005		MIT	Tsinghua/MIT
	Tsinghua	MIT	Tsinghua	MIT		
Postgraduate to under-graduate students ratio	0.4:1	1.2:1	1.3:1	1.5:1		
Doctorates conferred	177	522	646	467		1:0.7
Percentage teachers with doctorates	19%	96%	57%	96%		1:1.7
University budget (billion USD)	0.54	13	4.4	20.4		1:4.6
Research funds (billion USD)	0.3	3.7	1.74	5.4		1:3.1
Number of SCI publications indexed	231	3,151	2,915	4,348		1:1.5
Number of SCI citations	330	10,423	7,184	1,3498		1:1.9
Number of EI publications	343	893	2,976	847		1:0.3
Number of patents	48	104	521	127		1:0.2

Technology transfer is relatively new in China, but has been developing rapidly. Previously, when China functioned on the basis of a planned economic system, knowledge and technology were not seen as merchandise. Research was isolated from the 'marketplace' or industry. Technology transfer from universities to industry was governed by vertical administration from the central government through industry ministries and regional governments. Universities received research tasks and funding from their ministerial governing bodies, to whom their research results were delivered, without autonomy in choosing research projects or handling the results.

Following the economic reforms initiated in late 1978, China has been moving from a planned to a market-oriented economic system. The administration of technology development and transfer has undergone various and dramatic reforms. Since the early 1980s, China has shifted its science and technology policy from the previous emphasis on basic and theoretical research to economic development, and has emphasized the transfer of the results of science and technology research into economic production and consumer industries. In 1996 China issued the "Law of Promoting Technology Transfer" and began to reward those who made great contributions to technology transfer. Projects 211 and 985 have further quickened the process of technology transfer to local economic sectors nationwide. Despite these developments, China's overall rate of turning research discoveries into production remains low. China completes over 20,000 large research projects each year and only 10% can be effectively applied to industry (Li and Hu 1998).

Nevertheless, as a major source of new technology, Chinese universities are becoming an active participant in regional economic development. This is especially the case for China's top universities, particularly those with strength in engineering. Tsinghua has seized this opportunity to strengthen its links with enterprises. It was the first university in China to build up science park in 1994 (Mei 2004). The focus of its science and technology research has become economic-effect oriented. It proactively encourages its academic units and staff members to take part in research and technology innovations sponsored by the government and industry.

Through technology transfer, Tsinghua has expanded its budget substantially, raised salaries for its staff, and enhanced its position in securing funding in national R&D projects and economic development. Unlike the situation in some universities which focus on academic value and conflict with enterprises that place higher emphasis on economic benefit (Corsten 1987), Tsinghua's status as China's best engineering university helps it win the key projects that demand innovations and breakthroughs. For example, a new oil extraction technique developed by Tsinghua has been successfully applied in a number of major oilfields. This has helped increase the annual output of crude oil in these fields by an average of 300,000 tonnes. Among the most prominent R&D projects undertaken by Tsinghua are the national South-to-North water diversion, the large-scale speed-up of Chinese railways, China's large aircraft program, the solution to Songhuaqing contamination, and the design of the mascot, torch modelling and venue of the 29th Olympiad (Gu 2008a).

Tsinghua has harvested many benefits from such activities. It has contributed significantly to China's development. It has also enhanced its international reputa-

tion, with more and more transnational companies such as P&G, Sun, NEC and Schlumberger setting up research institutes. Meanwhile, its teaching and research have benefited from the many new academic programmes and research areas and outputs that have resulted from the expansion of technology transfer activities (Gu 2004). Here Tsinghua's successful story, which has been recognized as the nation's best, is due to its unique position and conditions. It has high-quality research staff, with 36 fellows of the Chinese Academy of Science and 32 fellows of the Chinese Academy of Engineering, 1,201 full professors, 1,646 associate professors, 12,179 Masters students and 5,316 doctoral students. It has 183 laboratories, of which 13 are key national and 15 ministerial laboratories with first-class research facilities. As a premier recipient of national funding for major R&D projects and tasks, it completes an average of 1,500 research projects annually, often in collaboration with enterprises.

The University has employed certain specific approaches to technology transfer. First, it established a committee entitled the University-Industry Cooperation Committee of Tsinghua in July 1995 to conduct work in the area. Increasingly, large Chinese and foreign companies have become members of this committee, such as IBM, Siemens, Motorola, Hitachi and NEC. Tsinghua provides various services to the member companies including the dispatch of special liaison officers to the companies, the formation of liaison networks between Tsinghua and the companies, the circulation of R&D information and the collection of information on demand by member companies, the creation of R&D and training centres with the companies, the direct training of senior staff for the companies, and also training through other means such as information technology and distance learning. By August 2004, the University-Industry Cooperation Committee included 171 member companies, of which 138 were from China and 33 from overseas (Gu 2004, p. 56).

Second, Tsinghua transfers technology through collaboration with local governments. As the effect becomes increasingly obvious, this heightens the enthusiasm of local governments to collaborate with the top universities. Tsinghua, aware of this excellent opportunity to establish collaborative relationships, is always the best choice for local governments. By August 2004 the University had signed contracts with 22 provincial and municipal governments including Beijing, Guangdong and Hebei, and more than 60 cities such as Daqing, Changzhou and Shenzhen (Gu 2004, p. 56). These collaborations aim to provide information exchange, build up R&D risk investment foundations to deal with the problems of lack of mechanisms and risk capital for investment in technology transfer, and establish permanent physical technology transfer bases such as Beijing-Tsinghua University Industry Development Institute, Tsinghua Science Park (with Beijing municipality), Shenzhen-Tsinghua University Institute (with Shenzhen city council), Tsinghua (Miyun) High Science and Technology Industry Park (with Miyun county government in Beijing) and Yantze River Delta Tsinghua Development Institute.

Third, Tsinghua has spun off a number of highly successful companies. Its Tongfang Company, like the Founder Group of Peking University, is a symbol of China's high-tech development. Some international experience suggests that the spin-offs of university research institutes is the most common form of technology transfer.

For example, it was reported that by the late 1990s MIT graduates and faculty had spun-off 3,998 high-technology companies, which employed 1.1 million people and had annual world-wide sales of US\$ 232 billion (Rogers et al. 1999). By August 2004, Tsinghua had established 38 high technology companies in partnership with enterprises. The enterprises input capital, while Tsinghua invests in technology, and becomes a stakeholder by converting technology into capital. This approach solves problems of benefit sharing and intellectual property rights. By 2003, the total assets of Tsinghua's scientific and technological industry had reached 20,400 million yuan. In 2003, the floating capital was 15,200 million yuan, and Tsinghua paid 540 million yuan tax (Gu 2004, p. 56).

Looking into the Future

One of the striking features of the Chinese situation is the strong commitment by both institutions and governments to the quest for world-class universities, something rarely found in most Western societies. The Chinese government works closely with universities with supportive policies and impressive investment to create a win-win situation for both sides. A recent study has found that members at China's six major universities including Tsinghua are confident (90.5%) and satisfied with (90.8%) their institutional strategic goals (Chen and Li 2007). This is important not only in a financial sense. Perhaps more importantly, it leads to high morale and even enthusiasm among those working at the front line.

China's recent efforts are paying off. China beats India, its close neighbour and strongest rival within the camp of developing countries, in almost every international ranking. According to the Academic Ranking of World Universities conducted by the Graduate School of Education at Shanghai Jiao Tong University (2008), China had six universities in the top 300 in the 2008 rankings, and two in the 2007 rankings. China features 18 times in the top 500 in the 2008 rankings, eight times in the 2007 rankings. In 2006, China produced 71,000 SCI publications. Between the 5 years 1997–2001 and the 5 years 2003–2007, China increased its SCI publications by 170.6%. Chinese universities are the principal force of all these spectacular achievements. Tsinghua's contribution is especially substantial: its numbers of EI and ISTP publications in 2006 and its SCI publications during 1997–2006 were ranked first among all Chinese universities (Wu 2007).

China's effort to create world-class universities features the designation of a special role for a handful of top universities, together with focused investment in them. Here the role of the state is decisive. This is not simply because of the characteristics of Chinese administration. It also replicates the international tide, especially since the 1990s. Instead of experiencing the enhancement of a privileged autonomy, as a social institution the university is becoming a part of an economic programme serving national interests under the state's control with less self-determining power than before (Maassen and van Vught 1994; Tunnermann

1996; Green and Hayward 1997). This notion of the university has been crucial to the upward mobility of Chinese universities within the pecking order of world universities. The state wants the universities to enhance China's global economic competitiveness (Husen 1994).

Tsinghua faces a dilemma here. Its recent development has resulted from its close partnerships with governments in China. Instead of separating from the state, Tsinghua is an integrated part of the national modernization project. In this sense, it has carried forward the Chinese tradition of higher education (Gao 1992), in which autonomy and academic freedom were simply not an issue (Hayhoe 1996). On the other hand, Tsinghua is aiming at world-class status. Academic freedom and institutional autonomy are defining features of world class universities. While Tsinghua wants to succeed in the intense competition with its domestic and international peers, how much does the intertwining of academia and officialdom—long been perceived as a threat to university autonomy (Berdahl et al. 1971) and criticized by both Western (de Moor 1993; Ordorika 2003) and Chinese (Cai 1986) scholars alike—allow Tsinghua to manoeuvre?

Tsinghua has greatly benefited from the Tsinghua phenomenon (Pan 2007); that is, the political affiliation between Tsinghua's senior administrators, government officials and national leaders. This has been an important factor in helping Tsinghua successfully attain some level of university autonomy, even though the affiliation inevitably invites state political influence into the University. The extent to which the double-edged sword can maximize the function of one edge, while keeps that of the other edge to the minimum, is highly doubtful. The question here is how long the honeymoon enjoyed by Tsinghua and the government can last. While the strategic coordination between the two sides works well in science and technology, it is more likely to be problematic in the development of social sciences and the humanities; which, however, are important in determining Tsinghua's chance of success in the quest for world-class status.

As this chapter was being completed, the 29th Olympics had just been declared closed. The Olympics were remarkably successful. This is another indicator of China's further integration into the global community, a process in which universities have been playing a significant role. Internationalization is currently the most important theme for China and for Chinese universities. Just as in China's huge success in staging the Olympic Games, with its rules deeply rooted in Western cultures, China is determined to become a successful player in the global cultural, economic and political arenas. The process starts with learning the rules, but does not end with winning gold medals. As the largest country in the world and one of the oldest civilizations, one that has continued for thousands of years, China has much to contribute to the international community. Its flagship universities are irreplaceable in this aspect. What they are experiencing are parts of the bumpy path towards their ultimate goal of rejuvenating the Chinese civilization. By so doing, they contribute the Chinese idea of the university to the world community of higher education.

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Chapter 8

Negotiating Globalization: The Royal University of Phnom Penh, Cambodia

David Howes and David Ford

Introduction

Less than 30 years ago, at the time Vietnam occupied Cambodia and defeated the Khmer Rouge in 1979, it was estimated that there were “no more than 300 persons who had post-secondary education remaining in Cambodia; and most of those left the country as soon as they could” (Sloper 1999, p. 7). The buildings of the Royal University of Phnom Penh (RUPP, then Phnom Penh University) were derelict, having been looted and abandoned for more than 4 years.

In the space of one generation, higher education is now again widely available in Cambodia. There are currently 13 public and more than 60 private institutions of higher education. RUPP has 10,000 students and over 300 faculty members. A Law for Higher Education was passed in 2002, establishing a legal basis and regulatory framework for the system. The Accreditation Committee for Cambodia was established in 2003 with responsibility for assuring the quality of higher education institutions. In 2006 the Cambodian Ministry of Education, Youth and Sport (MoEYS) released its second 4-year Education Strategy Plan (2006–2010). This plan has set ambitious targets, including the doubling of overall enrolment in higher education institutions from 48,845 in 2004–2005 to 90,000 by 2010. This target includes the even more ambitious sub-target of 40% female enrolment (MoEYS 2005, p. 12). Such is the current rate of growth of higher education, that it is likely these targets have already been surpassed (Innes-Brown 2006). By any measure, this is an impressive achievement of resilience and re-building.

Inevitably, the process of re-building has been neither simple nor straightforward. The task, which would have been complex under any circumstances, has been profoundly complicated because it has occurred simultaneously with the arrival of new forms of globalization and the consequent impacts both on Cambodian society as a whole and specifically the higher education sector.

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We take as our definition of globalization that provided by Dudley (1998, p. 22): “Globalization is a narrative of incorporation into a world system”. For us, this is a more useful definition than the more common, narrow focus on the integration of economic systems, in part because it allows an acknowledgement of what Cambodia’s history reveals all too clearly, that globalization is not a new or exclusively contemporary phenomenon. Cambodia’s history can be written as a history of colonization, in various forms by different powers at different times, and colonization is of course one form or expression of globalization.

The purpose of this chapter is not to engage in a debate about whether the higher education sector in Cambodia has benefited or not from the impacts of globalization. Such debates have been well-covered elsewhere by those who recommend ‘embracing openness’ to the forces of globalization as the best strategy for higher education institutions in developing countries. They claim that increased trade due to economies of scale in the vastly expanded global marketplace, and the competition it creates, lead to benefits for all in terms of increased global prosperity (Yusuf 2001, p. 3). Others have argued persuasively that it is a fallacy to assume that the new paradigm of market competition will generate improvements in the quality of educational services (Marginson 1997, p. 46) and that in fact globalization brings with it considerable risks to higher education in developing countries such as Cambodia, including marginalization, increasing inequality, increasing commercialization at the expense of public service and national needs subjugated to global goals and profit (Altbach 2001; Mohamedbhai 2002).

Our intent is not to join this debate but instead to reflect on how one institution, the RUPP, has negotiated the impact of globalization. We are interested in examining how things have come to be rather than assuming this is how they inevitably are, and to focus on the incorporation as distinct from integration of RUPP into a ‘world system’, not simply the commercialization of many of its activities. We distinguish incorporation as a process of inclusion where a distinctive identity and practice are maintained from integration which involves a greater degree of subsumption of distinctiveness.

This is not, however, a conventional case study in terms of providing a chronological account of the post-conflict establishment and development of RUPP nor is it conventional in its analysis of the impact of globalization.

Rather, following a brief contextual account, we use three ‘descriptive and analytical vignettes’ (Gale 2001, p. 160) to describe, explore and analyse recent developments at RUPP. For the argument of this study, as the analysis of the vignettes both reveals and confirms, is not that of other studies in this field that tend, in varying degrees, to present communities in developing countries as passive flotsam blown by the neo-colonial forces of globalization to places they have not chosen and would not choose of their own accord (for example, see Tabulawa 2003). Rather, we follow Lingard et al (2005) in applying metaphors first introduced to the field of sociology by the French sociologist Pierre Bourdieu, that of the ‘game’ and the ‘field’, to the analysis of education development at RUPP.¹ We extend the work

¹ Terminology in development studies is highly problematic, including the use of the term ‘development’. We, like many others, would much prefer to use an alternative to the common terms

of Lingard et al. through the locale of our study. That work, like earlier work in the field of policy sociology by Ball and others, has largely focussed on the analysis of education policy in developed countries. Here, we apply the same tools of analysis to the different context of a developing country. This analysis suggests that staff and officials at RUPP are active agents in negotiating the globalization game to their own advantage and the advantage of their institution, at least within the limits of what is contextually possible.

We take as our framework for analysis the higher education sector in Cambodia as one example of what Bourdieu terms a ‘social field’:

A field is a structured social place.... It contains people who dominate and people who are dominated. Constant, permanent relationships of inequality operate inside this space, which at the same time becomes a space in which the various actors struggle for the transformation or preservation of the field. All the individuals in this universe bring to the competition all the (relative) power at their disposal. It is this power that defines their position in the field and, as a result, their strategies.

(Bourdieu 1998, pp. 40–41)

As Lingard et al. point out, however, the ‘social field’ of education policy “should be recognized to have more than just a national character”. Now it is a “field with multiple levels, one of which includes a global character under the increasing influence of international agencies such as the World Bank, OECD and UNESCO” (Lingard et al. 2005, p. 3). A Bourdieuan concept of a ‘field’ is, therefore, a metaphor for a “social rather than geographical space” (Lingard et al. 2005 p. 3).

Lingard et al. also argue that “under conditions of globalization, the autonomy of the educational policy field has been somewhat reduced” (2005, p. 3). This study of RUPP will illustrate how the multiple and allied fields of new governance policy, language policy and aid and development policy have all generated ‘cross-field effects’ that have impacted on the educational policy field at RUPP.

‘developed’ and ‘developing’ when categorizing countries. As far back as 1955, Niculescu (1955, p. 546) pointed out one of the difficulties associated with these terms:

The present meaning of “under-developed” has an historical bias: development seems to be understood as *from* some common level defined in terms of the Western industrial and agrarian revolution ... Though this is a perfectly legitimate historical approach, it is not only useless but can also be very confusing when the attention is turned from the past accomplishments to the future.

A second difficulty with these terms is that they position one group of countries—the economically powerful—as a desirable end-point with no allowance for any critique of the possibly less-desirable characteristics of those societies. Conversely, the other group—the economically peripheral—are positioned as having as their only desirable goal the replication of the characteristics of the ‘developed’ group with no possibility of identifying characteristics of their own society that may be beneficial to the ‘developed’ societies. Alternate categorizations, however, such as ‘majority’ world or ‘two-thirds world’ are static categories that may well be shortly out of date with the continued growth in China and India. In the absence of alternatives, we continue, reluctantly, to follow Vulliamy et al. (1990) and use the terms ‘developed’ and “developing” as a “shorthand way of describing those countries which are characterized by relatively low levels of per capital income, limited industrialization and restricted infrastructure” (p. 2).

Within this framework we consider the actions of individuals, building on Bourdieu's metaphor of the game, especially the 'feel for the game', which he defines as "a mastery acquired by experience of the game" (Bourdieu 1990, p. 61). While Bourdieu's focus was on the dispositions that are the result of inculcation into ways of behaving from childhood, we extend the meaning here as a useful way of interpreting the action of individuals as they develop a feel for the new rules of the game that have been introduced by globalization.

The data source for this study is the experience of both writers as participants in the education sector in Cambodia for extended periods. David Ford has lived and worked in Cambodia since 1999, and continues to do so. He works as an adviser at the RUPP. David Howes lived and worked in Cambodia from 2003–2006 as an adviser to the Cambodian MoEYS.

In this, we follow the work of Lewin (1990 p. 125)

I used observation techniques extensively. [These were] relatively unstructured taking advantage of opportunities as they presented themselves. By 'being there' in [an institution] for a period I could learn a lot by sharing breaks, listening to staff conversation, looking at notices, attending staff meetings and so on.

It is important to note, however, that ours are not structured or participant observations in the sense that those terms are used in the fields of anthropology. Rather, they are unstructured observations based on our recollections, tested variously against both notes made at the time and the accounts of others present at the events and interactions observed. We do not regard these observations as 'naively positivist' (Lingard et al. 2005, p. 6). We are aware of the role our presence may have had on the actual events and interactions. We are aware also that our reception and subsequent interpretation is profoundly influenced by our own predispositions and histories.

With these caveats, we provide not a structured, ordered series of observation but rather three vignettes, that is, 'snapshots' of particular scenes and interactions at particular moments in time that are based on our own memories as both participants in and observers of the events described, and then bring to these vignettes our analysis and interpretation.

First, however, it is important to provide some context through a brief account of the history of RUPP and current socio-economic conditions in Cambodia.

Brief History of the RUPP

RUPP had an illustrious beginning in 1960 during the golden era of post independence. At that time it was an elite Francophone institution whose graduates were recognized by universities in France. But it gradually declined during the political turmoil that led to the Khmer Rouge regime in 1975–1978 when the whole country was closed to the outside world and an estimated 75% of lecturers and 95% of students were killed or left to resettle in other countries.

After the fall of the Khmer Rouge in 1979, during the next 10 years under the Soviet-backed, pro-Vietnamese People's Republic of Kampuchea (PRK), higher education was restructured and different departments were administered by related ministries; for example, the medical sciences by the Ministry of Health, agriculture by the Ministry of Agriculture and so on. This structure still exists and RUPP is still controlled centrally by the MoEYS. Due partly to the subsequent lack of international recognition by the international community and consequent lack of access to aid funding, the technical assistance received by RUPP came entirely from Vietnamese and Soviet experts. The language of instruction was Vietnamese or Russian and the study of French and English was banned. Some staff were sent to other communist countries including East Germany, Russia, Vietnam, Cuba and Czechoslovakia for post-graduate training and were required to learn the language of those countries.

The collapse of the Soviet Union and the Doi Moi programme of economic restructuring in Vietnam in the late 1980s led to the decline of Soviet and Vietnamese support for Cambodia and subsequent intervention of the UN Transitional Authority in Cambodia (UNTAC), which facilitated the elections in 1993. This involved more than 20,000 peace-keeping troops from a variety of countries who spread to all corners of the country and introduced many neo-liberal ideas and values. The need for English to communicate with foreigners stems from this time and a small industry has developed in response.

Since then a gradual process of renovation and rebuilding has been ongoing, often funded and driven by foreign aid and foreign technical assistance. In the period 1994–1999, for example, donor support was almost four-fifths of overall higher education spending (SEAMEO-INNOTECH 2003). RUPP has been forced to become more commercial for simple survival. Fee-paying students now outnumber scholarship students on the basis of a ratio of 3 to 1 (see Table 8.1).

Although enrolment in higher education has increased rapidly, higher education enrolments still only represent 3% of the age cohort (see Table 8.1).

Table 8.1 Royal University of Phnom Penh student profile. (Source: RUPP Handbook, 2007–2011)

Faculty	Students			
	Scholarship-based		Fee paying	
	Total	Female	Total	Female
<i>Undergraduate students</i>				
Institute of Foreign Languages	525	276	2,326	976
Faculty of Science	768	294	2,920	346
Faculty of Social Science and Humanities	1,015	440	1,328	541
<i>Total</i>	<i>2,308</i>	<i>1,010</i>	<i>6,574</i>	<i>1,863</i>
<i>Graduate students</i>			258	60

RUPP's staff are civil servants whose salary, although increasing every year, does not meet the cost of living. A typical base salary for a young lecturer with a Bachelors degree is about \$ 120 per month.² The supplement to base salary for a Masters graduate is a mere \$ 0.50 per month, while that for a PhD graduate is an increase of \$ 1.50 per month.

A key current imperative at RUPP is to upgrade staff qualifications. As a result of both the death of so many faculty and students and the decimation of the entire education system and infrastructure during the Khmer Rouge regime, less than half of the current teaching staff hold post-graduate degrees (RUPP 2007).

Socio-Economic Context

While current average per capita GDP in Cambodia is one of the lowest in the region at only \$ 571, the annual growth rate of the economy in 2007 was 9.5% (US Department of State 2008). Cambodia is now generally characterized as a country with a positive macroeconomic outlook due to the young, cheap workforce, rising productivity, stable politics and the second fastest GDP growth in the region (Yeo 2008).

This produces a predictable result: There are many young people, often from very poor backgrounds, aware of the increasing opportunities that the growing national economy presents for material gain, who often see education as critical for gaining entry to these opportunities, thus creating a huge demand. This is especially the case in terms of employment in the service industry, which now makes up 43% of GDP. Critical to this industry is the capacity to provide translation and interpretation, and so foreign language speakers are much in demand, primarily English, but increasingly Japanese, Korean, Mandarin and European languages to meet the needs of the increasing number of tourists who visit Cambodia.³

Also in demand are the skills of business. Foreign direct investment (FDI) into Cambodia has increased 12-fold since 2004. While the business operating environment in Cambodia is not yet effectively governed by regulatory frameworks, legal, accounting and business management skills are increasingly sought.

This is especially true of the skills in demand from one of the largest employment sectors in Cambodia, the aid and development organizations.⁴ Employment

² For the purpose of comparison, it was recently estimated that the total income needed for a 'middle class' lifestyle in Phnom Penh—that, is, a small apartment with electricity, a television, computer and car for a family of two adults and two children—was about \$ 250 per month.

³ Cambodia's tourism industry continued to grow in 2008, with visitor arrivals for the period January to August 2008 reported as 1,398,557, a 10.1% increase compared to the same period in 2007 (Ministry of Tourism 2008)

⁴ There are currently 418 such organizations listed in the Cambodian Yellow Pages. By contrast, there are only 299 listings of Bars and Pubs and 242 listings for the Banking and Finance sector.

in the service of one of the numerous aid and development organizations is highly sought after by Cambodian nationals as the pay and conditions are far in excess of rates paid for comparable positions in the government sector and are at least equivalent to if not more than rates paid in the private sector.⁵ Skills in particular demand include translation and interpretation, financial and office administration and project management.

Despite the growth in FDI, development funding continues to be a major contributor to Cambodia's economy. Approximately half the central government budget is comprised of donor assistance. Yet despite the billions of dollars provided in aid and development funding over the past two decades, Cambodia continues to be ranked in the lowest quartile of the United Nations Human Development Index (HDI) and to be one of the lowest ranked countries in the world on key performance indicators in the health and education sectors.

The growth in FDI and tourism and the proliferation of aid and development organizations in Cambodia has inevitably resulted in common manifestations of globalization. The WTO and The World Bank largely determine national macro-economic policy. English is now the dominant language of business. The decimal marker is now the point rather than the traditional comma.

Cultural hybridization is apparent especially amongst Cambodian youth who are absorbing external ideas not only from their new places of employment but downloads from the Internet, fashions on cable television, chatting and blogging online (called Clogging in Cambodia), celebrations of Valentine's Day and Christmas and eating hamburgers or pizzas in any of the rapidly growing number of fast food outlets.⁶ At this stage, these developments involve and engage only a small number of Cambodia's new and emerging middle class in the major urban centres, but they include the vast majority of university students.

Despite this, Cambodia remains relatively isolated from the rest of the world. The staff and students of RUPP are on the periphery of the global knowledge systems. The growth of private sector higher institutions that attempt to attract the best and brightest of Cambodian students away from their national universities only accelerates that peripheralization. The connection of Cambodian institutions such as RUPP to the global ocean of knowledge is a very small stream that is both slow and expensive to navigate. This is true in both an actual as well as figurative sense. Cambodia has one of the lowest rates of Internet connectivity with one of the highest pricing structures to access such connectivity (See Table 8.2).

⁵ Although the gap between salaries paid to 'international' and 'national' consultants remains obscene—'international' consultants are often paid USD \$ 10,000 per month while often highly qualified 'national' consultants, working alongside their international counterpart, can expect to earn USD \$ 1,000 per month.

⁶ It is often said that the true measure of secure economic growth is the opening of one or both of the two major international fast-food franchises, Macdonalds and Kentucky Fried Chicken. On this measure, Cambodia's economy has reached the tipping point—at the time of writing, the first Kentucky Fried Chicken outlet had just opened in Phnom Penh in the first half of 2008.

Table 8.2 Connectivity in the Asia-Pacific Region. (Source: <http://www.unescap.org/icstd/events/Info-Society-Stats-Workshop-2007/Table-Connectivity-in-AP> (accessed January 19, 2008))

	Asia-Pacific country mean	Cambodia	Vietnam	Thailand	Malaysia	Australia
Connection index ^a	47	6	36	50	94	148
Internet cost/revenue ^b	30	113	24	3.4	2.0	1.0
Internet connectivity ^c	19	0.3	17	13	44	75
websites ^d	1,989	32	785	764	2,247	14,000+

a. Sum of Internet penetration proportion (%) + (mean of fixed and mobile users proportion (%))—expected range 0–200

b. Cost as a proportion (%) of average income, for 20 hours monthly internet access (ITU 2007. Measuring the Information Society)

c. Proportion (%) of population; from www.itu.int (2006 figures available 2007)

d. Total number of websites listed by Ranking.com. Sampled November, 2007

It is this environment that provides the cultural and socio-economic context for this study of how the RUPP has negotiated and continues to negotiate the impact of globalization. We turn now to our three vignettes and associated reflections and analyses.

Academic Traditions—Unshared Assumptions

One of the authors was asked by RUPP to assist with the supervision of a research student who had proposed the topic, ‘To analyse breast milk’. When it was pointed out that this would not constitute original research, given the plethora of already-published research on this very subject, it became evident that the topic had been proposed by a Cambodian colleague. It was suggested that the proposed topic could cover new ground by, for example, comparing samples of breast milk from different provinces, or rural/urban backgrounds or different occupations. The response to this suggestion was, ‘How can he do that? We don’t know the right answer’.

It is hard to imagine a clearer instance of the different assumptions that academic staff from a Western/liberal tradition and Cambodian academics typically bring to their work. These are differences shaped by experiences of school education that both reflect and reinforce profound differences that in turn are the product of and reproduce different epistemological understandings. It reflects an understanding of the teaching and learning curriculum that Popkewitz (2001) describes in these terms:

...a particular, historically formed knowledge that inscribes rules and standards by which we ‘reason’ about the world and our ‘self’ as a productive member of that world.... Curriculum is a disciplining technology that directs how the individual is to act, feel, talk and ‘see’ the world and ‘self’. (Popkewitz 2001, p. 152)

Cambodian culture is shaped by a combination of Buddhist and Hindu beliefs and Confucian heritage (Biggs 1996) that has become intertwined with a social structure based primarily on a system of patronage. The respect owed to a patron, combined with the respect for parents and elders that is a fundamental tenet of this world view, lead to a view of personal autonomy that is expressed in this ancient Khmer proverb:

Don't reject the crooked road and don't take the straight one; instead, take the road travelled by the ancestors. (Khmer proverb cited in Fisher-Nguyen 1994 p. 99).

This has led to particular forms of teaching and learning. The word often used in Khmer for 'learning' is *rien sote*, 'to recite'. The concept of a good student is one who learns the knowledge already acquired by his or her teacher. The recent concept of constructivist learning, with its emphasis on the autonomy of the individual and the individual nature of learning, is anathema to a culture that sees more value in collective, proven wisdom than individual, new ideas. As Ayres (2000, p. 14) points out, nowhere is this reflected more clearly than in one of the verses from the *Chbab*, the normative Cambodian poems:

To know by oneself
Is like being lost
In the middle of the forest,
Or like a blind man
Left to himself, who sets out on his way
With no one to take his hand.
And when he looks for the path
He never finds it,
But wanders into the forest instead
Because he has learned things by himself
With no one to take his hand.

This understanding of learning is reflected in an understanding that a university research thesis should involve not original research but rather the reproduction of a complex procedure that achieves the same result as that previously produced by other competent researchers. This replication will duly show that the candidate has demonstrated the skills required of a competent researcher. The more complex and difficult the procedure that is reproduced and that gets an accurate result, the higher the quality of the thesis.

Despite this unreceptive environment, a succession of visiting lecturers and consultants continue to attempt to introduce 'new' models of effective teaching, learning and research informed by participatory, constructivist models of learning, the role of the teacher as a learning facilitator and research as knowledge creation.

If we treat these concepts as types of 'texts', Bourdieu's observation becomes illuminating:

The fact that texts circulate without their context, that... they don't bring with them the field of production of which they are a product, and the fact that recipients, who are themselves in a different field of production, re-interpret the texts in accordance with the structure of the field of reception, are facts that generate some formidable misunderstandings and that can have good or bad consequences. (cited in Lingard et al. 2005, p. 9)

One of the most notable areas of misunderstanding that is produced is that of assessment, particularly the different understandings of plagiarism, and the liberal/Western notion that the most meritorious of academic virtues is not replication but originality. For many Cambodians, this foreign insistence on individual responses, and the associated absolute prohibition on plagiarism, when taken out of the ‘field of production of which they are a product’, makes no sense and in fact runs counter to what is most valued in academic learning, as evidenced by the fact that RUPP as an institution has no explicit policy on plagiarism.

Another is the recently introduced Masters courses which include an emphasis on critical thinking. In value systems where direct communication is favoured, loss of face not feared, and a distinction made between criticism of an idea and criticism of a proponent of an idea, the process of ‘critical thinking’ is assumed to be of value. But when the traditional means of expressing disagreement is silent non-cooperation, and loss of face (and causing it) is to be avoided at all cost, then ‘critical thinking’ is often perceived as negative, impolite and unacceptable. Children are taught from an early age to respect and not question authority. Foreign visitors to RUPP often comment on the perceived lack of critical thinking skills amongst students, whereas Cambodian students increasingly express concern about lecturers who they perceive as expressing and encouraging disrespect for authority.

Why, then, are these largely Western notions of effective teaching, learning and research being introduced at RUPP in the context of contrary local traditions? One possible reason is what might be termed a lack of a national self-confidence and consequent rapid and frequent adoption of anything ‘foreign’ as inevitably ‘better’. Cambodia is, of course, not unique in this regard. As Steiner-Khamsi points out (2004, p. 203), in many countries “an imaginary international community (‘international standards’)...is evoked as a source of external authority for implementing reforms”. Spreen makes the same observation in relation to recent educational reform in South Africa:

foreign models and ideas are circulated and reviewed...often, their international status alone lends them credibility and authority. (Spreen 2004, p. 104)

The absence of an entire generation of academics perhaps makes Cambodia particularly vulnerable to this kind of approach because it is not yet possible for the consideration and adoption of new approaches to be mediated by experienced national academics. New approaches are therefore seemingly adopted uncritically and without apparent consideration of the context in which they will be received by students who come with a particular tradition of learning inculcated through their experience of schooling.

Another possible reason is that the adoption of such approaches is perceived to be an action likely to gain the favour of donor organizations and thus lead to the provision of funding grants. This leads us to our second vignette.

Playing the Game—The Introduction of ‘Strategic Planning’

In February 2008 a committee was formed to develop the first strategic plan for RUPP. At the table were the Rector, Vice Rector, Dean of Science, Dean of Social Science, the Head of English Department representing the Institute of Foreign Languages, the Head of the Quality Assurance Unit and one of the present authors. A visiting Fulbright Scholar from the United States, who had extensive planning experience at the institutional level, was invited to facilitate and advise the process. The meeting was conducted mainly in English, but the Cambodian participants spoke in Khmer in side discussions. The new vision mission and goals were presented, in Khmer, to the RUPP faculty in a full staff meeting which was the first at which all had been invited since the reopening of the institution in 1980. Following the meeting departmental leadership teams were expected to make their own strategic plans following a regional model from the AUN (ASEAN University Network).

The use of corporate terminology such as ‘vision’ and ‘mission statement’ to define the direction of a university is a recent construct following the increasing importation of both the language and values from corporate management. Such values are, however, based on fundamental assumptions about the organization of society that are based on a regulatory rather than relational framework. Why, then, is strategic planning that follows neo-liberal instrumentalist processes occurring now at RUPP? Why, in spite of already having a local style of organization and being in an environment where making plans is extremely difficult, is a foreign model of strategic planning being adopted?

There is no single answer. Instead, this illustrates Spreen’s view that

... [educational] policies are not merely the products of rational, analytical decision making; instead they are part of an inherently political process affected by interests, events, local priorities and understandings, and a host of financial and other constraints. (Spreen 2004, p. 102)

The phenomenon of the ‘borrowing’ and adaptation of policies, specifically in the education sector, has been the subject of considerable recent research, most notably by scholars such as Steiner-Khamsi (2004). Ochs and Phillips (2004, p. 9), for example, propose a ‘structural typology’ to map out the processes involved in what they term ‘cross-national attraction’. They propose four stages:

- Cross-national attraction
- Decision
- Implementation
- Internalization/indigenization

‘Cross-national attraction’ they define as both ‘impulses’, that is, domestic imperatives that lead to a search for solutions from policy settings in other jurisdictions, and ‘externalising potential’, that is, the identification of policies that will be transferable from one context to another.

Our interest is to explore, through this vignette, elements of this cycle as they are evident in the current experience of RUPP. Our exploration suggests that, while each of Ochs and Phillips' elements are discernible in the introduction of strategic planning at RUPP, it is not as neatly as sequential process as their typology suggests.

Arguably the key driver that accelerated the 'cross-national' attraction for strategic planning at RUPP was the prospect of a visit by a World Bank team in March 2008, as part of the planning and negotiation of a possible World Bank grant of \$ 20 million to support the higher education sector in Cambodia, including RUPP (the possibility of such a grant had arisen more than 5 years previously, but had disappeared when the MoEYS and the World Bank were unable to agree on a regulatory framework). The importance of such a grant becomes clear in the context of the planned 2009 MoEYS budget which has allocated total recurrent annual funding for RUPP of \$ 300,000.

The prospect of a World Bank grant is, therefore, of enormous significance to staff at RUPP, signalling as it does, amongst other things, the possibility of significant pay increases through salary supplementation by participation in a range of project activities funded by the Bank.

A general precondition of Bank grants, however, is the development of an approved strategic and financial plan with associated objectives, milestones and deliverables that set out how the grant is to be used. Little wonder, then, that enthusiasm for the development of strategic planning has rapidly gathered momentum.

A more difficult task, however, is to seek to identify the non-financial drivers that led to the move toward strategic planning *before* the World Bank visit.

One may be the increasing number of Cambodian staff at RUPP who have studied and/or worked overseas in settings where strategic planning is the norm and who have internalized and normalized the expectation that institutions will form and develop strategic plans. These individuals return with an expectation that RUPP should develop a similar management model. Certainly, in relation to the introduction of strategic planning at RUPP, the claim that this would help move RUPP in a "modern, effective, and internationally competitive direction" (Spren 2004, p. 108) was often invoked. By association, individuals who were able to speak with experience in terms of working in international environments where similar reforms have been implemented acquired a particular status and authority, which itself in turn became a driver for the further advocacy of such reforms.

A second, however, is perhaps a precursor to Ochs and Phillips' stage of indigenization. That is, Cambodian staff read the adoption of a strategic planning framework through the lens of Khmer culture and see how it can be shaped to fit this way of being. Here, the role of leaders is to provide moral direction and state what 'should be correct', but without any expectation that the direction will necessarily be followed. Examples abound of new laws and rules that have been announced publicly which have then been almost completely ignored. This can explain why Cambodian leaders often do not feel the need to consult with those who might be responsible for implementation of goals which is different to rule-based management in which consultation is a prerequisite and management usually accept responsibility for implementing goals and enforcing rules. The result is that Cambodian leader-

ship is freed from the practicalities of implementation and so can easily create very moral, politically correct, idealistic goals which may not necessarily be achievable. To an outside observer, this may appear disingenuous but, in a context that values stability and harmony, to ‘insiders’ it is both prudent and appropriate.

It is, however, this apparent, at least to foreign eyes, disconnect between the presentation of a particular perspective that is designed for outside consumption and its actual implementation that creates what seems to so many outsiders to be the shadow play of Cambodian public life.

Despite this, at the time of writing, the strategic planning process is still underway. Many departments are engaged in the process of creating their own strategic plans for the first time. Although visions, missions, goals and action plans may be largely foreign concepts, the fact that these important policies have been presented in Khmer to all faculty members indicates their growing acceptance at the local level. In one of the writer’s opinion, there has been evident a sense of pride and satisfaction with the results of the planning meetings, both because the outcomes represent a pleasingly harmonious consensus of opinion after long discussion, and also at least partly because such plans are taken as a sign that RUPP is beginning to wear the ‘uniform’ of the global club of universities.

We turn now to our final vignette, one which illustrates in a different context the importance given to the preservation of harmony and face.

Language and Learning—Lost in Translation

Cambodian students are reliant on textbooks in English since texts in Khmer, especially on technical subjects, are simply not available. In order to assist them, in 2003 the Chemistry Department at RUPP undertook to prepare an English-Khmer dictionary of scientific terms. The initial translation from English to Khmer was done by younger members of staff. They tended to translate technical terms by either transliterating from English or translating into equivalent Khmer words. Older members of staff however, who had some education prior the Khmer Rouge, had studied in French and were used to using French technical terms transliterated into Khmer. Some senior staff members had in fact already helped to translate the textbooks used in Cambodian high schools and so felt they had staked their claim already to the use of French technical terms. But in Cambodia’s very hierarchical society, age and seniority are highly valued and to change an earlier translation would have implied that the national text books and their authors were wrong, which would have meant not only loss of face but also disrespect to some quite senior members of the university. The compromise reached was that technical terms that had already been translated or transliterated from French were deemed to have become Khmer already and were retained, but new technical terms were either translated or transliterated from English.

The art form of the management by Cambodians of both the old colonial power of France and the new colonial power of global commerce that uses English as its medium of communication is here clearly apparent.

What is also apparent is the intimate connection between language and the cultural values of the society from which it has arisen. Khmer is an old and, at least grammatically, relatively simple language without verb tenses or plural forms of nouns or names for modern objects. But its vocabulary for expressing relationships, status and respect is far more extensive than either French or English. For example, the personal pronoun ‘you’ in English translates into 14 different Khmer words dependent on the relative age, sex and status of the speakers, and these are multiplied if the subject is a Buddhist monk or member of the Royal family. Neither English nor French is able to express the politeness required in Cambodia’s hierarchical society.

This story is, however, but one recent example of the impact of the introduction to Cambodia of foreign languages through a process of imposition or requirement over the last half century. Some Cambodian faculty at RUPP have had to learn a staggering variety of other languages throughout their lives. Older lecturers who studied before the Khmer Rouge regime (1975–1979) studied in French. If they survived, they were then required to learn Vietnamese to study at university during the Soviet-backed, pro-Vietnamese People’s Republic of Kampuchea. It was during this time that Cambodian students were sent overseas to other socialist countries for post graduate study which required first having to learn the local language of the host country. Some faculty can speak German, Russian, Czech and Spanish as a result.

This expectation of operating in multiple languages still evident in a speech given by the current Prime Minister Hun Sen as late as 2001:

To become competitive in the future within the context of ASEAN and globalization we should promote English as the second or working language of Cambodia, while Khmer language should always be Cambodia’s official language. In general, I support the idea that every Cambodian should know at least four languages (Khmer, English, French and a language of one of the countries of East Asia). (Hun Sen 2001, cited in Prak Polla 2002)

The need for English was recognized early on. RUPP was quick to respond and requested foreign technical assistance in 1991 to retrain former teachers of Vietnamese and Russian to teach English. At the same time the French government provided generous funding for a parallel curriculum taught in French, the *Filière Franco-phonie*, which continued until its demise in 2004 when student numbers declined despite the fact that the French embassy provided funding as an incentive both for students to learn and lecturers to teach in French. This provision of incentives has been a characteristic associated with the promotion of the French language. In 1992, for example, the Faculty of Law and Economics was reopened with university status, with financial support from a French assistance project. In 1994, the Dean, Yuok Ngoy, introduced a new policy that required all students to take 3 hours of English language classes, in addition to their French language tuition. According to Clayton, he was told by the French assistance team: “It is your decision to introduce English but we cannot pay for it” (Clayton 2006, p. 192). True to their word, the *Coopération Française* supplemented the salaries of all Cambodian staff—except those who taught the new English programme.

Government policy since 1997 has allowed the study of English or French but students have clearly shown their preference. The number of fee-paying students studying English is now 60 times greater than those studying French.

The attraction to learn English is certainly pragmatic. In an informal survey of students conducted by one of the authors, the most frequently expressed aspiration for the future was to get a job in a non-government organization (NGO) due to the perception that NGOs have foreign funding and can therefore provide good salaries. Fluency in English is generally a pre-requisite for such employment. This was reflected in a 2002 survey of school students which found that 69.0% of students would, given a choice, prefer to learn English as a foreign language at school. This was followed by Japanese (19.7%), Chinese (19.3%), French (17.3%) with Vietnamese, Russian, Thai, German and Korean all favoured by less than 10% of respondents (Prak Polla 2002, p. 29).

But part of the drive for English is almost certainly less tangible in the form of an association of English language with modernity, especially by young Cambodians, a process that probably began with the arrival of UNTAC. It is difficult now to imagine the impact that 20,000 foreign UN peace-keeping troops spread throughout the country had on Cambodians during the run-up to the 1993 elections. But the combination of wealth, power and the ability to speak English must have been compelling. This association has continued in many different forms up to the present time; in the use of English on the internet, on cable TV, through music (MTV) and sports (the hugely popular English soccer) to name but a few.

Conclusion

The three vignettes presented in this chapter are not intended to be a comprehensive account of the impact of globalization on RUPP. Rather, they are intended as windows into some of the issues at this university as the field of globalization surrounds more and more aspects of its operations.

These issues find their sharpest expression at the point at which cultural and economic factors intersect. While the demands of ‘international standards’, for example, require the university to engage in research, both tradition, as we have seen, and economic circumstances conspire against such aspirations—expensive and limited internet access, for example, means that the RUPP library has no online journal subscriptions.

Spring argues that:

the globalization of common educational practices involves an interplay between classical, industrial-consumer, progressive, and indigenous pedagogies, global and local languages and cultures, and the nation-state and civil society. (Spring 2006, p. 1)

Our vignettes confirm much of this view. But they also suggest that the globalization of common educational practices involves the agency of individuals who are attempting to negotiate the new rules that globalization has introduced to the educa-

tional game, both to protect and preserve what they consider to be of value from the past and to grasp the opportunities—both for themselves and for their present and future students—represented by the new.

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Chapter 9

Universiti Sains Malaysia: Its Strategic Response to Globalization

Sarjit Kaur, Morshidi Sirat and Norpisah Mat Isa

Introduction

Universiti Sains Malaysia (hereafter USM) is the second oldest public university in Malaysia and has a history of intentional, systematic and strategic responses to issues in higher education. The chapter first discusses how universities in developed and developing nations are affected by globalization, then provides an early history of USM, before outlining recent issues and innovations.

While acknowledging the realities of internationalization and globalization as worldwide trends, USM applies market-driven strategies aligned with Malaysia's higher education aims; meeting the human capital needs of the country, increasing postgraduate enrolments, promoting and sustaining international education, providing funding provisions for research and development and encouraging innovative teaching and learning. The changing debate on globalization and how it impacts on institutional responses will be discussed in the light of USM's efforts in continuing to provide high-quality education to the nation's future generations.

Globalization and the University

The drivers of the trend to drastic change in the governance and management of higher education in the Asia Pacific are globalization, marketization and privatization. Yonezawa notes:

...that society surrounding educational institutions is becoming more global, market-oriented and privatized; that education itself is becoming a global, market-oriented private industry and that the international mobility of students is currently an important concern for most higher education institutions. (Yonezawa 2007, p. 125)

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With massification and the rapid growth of the private sector in many developing countries, there are calls to re-vision the university. Globalization, and the market forces affecting and dictating the provision of higher education require universities in the developing world to analyse their envisioning and imaging processes in their quest to remain dominant global players in the trade of higher education services. Arguably, many contextual parameters afflicting university imaging in developing countries are also central realities worldwide. Nevertheless, it is necessary to unpack the realities of globalization and internationalization (Altbach 2004); and academe around the world is affected differently by common global trends.

Universities play a pivotal role in today's global environment. They are affected by changes, pressures and challenges from beyond their campus, some transcending national borders. Amid the worldwide craze to rank higher education institutions, it is advisable to take note of the long history of universities and the role they have played in sustaining development of knowledge and the quest for truth. In the realm of higher education in the twenty-first century, there are common realities: massification, accountability, privatization and marketization. These shape universities and those who work for them in fairly similar ways around the globe, albeit to somewhat differing degrees. Countries that use English benefit greatly from the increasing widespread use of that language in science and scholarship (Altbach 2007), but this reality leaves much room for consideration when it comes to the question of how higher education in the developing countries will experience expansion in the years to come. How then can individual universities and the academic profession stay united in their commitment to teaching and the creation, production and transmission of knowledge while at the same time actively contribute to all aspects of university life?

The impact of globalization on universities is not without precedents. From the early days, universities incorporated tensions between national realities and international trends (Altbach 2004). While the English language now dominates as the language for research, science and technology, at one time German and Latin were centrally important to knowledge. At the same time, globalization is now truly worldwide in reach. Few places elude current trends. Innovations and practices seem to spread even faster due to advances in information and communication technologies. Because of the centrality and prevalence of the knowledge economy higher education has assumed an unprecedented importance, both within countries and internationally, because of its roles in educating people for the new knowledge economy and in creating knowledge. The challenges generated by globalization include improving student mobility, English competency and computer literacy, and inculcating creativity and problem solving. University responses to these challenges are influenced by the conception of internationalization as a direct response to globalization, and by social and cultural aspects of national manpower needs.

Figure 9.1 presents a framework of the drivers of change in higher education:

Globalization discourse affects higher education in its policy making, governance, organization, academic work and identity (Vaira 2004). Each higher education institution's cultural features are also closely tied to national policy, culture and

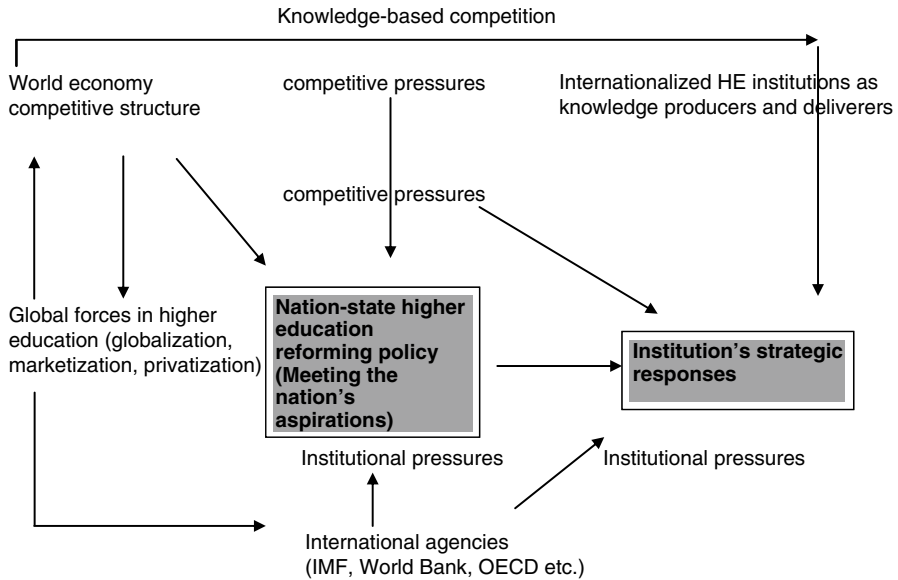


Fig. 9.1 Processes of change in a higher education institution. (Source: Adapted from Vaira 2004, p. 504)

economy. In the framework of Fig. 9.1, institutions of higher learning are operating within the landscape of knowledge competition, notwithstanding the fact that they may need to either infuse *glocal* (global + local) tendencies or adopt Marginson and Rhoades’ (2002) *glonacal agency* (global + national + local agency of collective actors) in processes of institutional change. Higher education is undergoing “deep institutional change that involves the deinstitutionalization of its rooted policy and value frameworks and parallel institutionalization of new ones” (Vaira 2004, p. 485). Invariably, these processes entail more or less strong resistances, conflicts and tensions; and also efforts to conciliate, adapt, translate—to combine the new with the old, combine the national features of higher education with new globalizing pressures, and combine the single institution’s structural and cultural features with the new imperatives and designs. Institutions need to acknowledge the global dimension and its growing impacts in the different dimensions of higher education.

As a thriving economy in the developing world, Malaysia knows the pressing challenges facing the provision of higher education in the face of globalization, marketization and privatization. With 20 public, 20 private universities and almost 520 private colleges, Malaysia in its multicultural environment has built mass higher education, expanding access, and given top priority to education governance. Higher education institutions must provide quality higher education within the landscape of a knowledge-based economy. While the government has a firm control on issues of governance in public universities; ranging from funding, policies for higher education, human resource development, national welfare to national integration;

it encourages individual universities to put in place strategic plans and activities to 'industrialize' higher education while riding the twin waves of globalization and internationalization.

Universiti Sains Malaysia

History

USM is the second oldest university in Malaysia. It was formed in 1969, 20 years after the inception of University Malaya, after the Penang State Executive Committee decided in 1962 that the state needed a higher educational institution to provide for Penang and northern Malaya. Following a visit by the University of Malaya Vice Chancellor, Tan Sri Sir Alexander Oppenheim and other university officials, an area of approximately 600 acres in Sungai Ara was earmarked and acquired. The then Prime Minister laid the foundation of Penang University College (as it was first known) on August 7, 1967. Its creation was gazetted under the "Corporation Act signed by His Majesty The Yang DiPertuan Agong (the King) as provided for under the Universities and University Colleges Act 1971" (Universiti Sains Malaysia 2007, p. 17).

On June 9, 1969, 57 pioneers pursuing science courses registered as students of University of Penang at a temporary campus at the Malayan Teachers' College in Gelugor. In May 1971, the University moved to its present location at Minden in Penang. On October 4, 1971 the University was officially established by the signing of the Incorporation Order into the Higher Education Act 1971 by the then Education Minister, Encik Hussein Onn. In 1972 it became 'Universiti Sains Malaysia'.

The University Today

The main campus at Minden comprises 239 hectares. The university has two branch campuses: Kubang Kerian, Kelantan offers medical and nursing courses on a 73-hectare campus; and Seberang Perai, Penang offers engineering on a 130-hectare campus. These two branch campuses were established as part of USM's commitment to regional development. In 1979, the School of Medical Sciences started on the east coast of Peninsular Malaysia, signalling national government commitment to the rural, ethnic Malay majority (Morshidi 2002). In 1986, the Engineering Schools were relocated to Tronoh, Perak, a lagging sub-region in the north. In the early 1980s, the School of Medical Sciences moved to Kubang Kerian from the Minden campus. With this move, USM took charge of the newly completed hospital in Kelantan from the Ministry of Health in 1983 and converted it into a teaching hospital incorporating a clinical-based curriculum designed to meet the need for doctors qualified in relation to local conditions (Morshidi 2002).

In 2007, 26,995 students were enrolled at USM and the University had 7,674 academic and non-academic staff in 2006. The 1,597 academic staff held positions ranging from Professor, Associate Professor, Senior Lecturer, lecturer and language instructor (USM 2006 Annual Report). When it was first established, the university offered solely science courses but later added Arts and Education. The academic programmes offered by USM today include undergraduate and postgraduate degrees, non-graduating programmes and certificate courses, the off-campus study programme and the diploma programme. The School of Off-Campus Studies, established in 1971, has been USM's most prominent feature. It was the first distance learning programme at tertiary level in Malaysia and has enabled many adult learners who otherwise might not have had the chance to pursue tertiary education without sacrificing their careers. It offers degrees in the sciences, humanities, social sciences and Civil Engineering. Currently USM has 24 schools offering academic programmes and more than 20 centres of excellence specializing in research.

USM offered higher education degree programmes as early as 1970. Initially, candidates for postgraduate study by research only were admitted. In subsequent years, other programmes combining course work and research, or providing course work alone, were introduced. Under the Seventh Malaysian Plan, USM aimed to achieve a postgraduate student population of 20% of the total student enrolment of the University. This was achieved in 1998 "in part due to our efforts of making USM the destination for postgraduate students in the ASEAN region" (Graduate Infolink 2000, p. 2). Presently, USM has 6,896 graduate students in Medicine, Science and Technology, Engineering and Arts who are working towards their Masters or Doctorate degrees, still more than 20% of all students. Altogether 1,417 of these graduate students are internationals (Institute of Graduate Studies USM 2008).

The academic programme in USM is based on three main principles. First, the courses offered must meet the country's requirements and interests. Second, the form and functions of its education must be different from those offered by other local universities, while also ensuring a balance between courses. Third, the university must provide for research and the accumulation, advancement and dissemination of knowledge. It also has to strive to integrate its educational and research programmes with the requirements of the society. USM has a sound interdisciplinary curriculum, periodically reviewed to accommodate current needs. A unique feature of its academic programmes is that all courses are offered through the respective schools, a break from the traditional faculty system based on departments. The school system has an added flexibility to accommodate the different interests and talents of university undergraduates as it both allows for specialization in a chosen field and encourages comparative and interdisciplinary studies in the respective areas.

USM has 24 schools, seven research platforms, two academic services centres and 16 research centres. The University's management comprises the Vice Chancellor, three deputy vice chancellors (academic and international affairs, research and innovation, student welfare and development) and six other members (three directors of centres, the Registrar, the Bursar and the chief librarian). The Chancellery department houses the offices of the vice chancellor and the deputy vice chancel-

lors and is supported by departments covering development and corporate offices, public relations, management and research innovation, bursaries and other areas. With a Chancellor and two Pro-Chancellors, USM's Board of Directors comprises a Chairman, the vice chancellor, two government representatives, one local society representative, three appointees of the Minister of Higher Education and a secretary. USM received approximately RM 88.5 billion from the government for development in 2006.¹ As stated in USM's 2006 Annual Report (USM 2007a, p. 138), total revenue for operating activities for the financial year ended December 31, 2006 increased by 9% from the last year. Of the revenue for operating activities, 90.9% (RM 55.7 million) was from government grants, 6.6% from student fees and 2.5% from other income.

Since its establishment, USM has registered significant accomplishments in teaching and learning, and research and innovation. The university has strategized its responses to globalization, marketization and internationalization by providing and maintaining good infrastructure, over time becoming more competitive at national and global levels. It has attracted quality staff and students locally and abroad. The university pays particular attention to matters that enhance its role as an institution of higher learning as well as meeting current needs, in line with its mission

...to lead and innovate in achieving excellence at the international level through advancing and disseminating knowledge and truth, instilling qualities that stress academic excellence and professionalism, developing holistic individuals and providing a strong commitment towards society's aspirations, the country's vision and universal aspirations. (USM 2007b, p. 6)

Corporatization of USM: A Strategic Response to Market Forces

By definition, public universities in Malaysia by virtue of being state-controlled universities are statutory bodies governed by establishment laws (Morshidi 2008). USM implements duties and responsibilities in line with the government's objectives and aspirations. The Malaysian government introduced corporate governance for State-controlled universities in 1996 by amending the University and University Colleges Act, 1971. Globally there are various discourses concerning usage of the terms 'incorporated', as used in Japanese and US higher education contexts; and 'corporatized' (adopting corporate-style management) as in the Malaysian context. In Malaysia incorporated public universities are meant to operate as efficient, transparent and financially able entities; and to adopt management systems similar to those of the corporate sector. At the same time they must accept that the government retains explicit control (Morshidi 2008) and the universities will adhere closely to government objectives. Chiang (2004, p. 190) observes that while Malaysian public universities are empowered "the room they have to exercise their powers may be

¹ Malaysian Ringat RM 1.00=USD 0.294 on January 23, 2010.

rather restricted because government continues to have a stronghold in the running of the universities”.

Alongside the incorporated public universities are Malaysian private universities which operate in a more corporate style than public universities tagged ‘corporatized’ entities. Examples include Universiti Teknologi Petronas, Universiti Tenaga Malaysia, Limkokwing University of Creative Technology and Multimedia University.

While public universities determine the fees for postgraduate students—this is the main source of income for incorporated universities—undergraduate students’ fees must adhere strictly to guidelines laid out by the Ministry of Higher Education (Morshidi 2006). Lee (2004) notes that revenue for operating activities arising from students’ fees has decreased while incomes from consultancy, contract research, sale of expert services, and other market-related activities, have become an important source of revenue for many public universities in Malaysia.

When USM was corporatized on March 15, 1998, its guiding principle became the commitment to achieve at an international level. In its strategic responses to globalization, the leadership of the vice chancellor was instrumental in steering the university and in encouraging staff to produce equally strategic initiatives in upgrading the quality of instruction and research at a global and international level. Throughout 1998, USM strove to install quality measures in its ‘core business’ incorporating teaching and learning, research and development, staff training and in developing holistic graduates. It also underwent a significant change in its governance structure. Its university court was replaced by an eight-member Board of Directors comprising Chairperson, Vice Chancellor, and six others (Morshidi 2002).

While the University experienced the restructuring of governance and funding, student enrolments were increased to help meet Malaysia’s manpower needs. Tables 1 and 2 provide the enrolment picture. Table 9.1 shows the growth in total student enrolments in all public universities in Malaysia between 2002–2007:

Table 9.2 shows student enrolment in USM in 2005 and 2006. Note that total students reached 26,995 in 2007. This compares to an average student enrolment in 1998–2001 of 19,291 (USM 2008). The total number of graduates from USM in 2007 was 7,140 (134 PhDs, 992 Masters and 6,014 undergraduate degrees). Total graduates from all public universities in Malaysia numbered 85,448 (MoHE 2008).

Table 9.1 Student enrolment at Malaysian public universities 2002–2007. (Source: Ministry of Higher Education Malaysia 2008)

Level	2002	2003	2004	2005	2006	2007
Diploma	67,807	69,157	62,136	60,911	67,628	76,345
Bachelors	184,190	192,288	194,470	209,148	223,968	247,881
Graduate Diploma	433	530	439	546	330	4,341
Masters	25,527	27,316	30,711	28,877	39,347	30,383
Doctorate	3,882	5,068	6,222	7,639	8,752	10,167
Others	–	–	–	–	–	13,880
<i>Total</i>	<i>281,839</i>	<i>294,359</i>	<i>293,978</i>	<i>307,121</i>	<i>331,025</i>	<i>382,997</i>

Table 9.2 Student enrolment in 2005 and 2006 in USM according to level of study. (Source: Universiti Sains Malaysia 2007, p. 49)

Level	2005	2006
Bachelor's Degree (full-time)	18,541	17,940
Bachelor's Degree (Distance Education)	4,728	5,183
Master's Degree	5,142	5,004
Doctorate Degree	1,379	1,648
Non-Degree Study (inclusive of Student Exchange Scheme)	110	149
Foundation Science (Distance Education)	24	13
Postgraduate Diploma	2	1
<i>Total</i>	<i>29,926</i>	<i>29,938</i>

International Students

USM's enrolment of international students at all levels rose from 1,151 in 2005 to 1,575 students in 2006, a 27% increase. According to USM's Division of Corporate and Sustainable Development there were 1,417 international postgraduates among the total postgraduate cohort of 6,687, and 158 international undergraduates out of 21,977 undergraduates altogether.

The largest groups of international students are from Indonesia, Thailand, Yemen, Jordan, Libya, Iran, Jordan, India and Palestine.

Research and Innovation

USM was nationally designated as a research university in 2006. In Malaysia it is widely acknowledged that USM offers excellent opportunities for research and education to both local and international scholars. The main thrust of policy on research and development has been to encourage academics to focus on areas that integrate academic interest and practical relevance. USM has recognized research strengths in environmental science, aquaculture, biomedical and pharmaceutical studies, natural language processing and computer-aided translations, information technology, food technology, polymer science and distance education, among other areas. In 2008 the Director of the British Council in Kuala Lumpur announced that under the UK's Prime Minister's Initiative (PMI) grant scheme, USM secured seven international research cooperation grants with UK academics in nanotechnology, lasers, photonics, biotechnology and climate change (Liston 2008). Penang also offers excellent on-site facilities for collaborative research in such areas as coastal pollution, mangrove ecosystem and marine aquaculture.

Table 9.3 shows the main types of grants for research and development that are available at USM. The main source is IRPA (Intensification of Research into Priority Areas) funding. In addition, USM allocates monies from its operating funds as an incentive or short-term research and project development. External funds, mainly as research grants, awards and consultancies won by individual academics, are

Table 9.3 Research projects funded at USM in 2006 by type of grant. (Source: USM 2006 Report, p. 87)

Type of grant	Individual research projects		Group research projects		Total	
		%		%		%
USM short-term	153	22.4	529	77.6	682	100.0
External agency	133	36.1	235	63.9	368	100.0
Incentive Fund	232	97.9	5	2.1	237	100.0
IRPA	4	2.3	167	97.7	171	100.0
Science Fund	3	2.8	106	97.2	109	100.0
FRGS	8	7.8	95	92.2	103	100.0
SAGA	0	0.0	26	100.0	26	100.0
IRPA short-term	3	42.9	4	57.1	7	100.0
<i>Total</i>	<i>536</i>	<i>31.5</i>	<i>1,167</i>	<i>68.5</i>	<i>1,703</i>	<i>100.0</i>

beginning to feature prominently. The work takes place on the basis of cluster-based research projects and through cooperation by researchers from different disciplines.

As shown in the table, in 2006 a total of 1,703 research projects were funded for conduct by researchers in USM. In the Vice Chancellor’s report in that year, it was stressed that researchers in USM are encouraged to disseminate their research and innovation products worldwide in globalized contexts.

USM’s Strategic Responses to Globalization

In the Malaysian context, institutional responses may vary but they are formally connected to policy implementation and closely aligned to Malaysia’s national and economic interests. When undertaking initiatives to internationalize campus activities Malaysian universities inevitably give due consideration to social and cultural rationales, including national cultural identity, intercultural identity and social and community development. Policy regulates institutions, permitting, requiring or forbidding the actions of both institutional members and government officials (Schlager and Blomquist 1996). USM has effective strategic policies that respond to global and national demands. It also has non-strategic policies, localized to individual schools/faculties. Approaches range from short-term to long-term.

While it may not be clear how strategic responses are collectively developed, implemented, monitored and evaluated—they are often complex and may involve a range of stakeholders—the USM leadership makes a systematic effort to carry them out effectively by incorporating all policies in the strategic planning process. For instance in 2006, USM’s vice chancellor, focusing on the ‘university-for-tomorrow’, mobilized selected academics to conduct workshops and brainstorming sessions designed to discuss different scenarios of the university-of-tomorrow in preparation for the increasingly globalized higher education environment. These workshops involved 400 academics, administrators, students, support staff and USM alumni

(USM 2006 Annual Report). Five alternative scenarios and their respective futures triangles were presented: the A La Carte University, market-student-led; the Invisible University, market-tech-led; the Corporate University, commerce-led; the State University, state-led; and the University in the Garden, scholar-led (Universiti Sains Malaysia 2007, p. 37). These scenarios were presented first to the USM community and later at a UNESCO forum on higher education in Paris and an Association of Southeast Asian Institutions of Higher Learning (ASAIHIL) conference in Penang.

As the only ASEAN Regional Centre of Expertise on Education for Sustainable Development, a designation received in 2005, USM has brought forward the issue of sustainable development in many forums. In its proposal for the Accelerated Programme for Excellence (APEX), a fast track development programme introduced by the Malaysian Ministry of Higher Education (MoHE), the University set forth its strategic mission to become a sustainability-led institution. In September 2008, USM was selected as Malaysia's very first APEX University. Under the Ministry of Higher Education's national strategic plan, APEX is aimed at driving selected universities in Malaysia to ascend the world league tables. The objective is to integrate sustainable development into the education system so future generations can be imbued with the need for ecological protection, conservation of resources and human development (The Apex University 2008).

The next sections of the chapter will discuss strategic responses to globalization taken by Universiti Sains Malaysia in particular domains of university activity.

Teaching Activities: New Programmes

In line with the government's call to enhance the quality of higher education, in 2006 USM introduced 14 new academic programmes focused on specific human resource needs of the country, the majority in specializations reflecting globally driven trends in fields such as information technology and environmental management.

In addition, USM's new Transkrian engineering campus was modelled to more fully engage the community both at sub-regional and international level via teaching and learning. This kind of interaction with the local community "generates knowledge founded on real-life situation and needs, which in turn strengthens university functions" (Shute 1999 in Morshidi 2002, p. 204). Located in Seberang Perai South district in Penang, the Trankrian campus is strategically located in the three contiguous states—Kedah, Penang and Perak—comprising Malaysia's northern region. The campus facility houses all engineering programmes previously located in USM's Tronoh campus plus new academic programmes in aeronautical and space engineering. While this campus provides opportunities for Malaysian students keen to pursue engineering it also provides a lagging region with infrastructure and facilities to spur economic and social development. The branch campus collaborates in research projects with academics from the main Minden campus while linking university and industry in Malaysia's northern corridor, a growth region. The campus is equipped to respond to local and international networks interested in innovative

product manufacturing (Morshidi 2002). It is an example of how global responses can involve not just university interaction across borders, but local capacity building so whole communities become modernized and more globally effective.

Educational Partnerships

The experiences of universities in the developed world suggest that “structural change at the institutional level” (Lee 2005, p. 21) is instrumental in establishing a research university. The creation of research groups, centres and educational collaborations with institutional support can elevate the research efforts of the institution. Likewise public–private partnerships involving higher education institutions can strengthen the presence of the nation in the global knowledge economy. In the smart partnership programme of 2006 ten private institutions of higher education collaborated with USM. This takes the form of programmes offered by USM and moderated by USM staff with the diploma awarded by the partner association; or external programmes whereby a USM programme is conducted at the partner’s premises under USM’s control and moderation and students receive a USM degree. Table 9.4 shows the private institutions with links with USM. These educational partnerships involved an enrolment of 1,711 students in the moderated programmes and 1,128 students in the external programmes.

Cross-border Student Movement

Globalization is changing USM’s concept of higher education and transforming its understanding of what the university should offer both to its own students and to

Table 9.4 Private higher education institutions involved in partnership programmes with USM (2007a). (Source: USM 2006 Annual Report, p. 56)

No.	Name of private higher education institution	Academic program
1	Stamford College	B.Sc. (Computer), Diploma (Computer Science)
2	ASTIN Management College	BA (Management), Dip (Management/Marketing)
3	Pulau Technological College	BA (Management), Dip (Management/Marketing) BSc. (Pharmacy)
4	Taylor’s College	BA (Communications), Dip (Communications)
5	U’sity College Sedaya International	BSc. (Pharmacy)
6	Chermai Jaya College	Dip (Multimedia Technology), Dip (Communications), Dip (Visual Communications)
7	Legenda College	BSc (Comp.Sc), Dip (Computers & Systems Info)
8	IKIP College Kuantan	BA (Fine Arts)
9	KDU College, Penang	BA (Management)
10	FMM Institute	BA (Management)

students from other countries. The University hopes that both local and overseas students will be able to experience the challenge of cultural diversity in their preparation for professional life, and to equip them with intercultural skills and knowledge of international competitiveness.

Overseas student recruitment is carried out by several university departments working together, including the Institute of Postgraduate Studies, the Admission Office, The International Office and the Public Relations Office. Recruitment includes international education exhibitions, arranging visits and making presentations on USM to memorandum of Understanding (MoU) partner institutions, and attracting staff of those universities for studies at Masters and PhD level. The University also actively advertises its postgraduate programmes in international media.

The University is proud to be the pioneer institution in Malaysia in introducing credit-transfer exchange programme opportunities to its students, facilitating their international exposure. This idea started when USM was invited to be one of the pioneer members of the Commonwealth Universities Study Abroad Consortium (CUSAC), which had its first meeting in Delhi, India in 1993. In the 1994/1995 academic session the University sent its first four students to two overseas institutions, the University of British Columbia in Canada and the University of Minnesota in USA. USM now has exchange partnerships with 75 institutions covering about 20 countries.

Exposing students to intercultural experience involves more than just one-way journeys to another country. An alternate means is to bring another society and culture to the campus. Through its collaborations with overseas institutions USM organizes short-term visit programmes whereby international students are exposed to the Malaysian life and experience Malaysian cultural perspectives in a systematic, participatory and meaningful way through teaching-learning and research-related activities. Local students also benefit through these programmes, which create opportunities for them to mingle and exchange information with their counterparts. It is hoped that the connections thus developed can enrich local and international students' understanding of multiculturalism and foster an appreciation of the personal and academic value of studying, learning and living in another culture/country.

International Student Support and Guidance

Various forms of assistance are available to international students. Academic support is provided by schools through the Academic Advisor and Mentor-Mentee programmes. Students can also meet with counsellors at the Counselling Unit for help with time management, effective learning behaviours and study skills. The Division of Student Affairs and Development provides support for welfare, accommodation, extra-curricular activities and student organizations. The International Office provides services such as orientation, the familiarization programme and assistance with visa application and extension. The International Office, the Division of Stu-

dent Affairs and Development and the Institute of Postgraduate Studies all organize social programmes that encourage international–local student interaction.

In USM degree programmes instruction is mostly in the national language (Malay) but English has been used in some undergraduate science-based disciplines since 2003. Generally, postgraduate education is in English. International students who lack knowledge in these languages receive support from the Centre for Languages and Translation, a service centre for all students in the university. The centre offers a variety of foreign language courses, skills-based courses in Malay, English language proficiency courses and academic and study skills support.

Research and Capacity Building

The University’s strategy of turning mission into action has never been easy. Most past Vice Chancellors have focused on improving the University’s research and development portfolio. The present Vice Chancellor, Professor Tan Sri Dato’ Dzul kifli Abdul Razak has helped to strengthen the present collaborative trend in USM and he has been instrumental in articulating and shaping concepts and visions for the university. This has greatly influenced the nature and the orientation of USM networking activities. Fig. 9.2 provides the innovation system model advocated by the

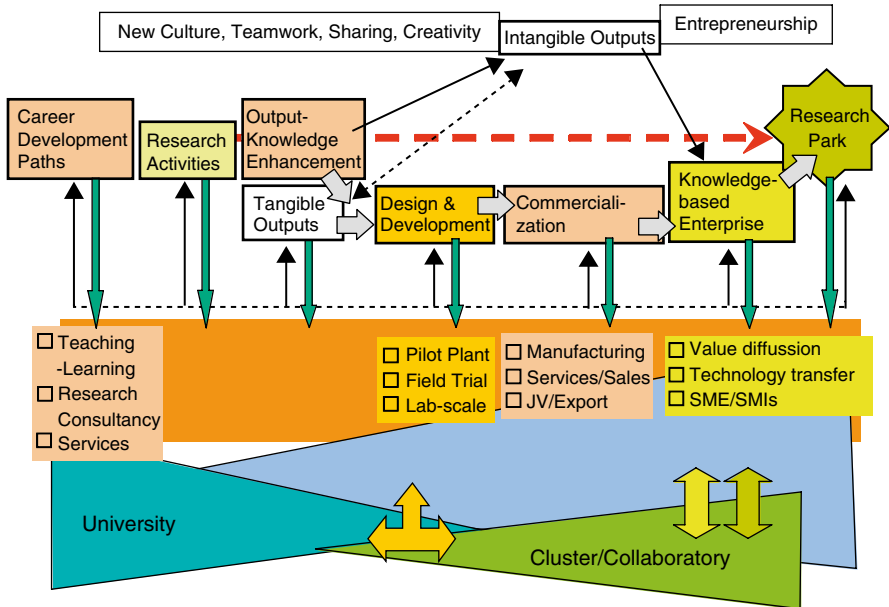


Fig. 9.2 USM’s innovation system. (Source: Dzul kifli and Ramli 2005; cited in Ahmad Farhan 2008)

USM Vice Chancellor. It situates the University's strategic responses in the increasingly globalized higher education context. USM's innovation strategy is designed to respond to today's knowledge economy and the vital needs to innovate and to manage innovation effectively (Dzulkipli and Ramli 2005).

USM has adopted the following strategic goals to help achieve its mission: to act as an engine of growth; to create a conducive research environment; to nurture exploration and creativity; to integrate with national and international innovative systems. In his 2003 Annual Address to staff the Vice Chancellor stated that if USM is "serious about its global endeavours, it needs to exploit innovation to gain competitive advantage". The USM innovation cycle system is comprehensive, encompassing Research (R), Development (D), Commercialization (C) and an additional entity Park (P). To assist academics/researchers to bring as many products as possible through the journey of R-D-C the University provides an innovation park where new ventures can be incepted, nurtured and ensured of success (Ahmad Farhan 2008). The innovation strategy acknowledges the contributions of all players. It operates and functions in a systemic environment that provides a close-loop with clear return of investment to the university (Ahmad Farhan 2008).²

The 'University in a Garden' image, introduced in 2004, brought the University closer to nature and sustainability issues. This branding suggested the need for a supportive network not only within USM but also across regional and global borders. As noted, the University was designated a United Nation Universities' Regional Centre for Education for Sustainable Development in 2005 and through this USM has secured links with agencies and institutions working in the area across the globe.

The University's research and innovation products have been recognized at international level. In 2006, researchers and scientists from USM were awarded 23 medals at the International Invention, Innovation, Industrial Design and Technology Exhibition (I-TEX 2006) and 18 medals at the Malaysia Technology Expo (MTE 2006). At the 34th International Exhibition of Inventions, New Techniques and Products in Geneva, researchers and scientists from USM "won another 24 medals, while at the 55th World Exhibition of Innovation, Research and New Technologies in Brussels, USM added six medals and two special awards to its already impressive list of achievements" (Universiti Sains Malaysia 2007, p. 39).

Research Collaborations

USM has always emphasized research collaboration, with private sector partners and with international players. From the time the notion of USM as a research-intensive university was introduced in the year 2000 it was emphasized USM would approach this in 'collaboratory' mode. This term, based on joining the words 'col-

² At the time of writing the innovation park was expected to become a reality with the launching of the Science and Arts Innovation Space (SPACE) later in 2008 (Ahmad Farhan 2008).

laboration' and 'laboratory', was coined to envision the critical need to network and share.

Collaborations can be initiated either by the university as a top-down exercise or by the individual, group or responsible centre in bottom-up manner (Ahmad Farhan 2008). When done the former way they are usually backed by the University through financial, organizational structure and human resource support. Such collaborations are deemed of high potential and consistent with the niche, vision and mission of the university. Bottom-up collaborations are also endorsed because USM has had success in turning researcher-initiated links into University-wide efforts, involving researchers from all three campuses of USM. It is a common practice in USM that when a Memorandum of Understanding is signed with another institution, collaboration is not exclusive to the initiator of the collaboration but opened up to the entire University. USM attaches MoAs (Memorandums of Agreement) to MoUs to ensure that they remain active (Ahmad Farhan 2008).

Research collaboration is facilitated by international networks of universities including USM, particularly in the Asia-Pacific (see immediately below). In the region the largest number of research collaborations is with universities and other institutions in Japan (15 collaborations). There are nine collaborations in each of China, Indonesia and Australia, six in Cuba and five in the USA. Others are three in Iran and Kuwait, two in the Philippines and Canada, and one in Pakistan, Singapore, Thailand, Palestine, Sri Lanka, Vietnam and New Zealand. The success of networks and cross-border collaborations is indicated by the grant income received and the mobility of researchers and students between partnering nations. Based on available records, since 2000 there have been 81 projects amounting to RM 5.9 million with 35 organizations from 12 countries. In terms of staff mobility, 50 academic staff went on research leave to the 12 countries for the year 2007 alone (Ahmad Farhan 2008).³

Academic Cooperation and Formal Networks

Cross-border academic cooperation began at USM from the need to ascertain the quality of the academic curriculum. Often academic cooperation was intended to enhance human resources, not teaching staff but managers. Most cooperation was developed with renowned universities in the United Kingdom, Australia and Canada (Dzulkifli Abdul Razak and Norpisah Mat Isa 2003). The funding for consultancies and for human resource training came from agencies such as the Overseas Development Association (ODA) in United Kingdom, the International Development Programme (IDP) in Australia and the Canadian International Development Association (CIDA), Canada. USM was not required to provide substantial input to the institutions that provided assistance but these gained indirect benefits, including

³ This does not include academic staff who went on sabbatical leave at other institutions in the world.

international recognition for their contribution and international exposure for their academic staff.

One example is the British Council project for development of Engineering programmes at USM. By 1984, in response to the national pressure to train more students in Engineering and Technology, USM was considering the establishment of Engineering schools separate from the School of Applied Sciences. In 1985, the Principal of the University College of Swansea was invited by the then Vice Chancellor to advise him on creation of a major Engineering faculty. Cooperation with Swansea further developed when senior UK academics were appointed as advisors to the four founding Engineering schools. The British Council facilitated this advisory role through a CICHE project which funded the travel of the academic advisors (Dzulkifli Abdul Razak and Norpisah Mat Isa 2003). When the Engineering Campus was established its new curriculum was approved by the Malaysian Ministry of Education, the UK external examiners and the Malaysian Board of Engineers. Within the framework of cooperation many staff were trained to PhD level and acquired expertise in topics identified as of national importance. Although the scheme only provided seed funds, it committed many senior UK academics to engage in further cooperation with USM. Long-lasting partner links and friendships were built and the cooperation has continued in collaborative research projects, where the expertises of both institutions are required to ensure success.

As observed by Altbach (2004) for many higher education institutions the new era of globalization is characterized by international agreements and arrangements that help to manage global interactions. These range from bilateral agreements for student and faculty exchange to the mutual recognition of degrees. Groupings of institutions have been formed to conduct educational activities and research. Member institutions may differ in size and focus but through these networks they endorse common functions and objectives, for example to promote collaborative studies and research programmes in priority areas identified for the region, and/or to enhance development of academic and professional human resources in the region. USM has had active links with the following networks since 2000 (Ahmad Farhan 2008):

- University Mobility in Asia and the Pacific (UMAP)
- International Association of Universities (IAU)
- Global University Network for Innovation Asia and the Asia Pacific (GUNI-AP)
- Association of Southeast Asia Institutions of Higher Learning (ASAIHL)
- ASEAN University Network (AUN)
- The Association of Commonwealth Universities (ACU)
- Association of Universities of Asia Pacific (ACAP)
- University Cooperation for Internationalization (UNICOFIN)
- Asia-Pacific Professional Leaders in Education (APPLE)
- United Nations Universities, Regional Centre for Education for Sustainable Development
- Association of International Education

This involvement in international groupings or networks allows the University to share its experience in various fields and activities. Its participation in international

organizations has increased tremendously and USM has taken leadership roles such as the appointment of the Vice-Chancellor as President of ASAIHL, Board Member of UMAP, Deputy Board Member for IAU and a member of the Advisory Committee for Asia-Europe Foundation (ASEF). In the Commonwealth Universities Study Abroad Consortium, the University was elected as Asian representative for three consecutive terms beginning in 2000 and chaired the Executive Committee for two terms.

Organization and Support Structures

Student Support

USM provides a range of student services benefiting local and international students. The University Housing and Accommodation Unit has responsibility for coordinating student accommodation and placement. This includes management of the accommodation at the International House, family units for undergraduates and postgraduates, the Transit House for new USM staff, and students' hostels on campus. This unit also coordinates student housing facilities outside the university. In the 2006/2007 academic session USM accommodated 16,448 students at the students' hostels (USM 2006 Annual Report, p. 67), with room rates among the lowest charged by public institutions in Malaysia, a major attraction for students. USM's International House can accommodate 236 international postgraduate students.

The Student Advisory and Development Unit provides services to students on campus. These include academic advisory services; academic and personal counselling services including career exhibitions, resume writing workshops and job placement services; research and assessment on students' needs on campus; production of study materials for students; and the planning, coordinating and implementation of courses and workshops on student development and leadership training (USM 2006 Annual Report, p. 69). USM offers student scholarships and loans, financed by sponsors including the Ministry of Education and the National Higher Education Fund (PTPTN); and a wide array of activities for students ranging across sports, cultural, leadership programmes, community service programmes and excellence programmes. The university also carries out activities such as forums, workshops and programmes held in conjunction with the National Day celebrations and religious activities, to ensure students develop as holistic individuals.

USM Libraries

The USM libraries on all the three branch campuses conduct year-round activities such as exhibitions and campus-based ceremonies to acknowledge academic

Table 9.5 Number of searches using selected databases, USM, 2007a. (Source: USM 2006 Report, p. 105)

Database	Number of searches
EbscoHost	235,680
Emerald Full Text	24,415
Engineering Village 2	1,638
GMID	2,515
CSA: Cambridge Scientific Abstracts	888
ISI Web of Knowledge	30,264
JSTOR	9,974
ProQuest	329,345
Science Direct	352,783
<i>Total</i>	<i>987,502</i>

contributions of staff. The USM library as the Secretariat of the ASEAN University Network Inter-Library Online (AUNILIO) cooperates with the Secretariat of the ASEAN University Network (AUM) to coordinate international meets, workshops and conferences. In 2006, 42,358 people were registered as members of the USM library. Members comprised students, members of the academic and administration staff and members of the public (USM 2006 Annual Report).

The USM library continually enhances its electronic information services through subscription to important databases. Table 9.5 shows the number of searches using selected databases in 2006:

Library staff benefit from courses/training sessions organized either by the university or external bodies. Library staff maintain relations with professional communities involved in librarianship at the national and international levels, forged when professional staff attend conferences.

Internationalization of Human Resources

USM's human resource management assists the university in the implementation of programmes relating to internationalization. In 2006 the human resources department sent 53 academic staff for training under USM's Academic Staff Higher Education Scheme (ASHES), 70 staff under the Bumiputra (Indigene) Academic Training Scheme and five staff under USM's own sponsorship. In addition 93 staff went on sabbatical leave, 20 on full-pay study leave, one on unpaid study leave and one on half-pay study leave (USM 2006 Annual Report).

At USM at least one of the degrees of academic staff must be from outside Malaysia. Staff are encouraged with funding support to present papers at international conferences outside Malaysia. There are also ample opportunities for academic staff to engage in short-term attachments at institutions overseas or conduct joint research and publication with international partners.

The University is making deliberate efforts to increase its number of international staff. Its policy is to have at least 10% expatriate staff. In 2007 USM had 126 overseas staff comprising 10 professors, 31 associate professors, 78 lecturers, 5 language teachers and 2 tutors. USM also welcomes visiting professors. There are 1,127 overseas staff in Malaysian public universities, with the largest numbers at Universiti Malaya (181) and the International Islamic University Malaysia (313 overseas staff) where the language of instruction is English (Ministry of Higher Education Malaysia 2008).

Conclusions

Globalization in higher education and science is inevitable. It is enhanced by modern technology and the increasing ease of communication, and the flow of students and highly educated personnel across borders (Altbach 2007). This discussion of USM's strategic responses to globalization indicates that its rationales for implementing strategic activities are not entirely autonomous. Universities in Malaysia are nation-centric and rely heavily on government funding. At the same time Malaysian public institutions of higher learning need to maintain and expand funding without relying solely on government assistance, and trends in higher education suggest non-government funding will be more important in future. In the globalizing environment, students as consumers are moving across national borders (Yonezawa 2007) on the basis of personal investment in global higher education and global labour markets.

The APEX University status accorded to Universiti Sains Malaysia includes provision for autonomy in finance, service scheme, management, student intake and student fees. Universiti Sains Malaysia, as a research and APEX University, is strategizing itself to be "more autonomous, accountable and will continue to provide incentives for partnership and business, the right mix of skills for the labour market and the community" (The APEX University 2008, p. v).

In most countries, the demand for higher education is increasing, especially for professional courses and non-traditional delivery modes (Kaur et al. 2008). While the development and maintenance of mass higher education is a big challenge for public finance, mass higher education itself may contribute to the national economy as a promising industry. While the reforms initiated by the Malaysian government's National Action Strategic Plan (2007–2010) may take time to be implemented, proactive action by individual institutions is essential to handling the dilemmas of higher education markets in the developing world. The initiation, implementation and evaluation of strategic policies and activities will help institutions to keep ahead of competition in the higher education industry. Emerging issues of student mobility, meeting manpower needs, enhancing research capacities and having effective academic cooperation and industry-university links are fundamental to the future vision of any higher education institution.

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Chapter 10

Globalization, Resources and Strategies: A Comparison of Universitas Indonesia and the Australian National University

Simon Marginson and Erlenawati Sawir

Introduction

This chapter compares the global capacities, strategies and potentials of two national universities in contrasting and neighbouring countries, Indonesia and Australia, through the eyes of institutional and research leaders. The purpose of the comparison is to investigate the global higher education setting—the ensemble of global, national and local practices (not just the global dimension)—as a *relational* environment.

The study compared parallel national universities, each a research leader within its nation, while accounting for the national funding and policy context, and the global context. By distinguishing global, local and national dimensions and clarifying the interplays between them it is possible to illuminate not just concentrations of activity, flows of activity, educational nodes and networks (Castells 2000; Appadurai 1996), but also relations of power and identity/difference in global higher education, between institutions and between countries. Held and colleagues refer to “stratification” meaning vertical unevenness and inequality in global relationships; and “hierarchy”, meaning “asymmetries in the control of, access to and enmeshment in global networks and infrastructures” (Held et al. 1999, p. 20). More specifically this study focused on the *capacities* of the two universities, especially their global capacities, differences between them, and elements that affect capacity. By a university’s *capacity* is meant its ability to receive, contain and produce activities, including the evolution of productive academic networks. Of equal interest is university *potential*, meaning the ensemble of possibilities within reach of a university. One question at issue is the degree to which potential and capacity are location

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dependant, and shaped by global hierarchies, and about the scope for strategic leadership to expand capacity and potential.

The two universities are the Universitas Indonesia (UI) in Jakarta, Indonesia and the Australian National University (ANU) in Canberra, Australia. Both are public universities founded in 1946, located in the capital and designated as a “national university”, with different meanings in each case. UI is a research university attracting as students much of the Indonesian elite. ANU is Australia’s strongest research university in scholarly outputs (SJTUGSE)¹ but plays a lesser role in elite professional education than do UI and the older Australian universities. Both UI and ANU have historically close relations with government and nation-building strategies. Because of the similarity of the two universities within their respective national systems, notwithstanding the fact that the UI/ANU contrast is affected by the idiosyncratic cultures and histories of each, and by episodic variations in national policies, the comparison creates a clean contrast between them in global capacity and potential.

The investigation covered university leaders’ sources of information and judgment in relation to the global environment; their understandings of the global setting; the global elements in university identity and mission; the global relations of the leaders and the institutions; and the effects of the global dimension in local educational practices, management, and in university–government relations. A core objective of inquiry was to map the signs and conditions of local autonomy and agency, especially the capacity for self-determined global initiatives with shaping effects. The research method was a program of semi-structured interviews in each university, coupled with study of university and national system documents, and data from global agencies. In each university there were interviews with the Rector/Vice-Chancellor, deputies, officers handling international relations, and a selection of heads of disciplines and research centre directors, with emphasis on social sciences and engineering. The two sets of personnel closely mirrored each other. Interviews took place in February 2003 at Universitas Indonesia and June 2003 at Australian National University.²

¹ Since 2003 the Shanghai Jiao Tong University has published a ranking of the world’s top 500 universities based on measured research performance, including Nobel laureates, citations and publications. ANU was ranked equal 59th in 2009 with the next best Australian institution the University of Melbourne at 75. There were no Indonesian university in the top 500 (SJTUGSE 2010).

² Universitas Indonesia: ten interviews in Bahasa Indonesia and English. Australian National University: 12 interviews in English. The core questions in all interviews were nearly identical, with open-ended variation in the follow-up questions. All interviewees agreed to be audio-taped, and were provided with a copy of the study findings. Aside from one ANU interviewee (not quoted here) no-one requested a review of the quotations selected for publication. We are most grateful to the interviewees in both institutions for their time, cooperation and trust; and the careful consideration given to the answers to our questions.

Indonesia and Australia

The archipelago of Indonesia is the world's fourth largest nation with 209 million people (2001).³ The economy grew rapidly after the mid 1980s but faltered in the crisis of 1997–1998, followed by political instability. Per capita GDP was \$ 2,830 in 2001 (World Bank 2003a).⁴ Funding of education was just 2.3% of GDP (2000). The economy is globally vulnerable, there is a large rural hinterland and urban modernization is incomplete. Indonesia is a “predatory democracy” (Robison 2002) where governmental machinery is incomplete and flawed by localism and corruption. The nation is held together by the national language Bahasa Indonesia, Islam and military force. Despite this the land is fertile, cultural diversity provides immense resources, national identity is robust and Indonesia cuts a distinctive figure in the world.

Australia has almost the opposite configuration of strengths and weaknesses. Its 20 million people (2001) occupy a large land area, much of it arid. Its regulatory financial agencies are synchronized with global finance and despite a vulnerable currency and chronic trade deficit Australia has averaged 4.1% annual growth since 1991. Per capita GDP was USD \$ 24,630 in 2001 (World Bank 2003a). It is politically stable, uses “advanced liberal” techniques of government (Rose 1999) and spends 6.0% of GDP on education, slightly above the OECD average. Despite multicultural roots and three decades of migration from East and SE Asia it is an English-language monoculture with an uncertain national identity. Australia is located on the edge of Asia, and trades heavily in Asia, but occupies an ambivalent subordinate place in the Anglo-American group. The global politics of border protection, terrorism and trade agreements have pulled Australia closer to the USA and increased implicit tensions with Indonesia.

Universitas Indonesia and The Australian National University

Australia spends much more on research and is well networked in ICT terms. In 2001 Australia had 707,000 personal computers in education while Indonesia had 58,000. In Indonesia spending on tertiary education, and tertiary participation, were low (see Table 10.1). Australian tertiary participation was above the OECD average, though its public spending of 0.8% of GDP was below the average, indicating the pressure to generate private spending, which was high⁵ (OECD 2003a; World Bank 2003a). Though Indonesian universities are administered centrally by the Department of National Education, in December 2000 four institutions, including UI, received

³ Data used here are for the period immediately before the case studies.

⁴ US dollars, PPP. The GDP data adjusted for Purchasing Power Parity (PPP) allow comparison between the national purchasing power of the local currencies.

⁵ In Australia charges for domestic students in public universities are high and foreign student fees provide 13% of university incomes in 2002 (DEEWR 2010). OECD averages are 1.0% for public expenditure on tertiary education and 0.3% for private expenditure (OECD 2003a).

Table 10.1 National contexts of Universitas Indonesia and the Australian National University. (Sources: World Bank 2003a; OECD 2003a, b)

(Data for 2001 unless otherwise indicated)	Indonesia	Australia
Population	209.0 million	19.4 million
National language	Bahasa Indonesia	English
Other languages with over one million speakers	14	nil
World ranking on UNDP Human Development Index (UNDP 2003)	102 (1999)	2 (1999)
Gross Domestic Product	\$ 145.3 billion	\$ 368.7 billion
Gross National Income p.a. per head, PPP method [global ranking]	\$ 2,830 [142]	\$ 24,630 [24]
Government revenue as proportion of GDP (CBP 2003)	20.7%	36.8%
Total assistance from World Bank in 2000–2001	USD \$ 2.708 billion	0
Personal computers per 1,000 people	11	516
Internet users per 1,000 population	19	371
Expenditure on ICT as proportion of GDP	2.2%	10.7%
Research & Development as proportion of GNI	0.1%	1.7%
Number of published research papers 1995	310	18,088
15–19-year-olds in education as proportion of 15–19 population 2000	44.8%	81.1%
20–29-year-olds in education as proportion of 20–29 population 2000	3.4%	28.3%
Graduation rates (sum of net rates by age) in first degrees 1999	4.8%	36.2%
All public expenditure on education as proportion all public spending	5.2%	14.6%
All expenditure on education as proportion of GDP 2000	2.3%	6.0%
Public expenditure on tertiary institutions as proportion GDP 2000	0.4%	0.8%
Private expenditure on tertiary institutions as proportion GDP 2000	0.4%	0.7%
Expenditure on tertiary education per student, PPP 2000	USD \$ 1,799	USD \$ 12,854
Proportion of tertiary institutions' funds derived from government	44% (1999)	46% (2001)
Tertiary students in the nation (approximately)	3.1 million (1999)	2.8 million
Tertiary students studying abroad in OECD countries 2000	26,615	4,805
Foreign students studying in national system 2000	377	110,789
Students at Universitas Indonesia/Australian National U	36,399	9,636
Doctoral students at UI/ANU	530	1,155
International students at UI/ANU (proportion of all students)	46 (0.1%)	1,292 (13.4%)

PPP method = Purchasing Power Parity

partial financial and organizational autonomy, and are now expected to raise some funding from fees, research and industry services. Australian universities achieved partial autonomy a decade earlier. They control their own budgets and self-accredit degrees and programs, while subject to government legislation in relation to public mission, commercial conduct, aspects of work relations, financial accountability, data collection, quality assurance and the provision of access to special groups. Business models of education are influential (Marginson and Considine 2000), though less at ANU than elsewhere. In 2001 Australian governments paid 46% of the costs of higher education, in Indonesia 44% (DEEWR 2010; World Bank 2003b, pp. 2–3).

The Australian National University is much wealthier than Universitas Indonesia in global terms, but both enjoy superior resources and status within the national system. Internal governance and management are broadly similar. Both have a chief executive (Rector/Vice-Chancellor), several deputies, and organize in discipline-based units. Both devolve internal management responsibilities, though this has gone further at ANU. Both manage their own budgets. Neither is commercially aggressive in the recruitment of local or foreign students, or in their research programs.

The designation ‘national university’ is held by several Indonesian institutions. In Australia it is confined to ANU and signifies a specialized mission and funding base. UI is a comprehensive elite provider of professional education and research with 36,399 students in 2001, including 530 doctoral. According to its Vision Statement UI is “an autonomous-modern research university” with “an internationally reputable academic standard” (UI 2001). Goals include the modernization of management and generation of private income. The much smaller ANU has 9,636 students, 1,155 doctoral. ANU was founded as four research schools to develop national capacity in research and doctoral training and maintain international linkages. Later, undergraduate studies developed on a modest scale. The structure is unique in Australia and has few world parallels. ANU still receives extra funding for basic research⁶ where it outdoes other Australians. Resources are concentrated in Pacific and Asian Studies, where ANU claims to have more specialists on Indonesia and China than any other English-speaking university.

There are significant differences between UI and ANU in patterns of international people movement, knowledge transfer and collaboration in higher education. Most Indonesian doctorates are completed abroad, Indonesia lacks a full capacity for doctoral training, but nearly all faculty are Indonesian. In Australia some faculty complete their PhDs abroad, the majority are trained locally and a high proportion are foreign born. There is a net outflow of students from Indonesia and a net inflow into Australia: Australia is the world’s fifth largest exporter of higher education and the largest exporter to Indonesia. Education and training constitutes 13% of Australian exports to Indonesia. However, UI and ANU are somewhat atypical: UI enrolls more international students than other Indonesian universities; ANU has a below average ratio of full fee students and a high proportion of doctoral students, one in-

⁶ In 2000, 46.3% of ANU’s research was classified “pure basic”, and 27.9% as “strategic basic”, a total of 74.2%. This compared with 54.5% in the “basic” categories in Australian universities as a whole. Correspondingly, applied research and the commercial development of research at ANU were relatively weak (DEEWR 2010).

ternational student in every five. In published research, Australia is globally active in most disciplines. In Indonesia academic knowledge is often codified in local/national journals rather than global ones. In 2005 Indonesia produced 205 globally published papers in the sciences and social sciences, compared to 15,957 by Australia (NSB 2010). Australian universities have extensive cross-border partnerships in relation to fee-based programs, and research and scholarly collaboration. In 2002 they signed agreements for 2,631 collaborations with Asia-Pacific institutions compared to 1,129 such agreements in 1995 (AVCC 2003). There are about 300 formal links between Australian and Indonesian institutions (AEI 2002), mostly initiated from Australia.

Data from the interviews with leaders at UI and ANU are now considered.

Perspectives on the Global Dimension

Taking the UI and ANU leaders together, their main sources of information about the global environment were the Internet including e-mail; personal networking and contacts with colleagues; and academic knowledge circuits including journals, books, meetings and networks. Some mentioned specific international organizations. The Rector of UI, Usman Chatib Warsa, who mentioned a broad range of sources, focused mostly on his networking with peers overseas. Likewise at ANU the Vice-Chancellor Ian Chubb focused on people interaction. He was privy to “a rich set of information resources” not available to “ordinary people”, including Embassy staff, senior government officials, and international visitors to Canberra. There were differences between the groups. ANU leaders used the Internet more than those at UI and were more strategic, tailoring information sources to fit specific purposes. Many ANU leaders emphasized local and international media as sources, whether by conventional or Internet delivery. Leaders at UI noted the weakness of local ICT infrastructures and skills. None mentioned the media as a source. At UI, though not ANU, several leaders cited as sources students and staff from UI currently based in overseas universities.

It seemed that for UI leaders it was necessary to be outside the country, or network with others outside the country, to develop a perspective on the global. For ANU leaders, the global dimension was inside the University, not only via ICTs but through meetings and seminars at ANU or elsewhere in the national capital Canberra.

Foreign University Models

Interviewees were asked whether there were universities in any other country that provided a useful example or model for them. Both UI and ANU leaders mentioned many examples. Neither group was wedded to particular national models, though Harvard was often cited. Both groups mentioned the National University of Sin-

gapore, where each university had active relationships, and also leading Chinese universities.

There were three differences between UI and ANU. First, UI respondents chose a broader range of examples from Europe/UK, Asia, North America and Australia. “We are polycentric” as one stated. International Relations Director Wardaningsih noted that UI did not follow one foreign model fully because of cultural differences. ANU respondents were more likely to mention UK and American cases, particularly Cambridge, named by 7 out of 12. Some Indonesian leaders mentioned Australia, seen by one as “very advanced in its technology”. Second, Indonesian leaders talked mostly in terms of national characteristics, while ANU leaders often discussed single universities in detail. Several UI leaders appeared to base their judgments on their PhD training while ANU examples mostly reflected current networks. Third, UI interviewees freely advocated cross-national modelling and borrowing, without concerns that UI would lose the capacity to control its distinctive evolution. ANU leaders were more wary of borrowing, and more inclined to emphasize their own claim as a unique model.

Understandings of Globalization

Interviewees were asked what they understood by “globalization”. Both groups talked about one-worldness, convergence, open borders, and global phenomena in local affairs. Nearly all leaders mentioned the impact of ICTs in sustaining a global communications environment. Many discussed aspects of people mobility. There was ambivalence or concern about economic globalization and competition, and varying views, especially at ANU, on whether economic transformation was inevitable. Only some focused on cultural or political aspects, though these were often exploratory and complex responses. Few gave a strategic overview. It emerged more in fragmented remarks about Americanization or first/third world relations, than by synthesis.

The ANU Vice-Chancellor distinguished between a hyper-globalized notion of “globalization” as economic competition and a positive notion of “internationalization” as cultural exchange. In its “more extreme form” globalization meant competing for staff, students, resources and research on a global scale. This created an “unnecessarily difficult” element of uncertainty. “I’m not a person who believes a free market will solve all our problems.... I don’t think there’s a free global market anywhere, except where the rich pound the poor into the dust.” ANU could survive in a more competitive environment “but if it’s totally deregulated no Australian university would survive”. In contrast “internationalization” meant ensuring the ANU curriculum was high standard and contemporary; and it meant international students and foreign staff at ANU, exchange agreements, ANU staff and students working offshore.

There were three main differences between UI and ANU. First, UI leaders talked about the novel impact of an open information environment. At ANU this was taken

for granted. Second, again, UI leaders saw globalization as proceeding “outer/in”. For ANU leaders global phenomena were not always welcomed, but were as much “inside” as “outside”. Third, ANU leaders were more likely to talk in terms of one-world systems, for example, global knowledge flows, global sustainability and mutual inter-dependence.

While UI leaders were positive about opening to the global dimension, which was seen as modernization, several were concerned about the implications for Indonesian cultural values. Globalization was disruptive, fragmenting and transformative. It challenged traditional assumptions about religion, public display and politics, families and the conduct of daily life, and ways of thinking and working in the university setting. The UI Rector noted that in the global era “cultural transmission occurs easily and openly”. Globalization affected all countries, but the degree of national preparedness for globalization varied. Indonesia might be less prepared than other countries. Though Western culture now flowed freely into Indonesia “our roots are in Asian traditional culture. These traditions are different from European culture”. Indonesia was at risk of becoming a “consumer” of the developed countries. Indonesia had to keep abreast of the West without losing its own cultural identity. There were UI courses in arts and culture such as speech, dance or painting, that strengthened students’ national identity. At the same time, advancing Indonesian identity could become a global project:

Indonesia is known for its strong Asian culture. It is actually something that can be sold. If I look at countries such as Japan and China, what they sell to other countries is their cultures. In technology, maybe, we are left far behind, but we are rich in culture.
(Usman Chatib Warsa, Rector, Universitas Indonesia)

Australia was at a lesser cultural distance from the USA and globalization was less obviously transformative. But there were more subtle dangers for self-determining national identity. “Globalization profoundly affects Australia. . . . We borrow from the US, we feed off the US more than I would like,” remarked one. ANU’s Allan Snyder feared that a few prestigious American institutions would gain immense worldwide mind-setting powers. Fellow centre director Andrew Blakers stated that:

A. Globalization is the process whereby things get standardised and everything looks the same no matter where you are on the planet.

Q.: Convergence?

A: Domination, rather than convergence, I would say. I haven’t noticed the Americans and the Indonesians meeting halfway. I haven’t noticed the Americans and the Australians meeting halfway. Hollywood or nothing.

(Andrew Blakers, Director Centre for Sustainable Energy Systems, ANU)

Several ANU staff noted that Australia’s location on the geographic and strategic periphery created difficulties. Research School Director Jim Williams remarked

It makes it much more difficult to interact to the level that is becoming necessary with globalization. . . . It is a little bit ironic; these days we have the Internet and we have instant communications across the globe so it shouldn’t be so important that Australia is remote, but I think it becomes important because, in order to develop trust between countries and individuals, face-to-face contact is still extremely important.

(Jim Williams, Director, Research School of Physical Sciences and Engineering, ANU)

On the other hand, being on the global periphery also had strategic advantages.

You need space. ... here we have space. Here we have a kind of independence. We can plug into the world in a second, but we can disengage. Many places you can't disengage. Being able to disengage is profoundly important.

(Allan Snyder, Director, Centre for the Mind, ANU)

Globalization, Higher Education and the University

Both groups emphasized the impact of global openness, competition and ICT systems on the University, its academic cultures and student and staff movement. Both mentioned international benchmarking. Both noted the new opportunities created by ICTs, for example in distance education. Nevertheless, at both UI and ANU there was a spectrum of affective responses to globalization, from the zealous embrace of global “inevitableities”, to scepticism and a hint (though not more) of refusal or disengagement. In both universities individuals varied between positive and negative potentials. They also varied in the extent, pro-activity and energy of their personal engagement in the global. Senior leaders tended to be more knowledgeable and more engaged.

The more the discussion about globalization stayed at a general level, the more the remarks made at UI and at ANU were similar, indicating that one aspect of globalization in universities is the generalization of a common discourse about it. The more the discussion moved to locality and detail, the more that differences emerged between the cultural effects in Indonesia and Australia, between developing and developed nation; between a university long an arm of the state (UI), and a university long administered as autonomous (ANU); and between a history of moderate global engagement (UI) and one of extensive international engagement (ANU).

As the UI leaders saw it, the primary institutional issue posed by globalization, in association with UI's recently acquired autonomy was the imperative to transform internal systems and cultures to operate more entrepreneurially and in a focused performance-driven manner, and to raise more funds. Though the immediate change was triggered by a government reform program, the Rector and others connected the autonomy decision to globalization. Global pressures and forces played a double role. They were starting points for UI's organizational transformation, through the immediate and daily impact of globalization, and the effect of global norms on national policy: university autonomy was endorsed by a World Bank loan program (World Bank 2003b). On the other hand globalization provided an ideological rationale for neo-liberal reform. At ANU a similar combination of globalization effects—direct, indirect, inferred, rhetorical—was playing out. Some ANU leaders attributed the business model of the university to globalization, as at UI. But at ANU globalization was old news, and the debate about managerialism was older still, predating the Internet. There was less interest in the alleged connection between globalization and organizational reform.

Another difference was that most Indonesian respondents understood the impact of globalization on the university in terms of culture, values and human needs, to an extent not evident at ANU. Leaders at UI were thinking actively about how to install the necessary expectations and behaviours. This was not just because of the newness of globalization or tensions between Americanized globalization and Indonesia. At UI leaders were more pastoral. At ANU, institutional responsibility stopped at an earlier point. Individuals had to manage global pressures and value tensions themselves.

There were also differences of emphasis in relation to people mobility. The main concern at ANU was to increase the number of international students, whether for commercial purposes or research purposes. In the Faculty of Engineering the overwhelming concern was to raise revenues. Some ANU personnel also mentioned the need to grow the outward movement of domestic students. In ANU Asian Studies undergraduate students spend one year in Asian universities. ANU had negotiated jointly badged degrees with the University of Singapore in Engineering, whereby students would complete part of the degree program in the partner country. Several ANU staff expressed concerns about sustaining an inflow of quality academic staff and paying local staff enough to head off brain drain to the USA. At UI there was little interest in inward student movement, there was a broad commitment to facilitating outward student movement, and the potential outflow of staff was a major problem, greater than at ANU. Indonesian salaries were further down the comparative scale.

At ANU the costs of global operations were factored into normal business, though more resources were needed, particularly for travel and student scholarships. At UI the global dimension was an add-on. The associated costs, including books and scientific materials, ICT systems and research, inhibited potential global activity. There were also differences about the globalization in teaching and research. Several UI staff talked up the need to internationalize research and curricula, for example by building English language and ICT skills. At ANU research had long been internationalized and the local curriculum was treated as an always-already global standard.

Cross-border Relationships and Activities

Interviewees were asked to describe the cross-border activities of the University (or Centre/Faculty). Both UI and ANU maintained an increasing number of contacts and collaborations, formal and informal. Research relationships played the largest part. In both universities cross-border collaborations were primarily driven by academic not commercial goals, though academic projects needed funding. Often, postgraduate study was the first stage of a longer-term pattern of cooperation. In the case of UI this began with staff studying off-shore; at ANU it more often began with international students studying at ANU. In both cases the country pattern of collaborations was broad, though ANU had a stronger orientation to the English-

speaking countries than did the UI. For example, no UI staff member mentioned a specific collaboration in the USA, though there were a large number of relationships with Australian institutions. Both universities had active relationships in East and Southeast Asia.

The main difference between UI and ANU was in the number, depth and scale of international collaborations. International Relations Director Wardaningsih stated that UI had about 70 collaborative agreements, with emphasis on Japan, Australia and the Netherlands. International collaboration was mostly small scale, such as meetings of international university associations⁷ and one-to-one projects. In contrast, the ANU Research School of Physical Sciences and Engineering alone had 150 active research collaborations, with partners in 27 countries. The ANU had more resources for international work, including linguistic capacity and a staff relatively mobile and internationalized in origins. Pro Vice-Chancellor Robin Stanton noted that ANU had 1,400 research-only academics that “spent a lot of time abroad”. In the ANU’s Contemporary China Centre the work, which was largely government funded, was primarily international. Often, international postgraduates remained in contact with the Centre after they graduated, and there was a full program of conferences and journal work. The Faculty of Asian Studies not only sent undergraduate students to Asia, trained foreign doctoral students and conducted cross-country research projects, it also coordinated non-academic projects, for example a government-financed scheme to bring Islamic leaders to Australia, a foundation-financed dialogue in several Asian countries, and security activity with Indonesia.

Preferred University Policies and Strategies

Leaders were asked to specify policies and strategies their University should adopt to be more effective in the global environment. Many interviewees simply advocated more global mobility as an end in itself, rather than focusing strategically on how to build global capacity or use global opportunities more effectively. Despite occasional remarks about the need to establish priorities, and to minimize exposure to risk, the dominant approach to the global seemed to be ‘more is better’.

Both ANU and UI, and their individual academic units, had formed policies and strategies designed to build cross-border activity. The principal approaches were better ICT systems, changes to research and curricula (particularly at UI) international agreements and collaborations, and international marketing (particularly at ANU). At UI strategies designed to enhance global competence and activity were conflated with reforms designed to create more business-like and performance-focused organization. At both universities the main future challenges were to secure more and more stable resources for international travel, student scholarships, re-

⁷ Including the Association of South East Asian Institutions of Higher Learning, the Asian University Network funded by ASEAN, the Australia-Southeast Asia University Network and the Asia-Pacific Rim Universities.

search collaboration; and to improve the quality of teaching; the quality and quantity of research; and ICT capacity.

At both universities there were questions about the willingness of staff to adjust to a more global era, though this was felt more widely and deeply at UI. UI interviewees discussed the obligation of the University to professionalize internal communications and management systems, including vision and strategy, performance management and quality assurance, and training and mentoring staff. One argued for coherent values and shared beliefs among staff, stating that all individuals needed to be made aware of the imperatives for change. Another argued that UI needed a road map for becoming a global research university. A third suggested that “by applying a reward and punishment system we can standardize our quality and our performance”.

At ANU, where the University was already internationalized, the concerns about system transformation were absent. In addition to resources, interviewees focused on staffing, quality and capacity in teaching and research, attracting international and domestic students, and research collaborations and priorities. Deputy Vice-Chancellor (Research) John Hearn argued for flexible research management, including broad-based engagement from a position of strength, as “you can’t predict where research is going”. The University’s research plan was grounded in national research priorities and ANU’s past achievements. It was “absolutely vital” to maintain a strong international doctoral student presence, despite the financial disincentives. ANU wanted 20% of both undergraduates and postgraduates to be internationals, but was insufficient scholarship funding: in framing international education as a market, the Australian government had downplayed foreign aid and research objectives. Parts of ANU outside the specialist Asia-Pacific units needed to commit more strongly to research networking in the region as distinct from North America, UK and Western Europe.

ANU PVC (Information) Robin Stanton noted that information infrastructure was essential to long-term capacity. It was often neglected because it did not generate much revenue, but a quality information base had to be nurtured, just like the human resource base. There was little other discussion of communication strategies, which for most people boiled down to on-line courses (UI) or individualized work patterns (ANU).

Similarities and Differences Between UI and ANU

Similarities

UI and ANU have much in common. Both are nation-building universities engaged in a process of self-globalization. This draws momentum from the institutionalization of global flows and signals, and is supported by government and university policies, revenue and prestige incentives, people movement and disciplinary

conversations. The central mediums of globalization are ICT-linked systems, an open information environment and cross-border collaboration between scholars and researchers. Both universities network confidently and broadly with international universities. Global engagement is driven primarily by academic not commercial objectives, except in engineering at ANU. In both universities global activity has become more extensive and intensive and is strongly supported by almost all leaders despite some defensive concerns about global economic competition and Americanization. Both groups want to improve global capacity and see this as integral to local identity and capacity and to the national position of the university. In both universities, for long inner-referenced and nationally referenced, senior leaders now globally reference them automatically. The leaders focus on collaborative research and staff and student mobility, with varying emphases. Within the universities, especially UI, global activity also has a more universal significance: global connectivity or 'internationalization' functions as an all-purpose indicator of modernization, performance and university quality.

Resources are a central concern in both places, a newer concern at UI than at ANU. Both are creating performance managed environments and quasi-corporate organization though the change is less raw at ANU. In the minds of some leaders, especially at UI, the business model has been invested with the modernizing ambience and sense of inevitability attached to globalization. There is a danger here that generic corporate reform and hyper-globalist ideology will function as proxy for a more locally nuanced global strategy (Deem 2001). This is ironic because in both universities there appears to be disjunction between globally influenced goals and strategy, and the nationally grounded character of resource capacity. Thus when considering developmental *strategies*, both sets of leaders emphasized global elements such as ICTs, cross-border research and fee-based places. Nationally bound objectives might be less important than before. But in the construction of university *identity* the balance was somewhat different. Both sets of leaders still understood their institution in terms of its historical role as a national educational leader. Neither would for a moment consider setting aside the prestige, power and resources they derive from this. In their *mission* statements both envisage a balance between national and global dimensions.⁸ (Table 10.2 summarizes these issues).

In relation to *capacity*, the nation was the central determinant in both cases. There was much interviewee discussion of public funding cuts, local fundraising and the inhibiting effects of regulation. The global dimension offered little revenue. Some at UI hoped for offshore research grants in future. ANU research schools derived some monies from collaborative projects. International student fees generated only 4.3% of ANU income in 2002, though crucial in engineering (DEEWR 2010). Australian governments provided three dollars in five, local students a dollar more. The nation regulates the global university and continues to pay for much of it, though the role of public spending has trended down in many nations including Indonesia and Australia. This growing disjunction between globalizing university

⁸ Nevertheless the bias towards global elements of strategy may have been partly due to the methodology of the study, which was primarily focused on global issues.

Table 10.2 Universitas Indonesia and the Australian National University: respective roles of global and national elements

	Global dimension	National dimension
University Strategy	Global objectives and external benchmarks are increasingly important in framing strategy.	National policies and nation-building tasks still matter, but do not set the horizon of strategy.
University Identity	University self-identity is partly derived from the international role [more at ANU than at UI].	National leadership remains central to identity, not just as a role but as a resource [especially at UI].
University Mission	Both the UI and ANU mission statements foreground internationalization objectives.	Increasingly, the national mission is pursued through the international mission [more directly at ANU].
University Capacity	Global costs exceed global revenues, though 4% of ANU income is from foreign students.	National government policy, and student fees, remain decisive in determining resource capacity.

strategy and (often declining) national capacity creates problems for both parties. Governments resent having to foot the bill for universities always moving beyond the horizon. Universities doing the nation’s work out in the wider world are brought back to earth with a thud by cuts in public funding. They can create a culturally independent identity, but despite business rhetoric, devolution and marginal revenue raising, they lack financial independence. The net costs of globalization are difficult to meet, especially in developing countries.

Differences

UI and ANU are at different points in the trajectory of self-globalization, under different conditions. ANU’s global networking is “thicker”, much more extensive and intensive, longer institutionalized, and supported by much better financed infrastructure. Two factors are crucial. First, in the Australian context ANU is remarkable for the number, depth and fluency of its global engagements, built on its long-standing national mission as an internationalized research university, compared to the narrower self-globalization of those Australian universities driven largely by full fee revenues (see Chap. 20). Second, like other Australian universities, ANU enjoys a developed ICT capacity. For ANU staff the networked environment is the principal working medium. UI’s ICT infrastructure is advanced in the Indonesian context but there is less day-to-day Internet use and global media are marginal. Cultural and linguistic distance also plays a role: at ANU, ICT systems and global contents are user friendly. Resource constraints in relation to books, equipment, travel and the development of global and research competences are also more apparent at UI than at ANU.

The most telling difference is that, while at UI interviewees see an Americanizing globalization as external to them, and culturally ‘other’, at ANU that same

Americanizing globalization is largely internal and familiar, though Australia's geo-strategic position on the Anglo-American periphery means it is also strategically remote. At UI globalization challenges traditional university culture. UI leaders are strongly committed to change but are also ambivalent and worried, supporting greater openness but deeply committed to Indonesian identity.

Hierarchy and Asymmetry

When the perspective is shifted from national context to global context the capacity and potential of UI and ANU changes, in three ways. First, both UI and ANU gain status within their nations, being more internationalized than their fellows. Second, both UI and ANU are overshadowed by the strongest institutions in the Atlantic countries. It seems unlikely an Australian university could reach the global top 20, and less likely at UI. Third, ANU has a much greater global capacity and potential than UI, which is in a developing nation. Global openness and competition exacts a harsh price from strong universities in the developing world, that suddenly find the game is slipping away from them, and they must make a sudden leap forward to bridge the gap. While they might have the strategic acumen, they lack the resources. Building UI's capacity in the global environment is an urgent and anxious task, one much in the minds of UI interviewees.

Universities in developed nations hold most of the cards. They have a superior public and private resources, much better ICT systems and research capacities—arguably, the crucial elements in global university networks—and a greater capacity to attract and hold students and staff. They have better English-language and PhD training capacities and more staff with global competence. At present UI can fund little basic research and attracts few foreign students and staff. It is globally vulnerable because of brain drain; and because the cultural challenge of globalization might deconstruct local academic identity faster than a confident, autonomous global capacity is created. UI's present global role is confined to its role in Indonesia and as gateway between Indonesia and the world. It could lose ground, in Indonesian eyes, vis-à-vis foreign universities, so that global weakness feeds back into the fragmentation of national position. In contrast, ANU is globally proactive and competent and fairly well resourced, so it can play a modest part in its own right in directly constituting global relations in higher education, mostly in the Asia-Pacific. UI is the Indonesian gateway for the World Bank Global Development Learning Program for on-line education in the developing world. ANU is helping to design the web platform for the whole venture.

Global hierarchy shows itself also in the asymmetry between the two. Both groups mentioned the other university with respect, but whereas for ANU leaders Indonesia is predominantly a site for ANU research, for UI Australian universities are a model. ANU people mentioned collaborative research and other ventures all

initiated from Australia. Students and staff move from Indonesia to ANU but none move from Australia to UI.

Conclusions

There are no iron laws here. The impact of globalization in individual universities—like the impact of neo-liberal policy and the new public management⁹—are contingent and variable, practised, contested and interpreted in numerous ways. Local and national history and context matter. Universities in the global environment are not starting from positions of equivalence. Capacity and potential are framed by geo-strategic power.

Both of these universities have competent leaders aware of their strategic setting. In large part UI and ANU have a different global capacity because their nations have a different capacity. While neither positioning (nation or university) is fixed in stone, and both are slow to change, it is easier for a nation to lift the relative position of its universities via changes to funding and regulation, than to lift its overall competitive economic position. But contemporary governments want self-financing universities, and global activity is subsidy dependant. Neither ANU nor UI is assured of its globalization trajectory. ANU has long leverage' international activities to sustain national academic capacity and mission, accumulating more global capacity in a feedback loop, but this strategy depends on continued government willingness to provide special funding for globally linked basic research. In the Australian policy environment, this is uncertain. Meanwhile UI has a harder road. It must develop its global role and non-government funding at the same time. Autonomy is necessary to effective global strategy, but by itself will not deliver global competence or global revenues. Indonesia attracts few fee-paying foreign students. Global networking is expensive. Unless Indonesia subsidizes UI's evolution as a global university, as has Australia at ANU, UI will fall short.

The difference between UI and ANU in global capacity translates into a difference in potential, in what is possible for each university in the foreseeable future. Yet globalization calls up specialized skills and attitudes within reach of any institution. In an open global environment, all universities can work to improve their global capacity and potential. For autonomous universities many strategic options are in reach. Neither UI nor ANU has exhausted the possibilities before it. The strategic openness of the global realm, in the context of limited resources and situational specificity, demands imaginative realism of the highest order. This makes university leadership difficult. As the ANU Vice-Chancellor remarked during his interview, maximizing the effectiveness of the university in the global environment is "the ultimate performance indicator".

⁹ The contingent and variable impact of the New Public Management emerges in studies of the emergence of managerialism in eleven countries collected by Amaral et al. (2003).

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Part IV
Asia-Pacific National Strategies

Chapter 11

Enhancing Global Competence in Higher Education: Malaysia's Strategic Initiatives

Gurnam Kaur Sidhu and Sarjit Kaur

Introduction

The changing interests of governments, institutions and individual students have generated the need for a better understanding of how globalization affects the provision of higher education. As Knight (2008, p. 23) notes globalization is “probably the most pervasive and powerful feature of the changing world”. In higher education around the globe there is a new order characterized by complexity, interconnectedness and diversity. This has triggered a restructuring process in higher education that seeks a redefinition of relations between the university, the state, and local and foreign economies.

While traditionally universities were predominantly interested in the transmission, preservation and interpretation of knowledge, contemporary education institutions are increasingly seen as essential to the creation and dissemination of knowledge (Altbach 2007). One change is the renewed interest in strengthening higher education in developing countries. In what is now termed the “knowledge economy” these countries are conscious of national needs for science, scholarship and a new generation of personnel that can exercise technological and intellectual leadership (Naidoo 2007). Governments and higher education administrators support the internationalization of national higher education systems to facilitate the flow of information, knowledge and skilled people. The global mobility of students and staff has increased. New technologies connect scholarly communities, forming international networks with English as the lingua franca.

The global trend has also placed real and strong policy pressures on national governments to roll back state regulation and transform non-market and “social” spheres such as public health and education services into arenas of commercial activity. In the increasingly market-oriented context, higher education is undergoing a new phase of transformation which is changing the relationship between government and institutions and characterized by policy changes and institutional devel-

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opments demanding better quality, efficiency and accountability from current and future providers of higher education.

Institutions of higher education all around the globe have put in place national policies designed to address the key drivers of globalization and internationalization with the objective of keeping abreast of worldwide competitors. Much thought and emphasis have gone into policy aspects such as the changing context of higher education, the growing market of higher education, the emergence of the stakeholder society, and transnational education. For example, Hawthorne (2007) observes that many OECD countries, in seeking to attract foreign students to their shores have liberalized immediate access to work, amended migration policies to facilitate post-graduate stays and created opportunities for conversion to permanent residence.

Emerging Contenders and Drivers of Internationalization

Baker (2007) advocates a reorientation of judgments about the global “superpowers” of higher education. While the United States has been and still is the global higher education “superpower”, it is becoming increasingly obvious that China’s higher education is progressing rapidly. If this trend continues there is a strong possibility that China, with a population of 1.3 billion people, will replace the USA as the global superpower of higher education (Wan et al. 2008). China’s *Development Outline 2010* plans an enrolment in higher education institutions of 6.5 million for 85% of people in the 18–21 age cohort. China’s impressive economic performance following its transformation from a planned economy to a market economy shows that its objectives in higher education can be achieved. Kell and Vogl (2008, p. 329) report that China, Malaysia and Singapore are “actively recruiting international students” and note that in 2004 there were 110,844 overseas students from 178 countries enrolled in colleges and universities in China, a 42% increase from 2003.

China already has the largest education system in the world. The number of degrees awarded by universities in China exceeds the USA and India combined (Baker 2007) and China is the top source of foreign students in Britain, Australia, Germany, Japan and New Zealand (Verbik and Lasanowski 2007). China attracts the attention of foreign universities keen to explore collaboration. One is John Hopkins University which jointly conducts degrees in international relations with Nanjing University. Partners from the UK, Australia and other Asian countries are also involved.

It is anticipated that within the next 10 years, university rankings worldwide will shift to include more universities from other countries such as Singapore, China, South Korea and India. These countries are working to “transform their knowledge economies and to develop national strategies to position their higher education institutions in a competitive world” (Spanier 2007, p. 6).

While concepts of globalization and internationalization continue to develop according to the views of individual researchers, in the evolution of these terms there

is common ground. Knight (2008, pp. 29–30) posits the following four categories of rationales driving internationalization:

- Social/cultural—national cultural identity, intercultural understanding, citizenship development and so on
- Political—foreign policy, national security, technical assistance, peace and mutual understanding, national and regional identity
- Economic—economic growth and competitiveness, labour market, financial incentives
- Academic—international dimensions to research and teaching, extension of academic horizon, institution building, profile and status, enhancement of quality, international academic standards

In the real world, strategic initiatives are accelerating at such an unprecedented rate that the internationalization of higher education is no longer an option but a critical aspect for all institutions. According to UNESCO's *Meeting of Higher Education Partners* (2003; cited in Mohamad et al. 2008, p. 161), the combined impact of internationalization and globalization on institutions of higher learning is fuelled by a number of factors. One is the perceived importance of knowledge for the economic, social and cultural well-being of society. Another is the ongoing integration and application of information and communications technologies (ICTs) to learning, teaching and research. At the same time, there are new pressures and demands on higher education institutions to prepare graduates for life and work in an international context. This is associated also with the need to facilitate the mobility of highly qualified human resources, especially in the competitive international labour market for academic and scientific workers.

A further driver of internationalization has been decreasing or stagnating public funding for higher education in most countries around the world, without a corresponding decline in demand for access to higher education. This has led to increased pressure on higher education institutions to diversify funding resources in order to meet society's demands. This fuels the commercialization or modification of education, including at the international level. At the same time, new providers have emerged, and innovations in the delivery of higher education in the overall knowledge production system. Often these operate across international borders.

The call to internationalize the university on a global scale has gained such ascendancy that it is a catch-word in many institutions, and has even emerged as a research area in its own right. Spanier (2007), in questioning the importance of the globalization era, says that nevertheless, for most universities it has never been more urgent and relevant to internationalize, so as to prepare students to contribute within and exist peacefully with diverse populations. Any discussion of the key drivers of internationalization and globalization must acknowledge the nature of the university and its role in the transmission and creation of forms of culture and knowledge. It is essential to recognize the universal nature of the advancement of knowledge as a global enterprise. Spanier (2007) sets out aspects crucial in the internationalization of today's universities. One is the role of international organizations, for instance, the Worldwide Universities Network (WUN), in providing

intercontinental opportunities and bringing together leaders in education to focus attention on international education. A second is the shaping of new curricula which integrates global perspectives into the programme at many levels. A third is the student experience, whereby international students bring cultural diversity to university campuses.

According to Ruben (2004), universities can no longer operate as ivory towers independent of society. They need to play active roles in the community. They not only help generate and disseminate knowledge but more importantly provide services to the community. The service to community or University-Community Engagement (UCE) is an important policy agenda in developed universities like the USA (Maurrasse 2001) and Australia (Garlick 2000). In contrast Lee et al. (2008) make the observation that the vision and mission statements of most Malaysian universities do not give much emphasis to community service. No systematic approaches or mechanisms have been put in place for effective collaboration. To remain relevant in changing economies, institutions of higher education should strive to equip students with the relevant knowledge, skills, attitudes and competencies so that they will be able to live and work in an international and multicultural society of the future.

Hanna (2003) sees the role of universities as helping to shape a positive future. Universities should be seen as consciously providing better access and equity to their citizens and should mould future leaders into the well-educated citizenry of tomorrow's globalized world, even if this is seen to be a heavy, if not challenging, burden for many world economies. Hanna (2003) in his article *Building a Leadership Vision: Eleven strategic challenges for higher education* lists the following strategic challenges for higher education in the twenty-first century: removing boundaries (moving from traditional elite "ivory tower" on-campus activities to a new networked communication-rich and much more accessible environment); establishing interdisciplinary programs; supporting entrepreneurial efforts and technology; redesigning and personalizing student support services; emphasizing connected and lifelong learning; investing in technologically competent faculty; building strategic alliances with others such as the corporate sector; incorporating learning technologies into strategic thinking; measuring programme quality; achieving institutional advantage or niche areas; and transforming bureaucracy, culture and assumptions. To address these 11 strategic challenges it is critical to have visionary institutional leaders that support innovation and experimentation, while promoting sustainable social and economic development in knowledge-intensive societies.

Higher Education in Malaysia

At the time of Malaya's independence in 1957, there was no university in the country. There was a university in Singapore established in 1949, the University of Malaya, resulting from the merger of two well-known Singapore institutions. King Edward College of Medicine in Singapore, recognized as a full-fledged medical

college since 1915, was the only academic institution offering courses leading to a degree. The second institution, Raffles College, offered courses in English, history, geography and the subjects leading to a diploma. In 1959, a campus of the University of Malaya was opened in Malaya's capital, Kuala Lumpur. This heralded the first wave of higher education. When Malaysia was formed in 1963 University Malaya was the only university producing trained manpower for the needs of the country (Haji Ismail and Musa 2007, p. 26). It had four faculties: arts, science, engineering and agriculture and its structure and curriculum content followed the British educational system.

The racial riots of 1969 and the drawing up of the New Economic Policy resulted in four new universities: Universiti Sains Malaysia (1969), Universiti Kebangsaan Malaysia (1970), Universiti Pertanian Malaysia (1971, now Universiti Putra Malaysia), and Universiti Teknologi Malaysia (1975) (Lee 2004). These additional universities were established to correct the widening socio-economic disparities between the Bumiputra (indigene population) and the non-Bumiputra (non-indigene) communities and the lack of national unity among the races. The latter was perceived as a direct result of implementing a British model of university education. The new universities adopted "national integration and unity" as their main objective, as outlined in the Second Malaysia Plan (1971–1975) (Haji Ismail and Musa 2007, p. 27). In its administration, the Malaysian university was no longer modelled as autonomous. It came under direct state control. Universities were required to adhere to guidelines set up by the Ministry of Education with regard to "financing, staff recruitment and promotion, curricula, medium of instruction, and student enrolment" (Lee 2004, p. 42).

Currently, the Malaysian higher education system comprises 20 government-funded universities, 37 private universities and university colleges and about 300 private colleges (Ministry of Higher Education 2008). These are all multi-faculty institutions offering a wide variety of courses. Table 11.1 presents a brief profile of higher education in Malaysia:

Malaysian degrees correspond to Bachelor, Master and doctoral degrees with the Bachelor degree requiring 3 years of full-time study, the Master degree requiring 2 years and full-time studies for a doctoral degree taking about 4 more years (Kaur

Table 11.1 Profile of Malaysian higher education 2007. (Source: Ministry of Higher Education 2008)

Key indicators	Public institutions	Private institutions	Total
Student enrolment	382,997	365,800	748,797
Graduate output	85,448	83,431	168,879
Number of international students	14,324	33,604	47,928
Number of academic staff	23,567	18,081	41,648
Number of staff with PhDs	6,109	1,670	7,779
Number of staff with Masters	12,717	6,846	19,563
Number of foreign staff	1,027	1,376	2,403
Number of Malaysian students studying abroad			54,915

et al. 2008). Of the 748,797 students in institutions of higher learning in 2007, 388,580 (51.9%) registered for undergraduate programmes, 34,755 (4.6%) for Masters programmes and 11,133 (1.5%) for doctoral studies. More than half the students in Malaysian public universities are females. Postgraduate student enrolments have increased significantly in both public and private higher education institutions, as workplace demand for knowledge workers grows. In 2007 there were 40,550 postgraduates in public universities and 5,338 in private universities and university colleges (Ministry of Higher Education 2007a).

Studying overseas is attractive to many Malaysian students. In 2007, 54,915 students pursued tertiary education abroad in countries like Australia (13,010), the UK and Ireland (11,490), Egypt (6,896), the United States (5,281), Indonesia (4,565) and elsewhere (Ministry of Higher Education 2008). In public universities in 2007, of the 23,567 academic staff 6,109 had PhD qualifications and for 12,717 their highest qualification was a Masters degree. The public universities employed 1,027 foreign staff that year (Ministry of Higher Education 2008), 138 as professors, 186 as associate professors and 508 as lecturers. In comparison, only 9.2% of academic staff in private institutions of higher learning in Malaysia had PhDs.

Throughout the 1990s private education in Malaysia grew at a rapid pace, especially after the implementation of the Private Higher Educational Institutions Act in 1996. From 156 private education establishments in 1992, the number rose to 35 by 1996, 70 in 2000 and 559 in 2004 (Ministry of Higher Education Report 2006, p. 23). No doubt the development of the private sector has reduced the number of Malaysian students studying abroad over the last decade. This suggests that the government's deliberate strategy to restrain student mobility is working but begs the question as to whether additional domestic capacity (in the form of new foreign branch campuses) would further slow mobility or whether those Malaysians continuing to study abroad are impervious to domestic opportunities (OBHE 2004).

In envisioning the economic growth potential of transnational education, the government has encouraged and allowed more partnerships with foreign universities. From 1999 onwards, there was a more wide-scale creation of private universities in Malaysia, with the setting up of the Multimedia University (MMU) in Cyberjaya with its branch in Melaka; Universiti Tenaga Malaysia (UNITEN) in Kajang, Selangor and its branch set up in 2001 in Bandar Muadzam Shah; Pahang; Universiti Tun Abdul Razak (UNITAR) in Petaling Jaya; Universiti Teknologi PETRONAS (UTP) in Tronoh, Perak; and International Medical University (IMU) in Bukit Jalil, Kuala Lumpur. After these institutions were established and began to receive encouraging enrolment numbers, more private higher educational institutions including polytechnics and community colleges were set up.

Until 2004 the universities were administered by the Department of Higher Education under the Ministry of Education. In 2004, after the general elections, ministerial governance was re-arranged to ensure expansion and sustainability of tertiary education in Malaysia. The Ministry of Education was split into two. The new Ministry of Higher Education encouraged administrators and policy makers to develop strategic planning and marketization plans to promote Malaysia as an education hub.

Issues in Addressing Global Competition in Higher Education

International Education and the Hub Strategy

The Ninth Malaysia Plan (2006–2010) includes a policy initiative to turn Malaysia into a regional education hub, “a regional centre for excellence in education and training through smart public-private partnership” (Kaur et al. 2008, p. 1). Many resulting strategic initiatives have been put in place by the government. Capacity building initiatives include the enhancement of research and development capabilities, with a target of 50 researchers, scientists and engineers (RSE) per 10,000 labour force in 2010; promotion of development through international cooperation; and producing tertiary institutions of international standing, abiding by the quality guidelines of the Malaysian Qualifications Agency). Human capital development is seen as central to both national needs and the international hub strategy. It involves increasing access and equity in higher education, increasing undergraduate and postgraduate enrolment, and expansion of post-doctoral fellowships. A total of 1,631 research and development projects have been undertaken under the Intensification of Research in Priority Areas (IRPA) program. At the same time, the strategy to make Malaysia into an educational hub asserts the national mission and character of Malaysian higher education. The Ninth Malaysia Plan emphasizes links between higher education and national economic development, improving the quality of higher education and linking higher education with national culture and identity (Abu Bakar et al. 2008).

Developed countries like the USA, the UK, Australia and many countries in the Asian region such as Singapore, South Korea and China have embraced the competitive market-driven view of higher education. Malaysia’s neighbour, Singapore, has systematically put in place strategies to actively address global competence and transnational higher education in its effort to provide quality higher education in the city-state. The two public universities in Singapore, Nanyang Technological University and the National University of Singapore, have been assigned the task of providing world-class education to its citizens by expanding postgraduate education and research, reviewing undergraduate curricula to place emphasis on cultivating students with creativity and thinking skills; and transforming Singapore as a hub of education, learning and information in the Asia-Pacific region (Mok 2008). Other recent higher education reforms include the setting up of an International Academic Advisory Panel (IAAP), comprising prominent scholars from international higher education institutions research; and the establishment of Singapore’s third university in August 2000, the privately owned Singapore Management University formed in collaboration with the Wharton School of Business at the University of Pennsylvania. This strategy has injected a degree of “internal competition” into the university sector although these three universities have been tasked to develop their own unique characteristics and niches (Lee and Gopinathan 2001). Another promising strategy of higher education reform in Singapore is closely related to Univer-

sity Governance and Funding Review (UGF) in 2000 embarked by the Ministry of Education, which aimed to ensure that systems and structures in relation to talent management, organizational processes and resource allocation were properly linked to their mission and objectives of long-term development (Mok 2008).

Malaysia realizes it cannot lag behind. In promoting itself as a hub for education excellence in the South East Asian region, the Malaysian higher education sector has to offer attractive, comprehensive and supportive student packages if it intends to attract large numbers of international students. The Observatory on Borderless Higher Education (OBHE 2009, p. 1) reports that private sector parties in Malaysia are laying the groundwork to attract a prestigious university from China and at least one “top-ranked” universities from Hong Kong to set up a branch campus in the Iskandar Development Region in the southern state of Johor. This region, comprising an EduCity where research and development centres and cyber incubators will be co-located with two ports and a financial district, will create an international “hub” that brings universities together with national and international companies.

Table 11.2 shows the number of international students from selected countries in public and private universities in Malaysia.

There were 47,928 international students from 175 countries in the Malaysian higher education sector in the year 2007 (Ministry of Higher Education 2008). Verbik and Lasanowski (2007) note that the rapid increase of international student numbers in Malaysia has made it one of the “emerging contenders” for international markets of foreign students. Between 2002 and 2007 the enrolment of international students grew from 30,397 to 47,928. The three main groups of foreign students are Indonesians, Chinese and students from the Middle Eastern countries such as Saudi Arabia and Yemen. According to Wan et al. (2008), Middle Eastern students in Malaysia increased from 2,096 in 2003 to 9,122 in 2007, making them the largest group of foreign students in Malaysia. A key strategy of the Ninth Malaysia Plan (2006–2010) is to market Malaysia’s higher education services more aggressively overseas, to increase international students studying in Malaysia to 1,00,000 by 2010.

Table 11.2 Numbers of international students from selected countries in Malaysian public and private higher education, 2007. (Source: Ministry of Higher Education 2008)

Country of origin	Number of students
Indonesia	8,454
China	6,458
Iran	3,678
Nigeria	2,884
Bangladesh	2,506
Yemen	2,016
Botswana	1,490
India	1,350
Pakistan	1,328
Thailand	1,145
Sudan	1,142
Maldives	1,067
Saudi Arabia	1,048

Over the last decade, Malaysia has developed strategies to actively recruit students from Indonesia and the Middle East. Foreign education offices have been set up in Beijing, Dubai, Ho Chi Minh City and Jakarta to market Malaysian education. Visa requirements now allow international students to work part-time.

Malaysia also occupies an important place in the development of transnational higher education in the English-speaking world. It pioneered twinning from the late 1980s and the 3+0 model—where a student may take an entire undergraduate degree from a foreign university in Malaysia—from 1997 (OBHE 2004). In part these transnational developments were deliberate governmental strategies to help curb the loss of talent arising from students studying abroad. A special envoy equivalent to a ministerial status was elected to attract blue-ribbon foreign universities to set up branch campuses in Malaysia. To date the following universities have set up branch campuses: University of Nottingham, Monash University Malaysia, FTMS-DeMonfort University Campus, Curtin University of Technology campuses in Lutong and Miri, and Swinburne University of Technology in Kuching, Sarawak.

The Ministry of Higher Education expects university leaders to ensure that internationalization is a priority. A recent study conducted by Mohamad et al. (2008) show that implementation of internationalization in public universities is rather low. Expatriate faculty teaching staff average just ten per institution across the public and private universities with the majority from ASEAN and the Middle Eastern countries. Faculty members spending time overseas for short periods of not less a month average 24 in public higher education institutions and 0.3 in the private sector. Malaysian faculty staff currently serving on international bodies number 4.7 for public higher education institutions and 15.2 for the private higher education institutions. Annual attendance at international conferences among Malaysian faculty staff averages 3.2 in public higher education institutions and 9.3 for their private counterparts (Mohamad et al. 2008, p. 167).

Does Malaysia Have the Human Capital it Needs to be Globally Competitive?

Among the challenges facing Malaysia within the global economy is to ensure the country's economy remains robust and sustainable. Malaysia has prospered as a successful production-based economy, but other countries with lower wages and more Foreign Direct Investment have also become responsive to the global economy, and have the competitive edge. An economy that is “primarily based on mass production, low cost manufacturing efficiency, relatively unskilled labour, and low wages” has to be replaced by an innovative, knowledge-based economy which integrates science, technology and engineering into the production process (World Bank 2007). It is an economy that will only thrive on the knowledge, innovation and design capabilities of its knowledgeable and skilled workforce.

In launching the National Higher Education Strategic Action Plan the Prime Minister pointed out that Malaysians “need nothing less than an ‘educational revo-

lution' to ensure our aspirations to instil a new performance culture in both public and private sectors are not crippled by our inability to nurture a new kind of human capital that is equal to the tasks and challenges ahead" (Ministry of Higher Education 2006, p. 4). But according to the World Bank (2007) the number of unemployed graduates jumped from 42,500 in 2000 to 74,182 in 2004.

Though some choose to highlight the issue of unemployment, the Minister of Higher Education, Mohamed Khaled Nordin has been quick to point out that there were close to 23,000 registered vacancies waiting to be filled in multimedia super corridor (MSC) status companies (*The Star* 2008). He highlighted the demand–supply mismatch between technical and soft skills needs of the ICT (Information Communication Technology) industry, noting that the Impact Survey 2007 indicated that the root cause of this mismatch was the difference between the competency levels of graduates and the demands and expectations of market-driven employers. Nevertheless, the issue of unemployed Malaysian graduates has become a matter of open public debates both in parliament and in local dailies. The main reasons cited for graduate unemployment are limited English Language proficiency and poor communication skills. A study by Sirat et al. (2008) pointed out that close to 31,000 university graduates were still unemployed in the last quarter of 2006. The study suggested the reasons for the high number of unemployed graduates included poor mastery of English especially communication skills, weak interpersonal skills, and a lack of proactivity and initiative in facing and overcoming workplace problems. The report also pointed out that graduates were unable to apply their knowledge to the work environment, or work in teams. They were unwilling to learn from subordinates, paid too much attention on hierarchy and status, and were “narrow minded”.

A study funded by the Ministry of Higher Education and conducted by Haji Sarudin et al. (2008) investigated the English language proficiency of Malaysian public university students, including 405 students from six public universities, and the perceptions of 117 academic and business leaders. The results are shown in Table 11.3:

Interviews and focus group discussions held with university academics, government officials and business executives from public and private sectors revealed lack of satisfaction with the English language proficiency of local graduates. Participants found the graduates to be limited users of English in speaking and writing. The university academics felt the students were not sufficiently proficient to undertake programmes conducted in English and had limited reading comprehension skills, insufficient writing skills to complete academic tasks, and limited language proficiency to express ideas and thoughts orally or participate in group discussions. The business executives felt Malaysian graduates were ill-prepared for employment, and were concerned about the students' limited ability to express their thoughts and ideas, prepare written reports, present reports orally or write minutes of meetings. The business executives felt that English should be used as a medium for instruction in all science and technology-based programmes. Both groups said more time should be allocated for teaching English in tertiary institutions especially English for Academic Purposes (EAP) or English for Occupational Purposes (EOP).

Table 11.3 The English language proficiency of Malaysian university graduates. (Source: Haji Sarudin et al. 2008, p. 47)

Language skill	Public university students' performance in English proficiency test (n=405)		Academics' and business leaders' perceptions of students' English language proficiency (n=117)
	Band	Description	
Listening	6	Competent user	Modest user
Speaking	4	Limited user	Limited user
Reading	5	Modest user	Modest user
Writing	4	Limited user	Limited user
Grammar	6	Competent user	–

Language Competence of Academic Staff

The failure to bring graduates to expected standards of English language learning is matched by an inadequate spread of English competence among academic staff. The Malaysian government recognizes that to embrace the changes brought about by globalization and internationalization, including the need to attract foreign students, good command of the English language, the international language for knowledge, is critical. Further, excellent command of English helps researchers to gain recognition in as it helps them publish and disseminate their findings. Mohd. Don et al. (2008) carried out an investigation of the standards of English among members of the academic staff in Malaysian public universities. The study, financed by the Ministry of Higher Education, involved 1,100 academic staff from 11 public universities. Language proficiency was analyzed based on six bands. The results are shown in Table 11.4.

The findings revealed that the overall proficiency among university academics is generally good. Scores for the oral test were higher than for both the writing and reading comprehension tests. Nevertheless, reading comprehension abilities were much lower than writing abilities. The results of this study also indicated a significant difference in language proficiency in terms of academic positions (lecturer, se-

Table 11.4 Overall English language proficiency among Malaysian academic staff. (Source: Mohd. Don et al. 2008, p. 15.)

Language skill	Band 1 Very limited (%)	Band 2 Limited (%)	Band 3 Modest (%)	Band 4 Good (%)	Band 5 Very good (%)	Band 6 Excellent (%)	Total (%)
Oral	1.0	2.2	9.0	22.8	37.7	28.2	100.0
Writing	4.1	14.0	28.3	26.1	20.4	7.1	100.0
Reading	11.8	16.2	28.9	13.7	13.7	1.3	100.0
General Proficiency	2.0	6.2	2.8	36.1	27.3	3.6	100.0

nior lecturer and associate professor) but no significant difference in overall scores between staff from the sciences and the non-science faculties.

Though the results indicated that most university staff possessed a Band 4 and above in all linguistic skills, there is no place for complacency as academia need to strive towards a culture of excellence here. Academics in Malaysia need to be bilingual in order to play an effective international role in internationalization of higher education and engaging in activities such as faculty and student exchanges, and sabbatical periods in foreign universities. The Ministry of Higher Education has called for an increase in academic staff professional development in terms of English language support programmes.

Recent Policy Initiatives

The National Higher Education Strategic Plan launched in 2007 is seen as a set of policy initiatives designed to revolutionize and transform higher education in Malaysia (Ministry of Higher Education 2007b). The transformation agenda is seen as a stepping stone towards promoting the development of quality human development and helping Malaysia establish a world-class university system so that Malaysia can be established as a regional hub for higher education.

Development of Holistic Quality Human Capital

In tabling the 5-year Ninth Malaysian Plan (2006–2010) the former Prime minister stressed that universities must aim towards the development of a holistic model of human capital, emphasizing knowledge, skills, and intellectual capital in fields such as science, technology and entrepreneurship. Furthermore, to foster national unity among multiracial, multi-religious and multiethnic Malaysians, it was envisioned that university courses will focus on intercultural understanding and diversity. The new dynamic and relevant curriculum and pedagogy would also include inter-disciplinary approaches and ones that stimulate creativity, innovation, leadership and entrepreneurship. Internationalization of higher education would mean that universities in Malaysia would benchmark with leading institutions in the world.

Going hand-in-hand with the development of holistic graduates is the development of academia. To uplift the university profession, the Strategic Plan requires all higher education institutions to deepen their core expertise and create conducive environments that will help foster a culture of excellence among their academic staff (Ministry of Higher Education 2006). Academia must look for avenues for collaboration with both industry and international contacts through exchange programmes at all levels. In 2006, there were 20,000 lecturers in Malaysian universities and as noted, only about a quarter of them possessed a PhD or equivalent qualification. The Government under the Strategic Plan hopes to raise this to 60% by 2010. The

government also hopes to provide reward and recognize academic achievement by providing career advancement opportunities to the best performers. In this regard, Malaysian academics will be encouraged to publish regularly in recognized, international high-impact and refereed journals.

Research and Development Policy

With four designated research universities in Malaysia, there are concerted efforts to prioritize discovery of new knowledge and the production of PhDs in a wide range of disciplines; even while universities continue to educate undergraduates, train professionals, provide service to society and engage in applied work and technology transfer. Based on the United Nations Conference on Trade and Development's (UNCTAD) 2005 World Investment Report, Malaysia was ranked 60th in its Innovation Capability Index Ranking (cited in Ministry of Higher Education 2007b). This ranking is based on two important aspects in the evolution of research and development in higher education—building of the critical mass of RSE; and instilling positive culture, passion and commitment towards research. In 2003 Malaysia had approximately 21 RSE per 10,000 workers. This is considered to be rather low when compared to the average of 100 RSE in European countries in 2003. To uplift Malaysian RSE the Ministry hopes to intensify training programmes such as academic training schemes and encourage split PhD programmes. Besides that, Malaysia also hopes to attract foreigners, especially international talents to conduct research in the country. Another strategy is to lure back Malaysian RSEs working abroad. The government has also increased research funding. Under the Seventh Malaysian Plan (1996–2000), research funding stood at RM 1 billion. For the Eighth Malaysia Plan it rose to RM 2 billion, and under the Ninth Malaysia Plan the budget allocation for R&D was close to RM 3.9 billion. Under the Ninth Malaysian Plan research funding reached 1.5% of GDP, a threefold increase in percentage terms compared to allocations under the Eighth Malaysia Plan (0.49%). This was still small compared to regional countries like Singapore, South Korea and Japan which have allocated between 2.15% and 3.07% of GDP to R&D since 2002.

To boost research and development the Ministry of Higher Education has encouraged public universities to increase their intake of postgraduate students from 18% to 24% by 2010. Furthermore, as noted in relation to universities above, efforts have also been made to foster more collaborative R&D as knowledge-intensive society, university and industry linkages (referred as the “triple helix”) have become an important agenda of higher education. The potential commercial value of academic knowledge has encouraged greater collaboration between university and industry. This partnership has now become a critical agenda in higher education. It is acknowledged that government–university–industry partnerships are still at an infant stage in comparison to partnerships in developed countries like the UK, USA and Australia. There is still much to be done to improve strategic relations between

local institutions of higher learning, and local and foreign industries, to achieve the win-win situation that the nation needs.

Quality Assurance Policy

Following the mushrooming of higher education institutions in Malaysia, there was a need to put in place the right mechanisms to ensure domestic and international students do not get short-changed in terms of quality higher education. This requires stringent monitoring to ensure the quality dimension of universities are translated into quality lecturers, quality students and quality infrastructures. The Malaysian government has enabled the establishment of the Malaysian Qualifications Agency (MQA) which is responsible for implementing quality assurance of higher education in Malaysia. Moreover, the establishment of the Malaysian Qualifications Register (MQF) by the government in January 2008 is one of several strategic efforts by the Ministry of Higher Education to enhance the international competitiveness of the country's higher education institutions (Online Borderless Higher Education 2008). This register will include a list of all MQA-accredited higher education programs offered by public and private higher education institutions in the country.

In addition, the Ministry has successfully put into effect *SETARA* (the National Rating System for Malaysian Higher Education Institutions) in an effort to provide internal competition and spur quality improvement across the national higher education system.

Apex University Initiative

Recent world university rankings by the Times Higher Education Supplement (THES) and the Shanghai Jiao Tong University saw no local university in Malaysia secure a place in the top 200 universities; though reputable and well-established Asian universities from Singapore, South Korea, Japan and Hong Kong achieved a place in the top 100. In order to push up the rankings and secure international positioning, the government of Malaysia has put in action a policy initiative in the Strategic Plan to set up Apex Universities in order to push forward the very best the nation has to provide. In the APEX (Accelerated Programme for Excellence) University Plan by the Ministry of Higher Education (2007a), it was emphasized that the Apex University would be given latitude to put in place the necessary mechanisms to achieve world-class status. A total of five public and two private universities submitted their proposals for consideration. The three conditions applied to assess the universities were: the state of readiness, preparedness for change and preparation of the transformation plan.

After a thorough evaluation by a selection panel comprising international quality experts, Universiti Sains Malaysia (USM) was bestowed the status of an Apex Uni-

versity in September 2008 for its remarkable accomplishments in teaching, research and innovation within the country. As Malaysia's first APEX university, USM will aim to achieve the following within reasonable periods, among other goals: to be one of the world's top 100 universities by 2020; to operate on the basis of autonomy in finance, service scheme, management, student intake and student fees; to undergo a stringent process in the selection of the vice chancellor, to enrol foreign students at the level of 20% of the student population; to admit students based on demographic profile of the country and merit; to employ top experts (including foreigners) as administrators, lecturers or deans; and to offer better terms of service and remuneration to foreign lecturers.

Conclusions

While policy tools and policy implementation are significantly shaped by political feasibility, Malaysia needs to realize that the success of the current National Higher Education Strategic Plan and related policy initiatives lie in the collaboration of all stakeholders. Both academics from public and private universities and politicians (government and opposition) must work cooperatively. For too long higher education in Malaysia has viewed private and public universities as very different and competing entities. Many leading educational experts in the country feel that private institutions in Malaysia have been left out of the loop of development and express hope that with the launch of the Strategic Plan, private higher education, which has made valuable contributions in recent years, can be brought in.

Future restructuring of the higher education system will need to emphasize issues regarding accreditation and credit transfer, involving mobility both between private and public local universities, and their collaborating international partners.

There is ongoing debate among national education experts and global experts about the National Higher Education Strategic Plan's potential to address the complex and pressing challenges within Malaysia's higher education system. Though some may view it as a "maturing" of higher education in Malaysia, others question whether it is Malaysia's "fashionable" response to the changing global landscape of higher education in the Asian context. A review by OBHE (2008, p. 2) reports that while many of Malaysia's initiatives appear to be promising, the country is still facing "difficulties in improving the competitiveness of its higher education system, especially in relation to slow progress in research and development and its brain-drain problem". There needs to be more concerted efforts to strike a balance between the expansion of the higher education system and quality enhancement, and to build links between the university and industry sectors to help spur innovation-led research activities. In line with this, there is also a need to devise a more comprehensive brain-gain programme as a long-term measure while Malaysia strengthens the country's research capacity and limited funding.

Nevertheless, there is potential for success, and recent increased investments in research and development may generate healthy competitive progress in the global

higher education market. Given Malaysia's status as an important market for transnational education and in the light of its improved quality assessment mechanisms, the introduction of the Malaysian Qualifications Register, the expansion of higher education partnerships in a more diverse range of countries and more targeted efforts to recruit international students from selected regions, Malaysia has the potential to strengthen its position as an attractive partner and international education "hub" (OBHE 2008).

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Chapter 12

Academics as Agents of Internationalization and Literacy: Malaysian Responses and Future Challenges

Yew Lie Koo and Vincent Pang

Introduction

This chapter explores the internationalization focus of the recent strategic and action plans of the Ministry of Higher Education in Malaysia, (MoHE hereafter) (2007a, b) in terms of the Malaysian academic's capacity and English language proficiency. This chapter does this through the lenses of two research studies: first, the preliminary findings of the Changing Academic Profession (CAP) International Research Project, and second, the findings on the English Language proficiency of academic staff of Malaysian universities, a research project on “enhancing the quality of higher education through research: Shaping future policy” (Zuraidah et al. 2008).

This chapter identifies key issues to do with internationalization and the new roles of the global academic, where academic staff members are viewed as one of the primary stakeholders in higher education. Internationalization of the university can be observed in (among other possible areas) policy and practices related to curriculum, the international recruitment of staff, and joint research networks/collaborations and publications. The paper is anchored on the Malaysia National Higher Education Strategic Plan (MoHE 2007b) and National Higher Education Action Plan 2007–2010 (MoHE 2007a) as arguably, higher education in Malaysia is largely driven by top-down Government policies, although efforts are slowly being made to provide a little autonomy to public tertiary institutions.

Our principal assumption is that the attributes and characteristics for coping with internationalization may be related to the actual and self-perceived capacities of Malaysian academics with foreign partners in research networks and collaborations. Such networks involving Malaysian academics are facilitated through their previous training in foreign institutions, and also their English language competencies. Zuraidah et al. (2008) argue that English language proficiency is one of

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the key competencies required for internationalization of Malaysian higher education. Cast broadly, the language factor may suggest wider intercultural connections between Malaysian academics and their relationships with foreign partners and institutions and the ability of such academics to draw on their international networks. Such networks form the key thrust of the MoHE's strategic and action plans.

The Primary Agents in Internationalization

This chapter focuses only on what are seen as one of the primary agents in the internationalization of higher education, that is, the academics. According to Tierney (2008a, p. 4):

...part of the definition of the modern professor of the twentieth century suggested that what he or she studied was trans-national, and that the creation, development, and expansion of knowledge occurred through the faculty's scholarly analysis and evaluation in journals that supposedly transcended national borders.

In other words, the demands on academic staff are expected to be even more complex and probably, more demanding in the wake of internationalization.

The Global Context and the Focus on Internationalization

In this period of rapid change stimulated by globalization and national policies promoting the knowledge economy, it is essential to understand the orientations and actions of knowledge workers, and especially those in the academic profession who occupy such a central position in the knowledge production process. This chapter is interested in exploring the academic profession's views towards the increasing relevance of internationalization, and academic responses to such shifts in the academia.

Increasingly as the landscape of higher education undergoes radical changes, so have the contexts, backgrounds, expertise, requirements, work roles and literacy of academic staff. For example, they are expected to be much more outcomes oriented in terms of research and are required to be entrepreneurial. At the same time, with the massification of higher education, and greater differentiation, growing requirements from local and global communities and society have emerged. Knowledge is identified as the key resource and new identities and participant roles are expected. Knowledge production and application are the new basics of contemporary societies. This new devotion to knowledge has both expanded the role of the academy and challenged the coherence and viability of the traditional academic role (Locke and Teichler 2007).

Malaysian Contexts: An Overview

Internationalization is rapidly changing the face of higher education. In this regard, Malaysia is no exception. This section of this chapter explicates the history and context relating to the internationalization of higher education in Malaysia. It presents the challenges and benefits of internationalization of higher education to the country, in relation to academic, economic, and socio-cultural areas. It discusses the issues faced by academics in higher education.

In part, internationalization was a result of the economic crisis that hit Malaysia in 1997. The crisis weakened the Malaysian currency and made the cost of studying overseas more expensive and unaffordable to many. One drastic measure undertaken by the government to cut down the outflow of foreign exchange was to reduce the number of students sent overseas. The government has since overhauled its policy of sending students abroad and instead emphasized the need for students to enrol in local institutions of higher learning in order to reduce imports and improve the balance of foreign exchange. The establishment of private higher institutions by private corporations has taken place either singly by Malaysian entities or in collaboration or cooperation with local or foreign partners. In 1996, the Malaysian Parliament passed the Private Higher Educational Institution Act (PHEIA) to allow the private sector to enter the higher education market. This opened the floodgates to the business sector. Since then, private higher education institutions have increased considerably in size and numbers. The presence of private higher institutions has not only increased access and provided diverse education options for students but also reduced the outflow of funds which otherwise would be used to finance education abroad. In other words, the 1997 crisis indirectly became a catalyst in reforming and restructuring the Malaysian education sector. The crisis also helped to expedite the country's aspiration to become a regional centre of educational excellence. The strategy to make Malaysia a centre of international education is directed to both international students and also international expatriates from around the world (Pang 2007).

The Private Higher Education Institution Act and other related Acts in 1996 facilitated the exportation of degree programmes to international students by public and private institutions of higher education. As a result, there was an influx of students pursuing undergraduate and postgraduate programmes from overseas, especially from China, Indonesia, as well as Middle Eastern and African countries. With the establishment of the new Ministry of Higher Education in 2004, the inflow of students reached higher numbers. It is expected to increase further. The government of Malaysia has set up machinery to attract more foreign students. For example, education promotion offices have been set up in Saudi Arabia, China, Vietnam and Indonesia (Malaysian Education Promotion Centre 2008). The government has also initiated programmes to encourage wider and correct use of the English language in public and private institutions of higher education. The government hopes that by the year 2020, in line with the aim to become a developed country, quality higher

education will be one of the driving engines of the economy of the country (Pang 2007).

The establishment of the Ministry of Higher Education in 2004 was designed to assist and support the development of public and private institutions of higher education in Malaysia. It paved the way for more specific and focused planning and implementation of higher education. The internationalization of higher education is expected to propel the country to play the role as centre of excellence for higher education in the region, although there are palpable concerns around issues such as quality, access, governance and autonomy. The release of most recent Ministry of Higher Education (2007a; b) strategic documents reinforce this commitment to a high-quality knowledge-based economy and society.

Overview of the Malaysian Higher Education Strategic Plan and Action Plan

In the quest for developed nation status by the year 2020, the Malaysian government recognizes that a substantial effort must be made to develop human capital and consequently enhance the country's competitiveness, productivity and capacity to innovate. The government has spearheaded an effort to transform the national education system at all levels, from pre-school to higher education (Ministry of Education 2007).

On 27 August 2007, Prime Minister Datuk Seri Abdullah Ahmad Badawi launched the *National Higher Education Strategic Plan* and the *National Higher Education Action Plan 2007–2010* with the aim of furnishing students and tertiary education institutions with the competitive edge needed in today's globalized world, and to realize the nation's aspirations as outlined in Vision 2020. The key rationales for the national higher education transformation are the development of human capital with a first class mentality; the repositioning of the country's higher education to meet current and future challenges; and realization of Malaysia's aspirations to be a hub of higher education excellence.

The Strategic Plan essentially articulates the Ministry of Higher Education's vision for the transformation of higher education until 2020. The plan is both broad and comprehensive in its coverage of higher education and addresses the longer term, enhancing existing programmes and encompassing new initiatives. The seven broad-based strategic thrusts of the Strategic Plan are widening access and enhancing equity; improving the quality of teaching and learning; enhancing research and innovation; strengthening institutions of higher education; intensifying internationalization; enculturation of lifelong learning; and reinforcing the Higher Education Ministry's delivery system (MoHE 2007b).

The Action Plan (MoHE 2007a) stresses the importance of human capital development and focuses on the immediate agendas necessary to get the transformation underway. It outlines strategies for immediate implementation within the period of

the Ninth Malaysia Plan (9MP). The strategies adopted will strengthen the five core institutional pillars of higher educational institutions, namely: governance, leadership, academia, teaching and learning, research and development. In tandem with this, there will be critical agendas designed to effect change within the higher education system.

Both the Higher Education Strategic and Action Plans emphasize quality in all aspects of higher education, from the selection and training of leaders and faculty members to the adoption of corporate practices in the management of higher education institutions. Both plans also complement the Ministry of Education's National Education Blueprint 2006–2010, which was launched on 16 January 2007 (Universiti Malaysia Sabah 2008).

Globalization

Whilst the impact of globalization on higher education has been widely discussed, Marginson (2007) makes reference to the term 'globalization' as encompassing the "widening, deepening and speeding up of interconnectedness on a world-wide scale", systems and policy zones. Indeed, every improvement in IT-based connectivity multiplies the linkages. Graduates will be able to move increasingly between regional economies and in and out of the APEC region, and they will need an increasingly common understanding of business, science, mathematics, human sciences and culture as well as flexibility in languages. In relation to this, the value of multilingual resources and intercultural adaptability is viewed as important human capital for multilingual communities and nations (Koo 2004).

Kaur et al. (2007, p. 1) argue that "in the Malaysian context, higher education has increasingly become global and international in its perspectives but the exact dimension of such endeavours is still in a flux". Whilst the concept of propagating the centrality of universities is fast gaining momentum, most policy makers and administrators are still grappling with the idea of making sense of what it takes or what it means to be a global university.

Looking Close at the Strategic and Action Plans

This chapter now goes on to examine the continuities and the gaps between on one hand the purposes and rhetoric of the Ministry of Higher Education's (2007a; b) Strategic and Action Plans; and on the other hand, the perceptions and capacities of academics, as reported in the CAP study and in the national research report on language proficiency of academic staff in public universities.

The Strategic and Action Plans focus on internationalization implicating the roles of the academics as important agents of internationalization. One of the strategic plans is to intensify global higher education networking and academic collaboration

Table 12.1 Memoranda of Understanding (MoU) signed by Malaysian Government with other countries. (Source: MoHE 2008a)

Number	Country	Date
1	Brunei	14 February 1992
2	New Zealand	26 March 1996
3	Indonesia	10 August 1998
4	Yemen	21 March 2000
5	Ireland	4 September 2001
6	Libya	19 April 2002
7	Australia	13 June 2002
8	Cambodia	29 October 2002
9	Iran	28 February 2003
10	Vietnam	21 April 2004
11	China	15 December 2005
12	United Kingdom	5 February 2005
13	Thailand	21 August 2007
14	Egypt	26 November 2007
15	Singapore	4 December 2007

at international level. In relation to this, there have been a number of active memoranda of understanding (MoU) with various institutions abroad, as detailed in Table 12.1.

Compared to the negligible number of international faculty members in the pre-1996 era, there has been a significant emergence of foreign staff in academic institutions in recent years. The total number of international faculty members in public and private institutions of higher education can be seen in Table 12.2.

The Strategic and Action Plans also call for increase in the number of international students in the nation. From a negligible number of international students in the pre-1996 era, the number of international students has increased steadily to 47,928 in 2007. The number increased further to 80,750 in the 2009/2010 session through promotion and marketing programmes by the Ministry. Table 12.3

Table 12.2 The number of academic staff in Malaysia, 2007. (Source: MoHE 2008b)

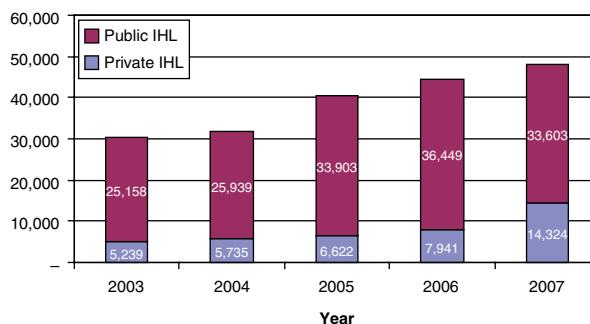
Highest qualification	Malaysian	Non-citizen	Proportion who are non-citizens (%)
<i>Public institutions</i>			
Doctorates	5,554	555	9.1
Masters	12,409	308	2.4
Bachelors	4,006	51	1.3
<i>Private institutions</i>			
Doctorates	1,173	497	29.8
Masters	6,203	604	8.9
Bachelors	7,502	252	3.4
<i>Total</i>			
Doctorates	6,727	1,052	13.5
Masters	18,612	912	4.7
Bachelors	11,508	303	2.6

Table 12.3 Number of international students according to gender. (Source: MoHE 2008c)

Region of origin	Male	Female	Total	Proportion of total (%)
Arabian Countries	5,527	2,070	7,954	15.9
Central and East Europe	186	159	345	0.7
Central Asia	340	244	584	1.2
East Asia and the Pacific	10,288	9,440	19,728	41.2
Latin America and Caribbean	27	21	48	0.1
North America and Western Europe	284	182	466	1.0
South and Western Asia	8,114	2,948	11,062	23.1
Africa Sub-Sahara	5,105	2,528	7,633	16.0
Not stated	205	260	464	0.8
<i>Total</i>	<i>30,076</i>	<i>17,852</i>	<i>47,927</i>	<i>100.0</i>

IHL = Institutions of higher learning

Fig. 12.1 Enrolment of international students in IHLs in Malaysia. (Source: MoHE 2008c)



shows the breakdown of international students based on the region of origin. Fig. 12.1 shows that the increase of the number of international students has been at a steady pace.

The First Lens: The CAP, an International Research Project

The CAP research was primarily aimed at understanding how changes in higher education influence academic value systems and work practices, in turn affecting the nature and locus of control and power in academe. This project was undertaken in Malaysia by the National Higher Education Research Institute (NaHERI) which is a national research institute established by the National Council on Higher Education in 1997. The CAP project in Malaysia is headed by Professor Morshidi

Sirat, the director of NaHERI, with colleagues from the main public universities in Malaysia.

The project examined the nature and extent of the changes experienced by the academic profession in recent years. It explored both the reasons for and the consequences of these changes. It considered the implications of the changes for the attractiveness of the academic profession as a career, and for the ability of the academic community to contribute to the further development of knowledge societies and the attainment of national goals. The project, relying on a six-stage model of change, made comparisons on these matters between different national higher education systems, institutional types, disciplines and generations of academics. The following countries were committed to the conduct of national studies: Argentina, Australia, China and Hong Kong, Finland, France, Germany, India, Japan, Malaysia, Mexico, Norway, Portugal, Russia, The Netherlands, the UK, and the USA.

The aims of the project were to investigate:

how the academic profession is exposed and responds to increasing expectations of the relevance of academic work, how the growing trend of internationalization affects academia, how changes in the doctoral phase of learning and academic work shapes academic careers, and how academic work and employment changes amidst major transformations in governance, notably the growing power of institutional management in many countries. (Locke and Teichler 2007, p. 9)

In terms of method, Malaysia secured a national representative sample of its academic profession. The project engaged a self-administered survey instrument.

Findings from the CAP Malaysian Cohort

This section focuses on the internationalization potential and the actual links of Malaysian academics, in relation to foreign research partners and networks.

Table 12.4 shows that Malaysian faculty members who gained their second degrees overseas were more likely to engage in international collaboration with colleagues overseas. Out of the 241 faculty members who collaborated with overseas colleagues, 131 (54.4%) read their second degrees overseas. Out of 573 who did not collaborate with their colleagues overseas, 327 (57.1%) were trained locally. Chi-square test shows that the difference is significant. This implies that academic staff members who are educated overseas are more likely to collaborate with their colleagues overseas.

Table 12.4 Cross-tabulation between the country where second degree was gained and international collaboration. (Source: National Higher Education Research Institute 2008)

		Collaboration with international colleagues:		
		Yes	No	Total
Location where the second degree was earned	Malaysia	110	327	437
	Overseas	131	246	377
<i>Total</i>		<i>241</i>	<i>573</i>	<i>814</i>

Table 12.5 Correlation between the types of research undertaken by faculty members. (Source: National Higher Education Research Institute (2008))

	Basic/theoretical		Applied/practical-oriented		Commercial-oriented		Social-oriented		International in scope or orientation	
Basic/theoretical	Correlation	1.000	0.187(**)	0.047	0.145(**)	0.242(**)				
	Sig. (2-tailed)		0.000	0.170	0.000	0.000				
	N	914	880	835	849	842				
Applied/practical-oriented	Correlation	0.187(**)	1.000	0.325(**)	0.227(**)	0.268(**)				
	Sig. (2-tailed)	0.000		0.000	0.000	0.000				
	N	880	944	861	864	859				
Commercial-oriented	Correlation	0.047	0.325(**)	1.000	0.198(**)	0.296(**)				
	Sig. (2-tailed)	0.170	0.000		0.000	0.000				
	N	835	861	868	834	834				
Social-oriented	Correlation	0.145(**)	0.227(**)	0.198(**)	1.000	0.260(**)				
	Sig. (2-tailed)	0.000	0.000	0.000		0.000				
	N	849	864	834	891	841				
International in scope or orientation	Correlation	0.242(**)	0.268(**)	0.296(**)	0.260(**)	1.000				
	Sig. (2-tailed)	0.000	0.000	0.000	0.000					
	N	842	859	834	841	871				

**Correlation is significant at the 0.01 level (2-tailed)

Table 12.6 Difference in publication between faculty members who were trained locally and those trained overseas. (Source: National Higher Education Research Institute (2008))

	Where second degree was earned	Number	Mean	Standard deviation
Scholarly books you authored or co-authored	Malaysia	162	1.98	5.404
	Overseas	157	1.39	1.501
Scholarly books you edited or co-edited	Malaysia	119	1.44	5.632
	Overseas	127	1.18	1.962
Articles published in an academic book or journal	Malaysia	268	4.56	6.316
	Overseas	271	6.58	19.218
Research report written for a funded project	Malaysia	216	2.20	2.931
	Overseas	199	2.98	4.211
Paper presented at a scholarly conference	Malaysia	335	6.19	9.276
	Overseas	298	7.25	9.427
Professional article written for a newspaper or magazine	Malaysia	134	3.69	15.885
	Overseas	132	2.82	5.651

Table 12.5 shows the cross-correlates between the type of research carried out by Malaysian academics. The results show that there is a small significant correlation between research that is international in scope or orientation with research that is basic/theoretical, applied/practical research, commercial-oriented research for technology transfer, and social-oriented research. This implies that Malaysian faculty members who engage in international research tend to be more versatile and are more likely to be active in research of all types.

Table 12.6 shows the difference in publication between faculty members who were trained locally and those trained overseas. The results show that academic members who had undertaken a higher degree overseas produced more publications which are considered to be higher in impact, i.e. journal articles, research reports written for a funded project, and papers for scholarly conferences. On the other hand, academics who were educated locally are likely to publish in terms of articles written for newspapers or magazines.

Table 12.7 shows the difference in time taken for administration involving committee work, department meetings, and paper work. According to this table, the mean of time spent on administration is higher among academics who obtained their doctoral degrees overseas (9.49 hours/week) compared to those who were trained locally (7.01 hours/week). This difference is significant according to an independent sample t-test. The finding implies that overseas trained academics are more likely to be given the responsibility to administer.

Table 12.7 Time spent in administrative duties: Difference between staff who obtained PhD locally and overseas. (Source: National Higher Education Research Institute (2008))

	Location where the second degree was earned	Number	Mean	Standard deviation
Administration (hours per week) when classes are in session	Malaysia	126	7.01	5.273
	Overseas	229	9.49	8.568

The Second Lens: Findings from a National Study on Academic Language Proficiency in the Global Code of Communication (English), and in Professional Academic Genres

The study was commissioned by the Malaysian Ministry of Higher Education. The purpose was to investigate the standards of English among members of academic staff in Malaysian public universities. The research was intended to assist the government in the formulation of policy on English, to raise the standards of English language communication among the academic staff, in view of the government's aspirations for globalization and internationalization in higher education. The literacies of academics in English are vital in building relations with international networks and educating students in the genres and skills required for global connections and networks.

The research team ran a series of tests (reading, writing and speaking) including a survey questionnaire to sample participants in 11 public universities in Malaysia. Responses were received from 714 out of the selected 1,100 numbers of academic staff from the universities. The respondents included staff from the various academic ranks, viz. tutors/instructors, junior and senior lecturers, assistant professors and associate professors. There were two segments: a written test for reading and writing, and an oral interview for speaking and listening, accompanied by a questionnaire for biodata purposes.

The findings indicated that the English language proficiency and skills of academic staff in Malaysia needs improvement, especially among those who are assistant professors. There were four main issues of concern. Reading was less developed than writing and speaking. The report indicated that there seemed to be a lack of critical reading and inference skills. This was deemed as highly problematic as academic staff members were expected to have strong and critical reasoning capacities. Secondly, the findings revealed a palpable gap in the readiness of academic staff to take part in the change of the medium of instruction from Malay to English. Many lecturers did not perform well in all aspects of English proficiency. This was expected to lead to setbacks in the teaching of Mathematics, technical subjects and Science in English. The study also reported significant differences in proficiency levels in English between the junior and senior academic staff. Junior academic staff (tutors and instructors, and in the second tier the assistant professors) in general did not achieve the level of English use necessary "to achieve higher goals of communication and networking in English at an international level" (Zuraidah et al. 2008, p. 25). This was particularly revealing, as the longer-term success of internationalization depends on this second tier of academic rank. They are the likely successors when the current associate professors have retired.

The study recommended that there was a critical need for English language support programmes for academic staff to address the existing inadequacies. Although admitting limitations to the study, the initial findings "suggest some of the important elements and parameters necessary for the development of effective English

language support for academic staff at public universities...including significant baseline information about the English language proficiency of the sample of the academic staff...and point to potential specifications for the development of suitable English language programmes for academic staff” (Zuraidah et al. 2008, p. 27). The report further suggested that there was a critical need to provide remedial resources for enhancing the competitiveness of Malaysian academic staff at international level. Specifically, the study proposed a three-strand approach: English proficiency, English for Professional Purposes (EPP) and English for Specific Disciplines (ESD). The report suggested that given that development and research on English language support and testing should be expanded, in view of the key role played by the English language, “training will need to be complemented by testing and examining, and supported by relevant research. Malaysia is well positioned to play a major role in the exploitation of this market and the aim should be to become a net provider, rather than a consumer, of English language services” (Zuraidah et al. 2008, p. 34). It is noteworthy that the market was cited here as a reason for such proficiency. However, English is also vital for cultural exchange and interaction.

Non-Native Englishes

Two points arise at this juncture. The first concerns the issue of the standards of English which was adopted in the study. There are various Englishes (Kachru 2005). English has become the lingua franca for academic interaction of learners and academics. Access and empowerment issues in international education would have to consider greater political, social and educational tolerance for nativized varieties, in other words World Englishes (Kachru 1990). This is important to make space for knowledge making in international education through English as a lingua franca without labelling users as deficient because they are using non-native varieties of English. A constant striving after native varieties can cut out the voices of non-mother tongue speakers of English. Equally, a framework of sustainable research in the Asia Pacific would have to build upon the diverse indigenous and vernacular knowledges in the repository of the multi languages and plural cultures of the Asia Pacific.

Intercultural Literacy and Internationalization: Building Local-Regional Knowledge in Internationalization

At the same time, there is a need to cast the issue of language proficiency more widely in terms of the intercultural literacy needed to effect internationalization through cross border research networks. This would, arguably, include research into the role of language, culture as human capital, and knowledge production. These

topics would be investigated comparatively across contexts, nationally and across research communities and networks.

Internationalization has brought cultures into contact and interaction and with it, new possibilities of learning. However, there are tensions around such cultural interactions. For example, some may see the too easy conformity to first world or northern knowledge via an international language like English may endanger local languages, vernacular ways of being, local cultures and ways of knowledge-making (Koo 2008b).

In this respect, Koo (2004, 2008a) has posed what she sees as a reflexive framework of intercultural literacies for both local and international spaces in which the intercultural is inevitable. At least three strands are integral to this perspective. Firstly, one needs to make visible the way of doing dominant academic literacies as these are situated in cultural contexts which assume dominant values and beliefs. Secondly, efforts have to be made to articulate the interface between the unproblematic international literacies of the North and local literacies of the South so as to explore new ways for redressing the silencing and disempowerment that can effect heterogeneous Southern voices and perspectives. Academics need to engage their academic partners across national, ethnic, gender and class spaces. The international environment requires careful negotiation of cultural variation, among others in terms of collectivistic and individualistic cultures, position orientated and person-oriented cultures. There is also the need to consider the likely tensions around assumed values, beliefs and behaviours related to what may be hegemonic academic and research styles.

In particular, a careful marking of the intercultural transitions often taken for granted in international environments is vital. This involves dialogues and negotiation of shared spaces and 'agree to disagree' positions; for example, discussing diverse and different understandings of what 'effective' or 'good' research is. Often, such intercultural dialogues reveal deeply embedded, socially situated constructions of values and beliefs that privilege particular perspectives and ontologies. In this regard, research and educational systems that are considered developed or Northern tend to be privileged. They may pose a threat to local ways of knowing-doing which may have value in transforming educational spaces.

The challenge is to bring international academics, managers and students to engage in intercultural discussions around questions of researching, teaching and learning styles, and global citizenship, so that they create opportunities for pluricultural research, across cultural, linguistic and disciplinary borders.

With reference to Malaysia's Strategic and Action Plans' pursuit of international curriculum, it seems important to ensure that in the rush towards an 'international curriculum', that local knowledge is not marginalized, that local knowledge itself is seen as enriching what is out there. This is particularly important when international knowledge is often perceived, wrongly to be always outside of national borders and especially resident in first world or Northern contexts. This is not surprising given the entrenched and institutional power of international universities which are ranked as top notch universities with its well resourced systems of publications,

access to state of the art research facilities and given its relatively greater political, economic social and power. Marginson (2008, p. 3) notes, for example, that, in the increasing mobility of well-regarded researchers, that importance should be attached to “sustaining the national system research capacity” which would continue to regard national and local cultures as worthwhile sustaining.

Concluding Statements

In terms of viable futures, stakeholders in Malaysian higher education need to re-evaluate the dominant discourse around international ranking, which has led in part to accelerated efforts on international collaboration and research. They would need to consider, for example, the philosophical underpinnings which have led to the ranking of American University as the gold standard. According to Tierney (2008b), merit, equity, autonomy, shared governance and academic freedom are the key values embedded in the philosophy of first ranked research universities.

The national context itself is challenged by the concept of the global, driven in part as it is by the market and industry. The Ministry of Higher Education Strategic and Action Plans (MoHE 2007a, b) have not identified civil society as a major player in higher education. It is, however, noted that civil society is a serious agent in the ‘global flow’ and transformation of knowledge. It is viewed as a serious player in the forging and transformation of identities and discourses around sustainable environments, ecology and global citizenry. Indeed, as an Asia-Pacific framework on transnational research seems an emerging reality, higher education will have to engage with civil society players in the global, regional and national sectors so as to work on futures that have not only economic, and material but significant human consequences.

The CAP findings indicate that there are strengths as well as obvious gaps between the discourses of policy and the way it is experienced by academics across academic ranks. The English Language Proficiency study indicates that the key mode of internationalization in terms of the English Language shows some strengths as well as inadequacies.

This chapter has identified the potential as well as the limitations in the higher education scenarios in terms of strategic policy. Greater attention to implementation and evaluation of implementation will, as Nelson (2005) argues, provide for quality to be experienced by multiple stakeholders and actors across levels of experience both in higher education and in schools. It seems that strategic plans will have to address among others, the transitions between schooling and higher education (Lee 2004; Nelson 2005). In the Malaysian higher education context, having capacity in the eight areas above would help advance the country in making inroads to compete globally.

At the same time, there are crucial challenges in finding a niche for higher education for this part of the world, in relation to its place in global knowledge. In the fact of serious unemployment issues at 34%, the question arises as to what are the

systemic policies and practices to cope with preparing graduates for the workplace. Whilst the Strategic and Action Plans have identified broad range policy and actions plans, there is a palpable belief that classroom quality in higher education should be systemically implemented and not just declared (Nelson 2005). Whilst it is clear that Malaysia prioritizes higher education (World Bank 2002), the annual OECD reports on education published under *Education at a Glance* suggests that there are obvious gaps and limitations. For example, in the Centre for Public Policy Studies Proposals for the Ninth Malaysia Plan (Asian Strategic & Leadership Institute 2006), key concerns were framed around inclusion of minority groups, rural learners, the lack of quality and the unemployability of local graduates, and the need for careful transitions between schools and higher education.

The challenge for Malaysian higher education is to provide quality and relevant education that helps produce employable graduates who are multilingual and multi-literate (Koo 2004) to cope with the requirement of the workplace; and in this process to build on the undergraduates' intellectual and situated resources. Recognizing this, the Higher Education Strategic Plan states that, in relation to enhancing the quality of teaching and learning, tertiary institutions should provide programmes that attract international students attracted by its comparative and distinctive niche programmes. This ought to assist the success of its graduates in obtaining employment. Over-concern with attracting 'foreign students' should not deflect Malaysian higher education from focusing on local graduates with serious language and communication problems. This, arguably, involves questions of leveraging on their other languages (other than English), and thus interfacing local knowledge and resources in relation to international and global requirements. Specifically, what is the productive diversity in relation to multilingual resources of Malaysian learners? Whilst recognizing the importance and value of English as a global commodity, it seems equally important to link this commodity in relation to the multilingual resources of Malaysians.

Finally, Tierney (2008b) has advised higher education stakeholders in Malaysia to provide substantive and reliable data about consumer participation and the needs to improve organizational performance, in place of "verifiable data that more frequently than not turned out be often contradictory and confusing".

The need for the collection of systematic and verifiable data speaks to three critical issues. First, without trustworthy data, a nation has no way of knowing who is participating in tertiary education and who is not. Such a point is important for a country concerned about educational equity for all citizens. It is likely, for example, that some sectors of a society have greater educational opportunities than others. Without an awareness of why different sectors are participating at a lower rate than others, the country cannot create policies that increase participation among all constituencies (Tierney 2008b, p. 32)

It would be strategic for the Ministry to provide research funding which encourages the collection of systematic and triangulated baseline data as a point of departure for decision-making on policy and practice in higher education, with palpable consequences for individuals and society.

Marginson (2007) notes that:

Worldwide higher education landscape is continually moving; and it is also a relational landscape. It is a continually changing network of national systems and of individual institutions. Here, while nearly all national systems and research universities are in communication with many others, it is not on a basis of equivalence or equality. Those nations and systems are differentially positioned within the landscape (Marginson 2007, p. 12)

The complex and challenging negotiation of this uneven ground lies with stakeholders and actors locally, nationally and internationally. The scenarios are still unfolding.

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Chapter 13

The Global Schoolhouse: Governing Singapore's Knowledge Economy Aspirations

Ravinder Sidhu, Ho Kong Chong and Brenda Yeoh

Introduction: Singapore in the Global Economy

East Asia is in the midst of extraordinary changes characterized by unprecedented levels of population mobility, the emergence of new modes of knowledge-based production, and new projects of identity-making. Although not East Asian in a geographic sense, Singapore's urban economy faces similar development challenges to those of Japan, South Korea, Taiwan, and Hong Kong; challenges that are framed by a context featuring the emergence of China as a low-cost industrial powerhouse and major attractor of foreign direct investment. These changes have propelled policymakers throughout East Asia to foreground research and innovation capabilities as development goals. Globally, research capacity is assuming a new and perhaps unparalleled significance in political and economic discourse.

Within this structural context, Singapore's universities are striving to develop profiles in research and development especially in the fields of precision engineering and biomedical sciences. While education and training of the national labour force remain important, universities are now intensifying efforts to produce qualities of entrepreneurialism, creativity and cosmopolitanism in their graduates.

Faced with new responsibilities to contribute to national development, Singapore's universities nonetheless operate in complex transnational environments. Like any university seeking global prominence and profile, Singaporean universities are caught up in global circuits and regimes of value created in part by competi-

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tion for “talent” in selective fields (for example, science, technology and creative industries). Thus, in seeking to recruit research active personnel with the potential for technologically driven innovation and entrepreneurship, the city-state’s universities are often outranked by leading American and European universities as the destination of first choice by promising researchers.¹ Like other universities seeking to develop a “world-class” reputation, Singapore’s universities seek to compete in global rankings such as The Times’ *Best Universities Guide* and Shanghai Jiao Tong’s *Academic Rankings of World Universities*, adjusting their missions and strategies accordingly (Marginson 2007).

While conceding that “the world of globalized higher education is highly unequal”, Altbach (2004, pp. 6–7) acknowledges that “a number of universities in Japan, Korea, China and Singapore, are approaching the status of world class research institutions”, helped in part by the policy-driven efforts of these developmental states.

These national and global trends suggest that Singapore is an important case study to seeking to understand new initiatives in higher education practices. The island-state is seeking to capitalize on its English-speaking colonial heritage, quality public education system and the flow-ons from its investment in the Global Schoolhouse policy, which seeks to establish Singapore as an education hub. However, these national projects of hub development and talent migration, although well resourced, create challenges for social cohesion and equity. They are premised on re-engineering the institution of citizenship by creating new binaries between citizens and non-citizens, and within Singapore society more generally, an issue we examine in this chapter (see also Sidhu 2009).

We begin by locating the trajectory of hub/cluster development in a historical snapshot of Singapore’s political economy. We then proceed to examine two cases; the collaborative alliance between Singapore and the Massachusetts Institute of Technology, and the reformation of the National University of Singapore (NUS) into a “Global Knowledge Enterprise.” We conclude with a discussion of mutations in the Global Schoolhouse from a platform initially formulated to emulate the US paradigm of research-based cluster development, to potentially new expressions of transnational education and research which are grounded in the growing geopolitical significance of Asia.

The Political-Economy of Development in Singapore

Postcolonial Statism

Singapore was first acquired by the East India Company in 1819 and thereafter became a colony within the British Empire. Informed by the liberal principle that

¹ Turpin et al.’s survey (2008) of 10,000 scientists and engineers from the Asia-Pacific region shows the USA and Europe to be the most important destinations for training and research. They found that Singapore’s desirability as a scientific destination is also increasing.

less government was good government, colonial governance facilitated the smooth operation of markets, leaving the private sector to meet industrial, commercial and community needs. Despite its status as a base and conduit for European capital investments in the emerging global economy of the nineteenth century, colonial Singapore represented an ethnicized, hierarchical economic order, its population poorly served by laissez-faire governance (see Yeoh 1996). The liberal colonial state showed little commitment to fund education for Singapore's working class masses although the Education Code of 1902 created the conditions for a limited number of English language schools (Gopinathan 1991). The liberal colonial state's neglect of social needs had long-term political consequences. It created ethnic- and class-based schisms, most prominent of which were those between the multicultural English-educated elite, and the socio-economically diverse Chinese educated (Trocki 2006). The English educated political elite formed the People's Action Party (PAP), which has remained in power since independence.

Since winning power, the PAP has enshrined "strategic pragmatism" as a practice of government (Rodan 2006; Chua 1995). The party's platform rests on delivering economic growth for the city-state and it has set aside ideological essentialisms to pursue this objective. In the past, the Party manipulated Cold War tensions to adopt an identity contrary to the liberal political and economic order championed by the "free world". It established a developmentalist identity—with technically competent bureaucratic and political elites setting the course of national development—within an insulated political space (Beeson 2007). Ideological affiliations were re-worked, first, by establishing alliances with the more hard line Chinese working class labour unions to win government and thereafter discipline domestic capital interests—the *taukeh* class. Later the PAP used a state ideology of multiculturalism to discipline labour unions, citing their alleged Chinese chauvinism as a threat to social peace (see Liew 2003)

Singapore has a long history of embracing and re-working global ideas and norms in particular those relating to economic development. It adopted an industrialization platform driven by foreign investment on the recommendations of three studies: a 1955 report from the International Bank for Reconstruction and Development, a 1959 report by Canadian industrial development specialist, F. J. Lyle, and a 1961 report by an UN mission headed by Dutch economist Albert Winsemius. The state courted foreign investment, introduced technical training programmes, tax incentives and free remittances of profits (Perry et al. 1997, pp. 48–49). The Winsemius mission had also highlighted the importance of managing labour, and curbing trade union activity (Liew 2003).

Although this approach to industrialization facilitated the development of manufacturing capabilities and created employment for its working classes, it also contributed to a failure to develop indigenous entrepreneurs and corporations with global profiles and reach. Integrating Singapore into the global value-chains of foreign MNCs also meant that it did not develop "national champion" enterprises like Japan and Korea (Lim 2006).

By the end of the 1970s, Singapore and its East Asian counterparts were confronted by the offshoring of manufacturing, driven by a combination of rising labour and land cost and appreciating local currencies (Clark and Kim 1995; Ho 1993, 1995). As part

of a broader push to re-model the substance of Singapore's comparative advantage, policy thinking in the mid 1980s alternated between strategies to retain manufacturing by shifting to higher forms of value-added production, and towards developing service industries although it can be argued that it took the 1997 Financial Crisis to increase momentum (Ho 2003). Two policy strands emerged from this period. The Economic Review Committee (ERC) recommended a cluster-based approach to economic development, focusing on a strong services strategy. The government responded by introducing regulatory changes designed to open up banking and financial services, and developing new initiatives in chemicals and the life sciences. Singapore's embrace of the cluster approach to economic development reflects the globalization of business knowledge, driven variously by state and non-state actors such as the flows of Singaporean professionals, officials and bureaucrats to US business schools, business media, and international consultants (Olds and Thrift 2005). The proximity afforded by clusters was regarded as creating optimum conditions for the acquisition of tacit knowledge, deemed a vital ingredient for creativity and innovation.

On the second front, the Singapore 21 Committee, formed in October 1997 to build consensus amongst Singaporeans with regard to the type of society they wanted in the twenty-first century, introduced the idea of "foreign talent" and socialized the public into the inevitability of accepting the push to attract the highly skilled. The Singapore 21 platform exemplifies the emergence of new expressions of economic nationalism under conditions of globalization, namely the crafting of particular types of national identities in order to further economic development. Its citizens must now respond to the exigencies of economic globalisation including being passed over for a job or a university place by foreign talent if they are not sufficiently competitive. The stoic, self-sufficient, resourceful and self-improving citizen is also required to exhibit the right mix of cosmopolitan sensibilities—English speaking but equally at home in the region, be it China, India or Southeast Asia. The project to recruit talent also requires a careful calibration of Singapore's ethnocultural demography: China is targeted as the most important site for recruiting foreign talent, followed by other Asian countries.

At one level, these policy shifts suggest the arrival of neoliberal ideas and modes of organization in a developmental state. At another level, and despite the rhetoric of neoliberal style reform the activist state continues to grow in strength. There are no policy moves, for example, to relinquish the state's authority over Singapore's government-linked corporations (GLC), despite persistent lobbying by US business interests in the 2006 US–Singapore free trade negotiations. By exploiting post '9/11' security concerns, the government negotiated to maintain the status quo (Rodan 2006).

Singapore has drawn in foreign expertise, paying above-world-market compensation rates and providing generous capital subsidies to foreign corporations including foreign universities to further its policy of building economic clusters in value-added manufacturing² and service industries.³ However, it is becoming clear

² Singapore's Economic Development Board has nominated the following industries as value-added manufacturing: biomedical manufacturing, precision engineering, chemicals and electronics.

³ The targeted service industries are healthcare, education, logistics, information and communications media and, environmental engineering.

that retaining “talent” for its developmentalist ambitions requires policymakers to adopt a more complex imaginary of the desired migrant than that of a rational, opportunity-maximizing agent.

Technologies of Hope: Building a Global Schoolhouse

Singapore's government has long aligned its education policies with the nation's economic priorities. At independence, English was institutionalized as the official language and in doing so Singapore confirmed its pro-western identity and allegiance with the dominant calculus of geopolitical power. The strategy of making English the official language helped subvert the authority of the Chinese educated power brokers such as the *taukeh* class in postcolonial Singapore. Pragmatism was also evident in the priority given to technical education ahead of providing broad access to university education for Singaporeans. This was a response to an economic policy aimed at building an industrial labour force for Singapore's restructured economy.

Significantly, the governing PAP has constituted education as a “technology of hope”—a site where family and individual aspirations for socio-economic mobility are materialized. This stance is embraced by the wider population and also by various education researchers who point to the role played by education in converting Singapore from a city peopled by an economically marginalized proletariat to the second highest per capita income in Asia (Kam and Gopinathan 1999; Ashton 2002). A well-resourced education system has been established to support the city-state's developmentalist ambitions based on the “4Ms plus M” (multiracialism, multiculturalism, multilingualism and multireligiosity, plus meritocracy) formula. In recent times to counteract the globalizing spread of liberal ideas, Singapore's education system has intensified emphasis on various citizenship building projects such as the *Asian Values* and *National Education* which aim to provide a national and cultural “ballast” for its population (Gopinathan 2007; Kam and Gopinathan 1999).

The project to transform Singapore into a knowledge-based economy has demonstrated the same close articulation with statist economic and culture-building projects, with a broad-based discourse of reform highlighting the need for innovation, flexibility, entrepreneurship, creativity and commitment to lifelong learning (Gopinathan 2007; Cheung and Sidhu 2003). The Global Schoolhouse initiative represents a key element within this new environment and has three constituent parts: finance an identified group of “world-class universities” to establish operations in Singapore; attract 150,000 international students by 2015 to study in both private and state-run education institutions, and re-model all levels of Singaporean education to inculcate the attributes of risk-taking, creativity and entrepreneurialism (see MTI 2007).

Singapore's near monolithic state—no political opposition or organized civil society of note—has created optimum conditions for “joined up governance”. The Global Schoolhouse typifies this closely articulated policy architecture: it is com-

plemented by policy reforms in the spheres of urban re-development, taxation, immigration and intellectual property.

In its early days, the Global Schoolhouse was dominated by research-intensive American institutions: MIT, Georgia Tech and Duke University were funded to run graduate-level programmes, while Johns Hopkins University was to conduct biomedical research and provide doctoral training. The Chicago Graduate School of Business was assisted to establish a “campus” in the city-state’s major shopping precinct, and Wharton Business School was contracted to provide expertise in setting up Singapore’s third university, Singapore Management University. The initial thrust towards the technoscientific domains and management education has given way to some diversification. New York University’s TISC School of Arts started classes in the 2007/2008 academic year. Diversification has also involved the inclusion of non-American universities such as INSEAD, a European business school, and the Indian Jain School of Management.

The Global Schoolhouse is the latest incarnation of a long-held policy of leveraging off foreign expertise to build capacity. In the first three decades following independence, Singapore’s development policy was premised on using foreign know-how to build manufacturing capacity. More recently the focus is on building a knowledge and innovation-driven economy using the expertise of foreign universities and foreign researchers. The US\$ 600 million Campus for Research Excellence and Technological Enterprise (CREATE) is anticipated to continue this history of using foreign institutions to further Singapore’s development. CREATE will host a significant foreign presence in research labs, all financed by Singapore to further its biomedical and pharmaceutical industries.

Singapore’s universities are young and have largely focused their energies on producing high-quality undergraduate programmes. They face significant challenges if they are to “leap-frog” into a research-intensive culture through alliances with globally positioned research institutions. Academic staff are being encouraged to develop entrepreneurial mindsets and capabilities to further the commercialization of knowledge. They are also expected to benchmark themselves against real (and imagined) standards of global excellence. The project of benchmarking the local population against global ideals of “excellence” also serves to manage Singapore’s entrepreneurial and professional classes: they must strive for continuous improvement and self-betterment or risking displacement by overseas talent.

At the same time it is significant that the government has been selective in its adoption of neoliberal policies and practices. Selective strategies and practices of marketization and managerialism including performance management, and research assessment have been encouraged, but there is little evidence of a state retreat from financing higher education.

Re-making a newly industrialized country into an innovation and knowledge-intensive hub is a risky endeavour. It requires aggressive and pronounced promotion by the state in order secure acceptance from the electorate. The city-state also has to counteract perceptions that its government is hostile to academic and creative freedoms, more generally. It is noteworthy that executive and senior personnel from foreign universities play a “mediatization” role, providing commentaries to the

city-state's newspapers, and offering proof of the city's openness to international expertise and experts ("foreign talent").

The rest of the chapter is concerned with analyses of two case studies: the Singapore-MIT Alliance, officially showcased as a successful Global Schoolhouse project, and the corporatization and transnationalization of the NUS.

Policy in Practice

The Singapore-MIT Alliance

The Singapore-MIT Alliance (SMA) was established following the signing of a Memorandum of Understanding between the Singapore government and the Massachusetts Institute of Technology in November 1998. For Singapore, the impetus to establish this research and education alliance arose after a 1997 MIT-led review of engineering education in Singapore's universities. The review recommended collaborations with external parties and systemic changes in Singapore's engineering programmes. MIT was subsequently invited by the government to enter into an educational "alliance" that involved Singapore's two national universities, the National University of Singapore (NUS) and the Nanyang Technological University (NTU). It is broadly acknowledged that the decision to approach MIT was a top-down decision driven by Dr Tony Tan, then Deputy Prime Minister and Minister of Defence, and an alumnus of MIT.

The SMA and other key Global Schoolhouse projects were formulated and announced in a period marked by the watershed event of the Asian Financial Crisis. Despite having strong economic fundamentals, government discourse portrayed Singapore as fragile in the face of seismic regional forces; the need for re-invention, vigilance and stoicism to "stay ahead" was paramount. Implicit within the various ministerial pronouncements and given full expression in Singapore 21 was the project of building a new national identity for Singapore's citizens—dynamic, entrepreneurial and transnational, people who would use transnationality in all its complexity to further the nation's economic well-being (Shanmugaratnam 2004; Tan 2000; Wong 2003).

To attract foreign and local "talent" the SMA operates along the lines of a development assistance model offering bond-free scholarships for postgraduate education in engineering. MIT's brand name was anticipated to influence individual students to choose Singapore as a study destination. Recruitment was also facilitated by stringent US immigration policies adopted after "9/11". Although statistics of students' countries of origin are deemed too sensitive to be publicized, anecdotal evidence suggests that Singaporean students do not predominate in the programme's enrolments. In this respect, the SMA functions as a policy instrument to attract "foreign talent". Implicit in their successful selection is the "Asia literacy and affiliation" of individual applicants, as this senior SMA professor notes:

We also look to see if they are motivated to stay in Asia. It's not much point [just] training them for the US. (staff, SMA).

A revised agreement between the government of Singapore and MIT in 2005 saw a shift in emphasis away from engineering to the biomedical sciences in this second phase of the Alliance (SMA-2). Although MIT is not the premier North American institution with expertise in the biomedical field, there was no question of replacing MIT as an alliance partner. SMA-2 students could now obtain a dual Masters degree from MIT and from the Singaporean partner universities—NUS or NTU.

The government's trust in MIT's capacity to contribute towards knowledge-led, innovation and entrepreneurship remains strong as shown by a speech by Dr Tony Tan, who now heads Singapore's National Research Foundation:

If the companies founded by MIT graduates and faculty formed an independent nation, the revenues produced by the companies would make that nation the 24th largest economy in the world. The 4,000 MIT-related companies employ 1.1 million people and have annual world sales of USD 232 billion (Tan 2008).

Has SMA fulfilled its objective to produce technopreneurs for the city-state? Our provisional findings suggest that fewer graduates choose the entrepreneurial pathway, preferring safer career choices in academia and industry. The reasons provided by alumni, students and staff interviewees include a broader social context which does not encourage failure ("Singapore is not a place [to] tolerate failure") and an equally risk-averse and conservative approach by employers. For Lim (2006) Singapore's political context, and history of top-down governance are factors that militate against creativity, individual initiative and risk taking, attributes associated with entrepreneurialism.

Transnational education alliances like the SMA are not without challenges. First, it is significant that the SMA's success rests on considerable state-sponsored financial support. The Alliance should not be seen as a template for transforming developing countries into knowledge economies. The governing party's openness to foreign ideas and people, its tendency to foreground economic rationalities in policymaking and the political hegemony that it exercises are factors that may not be replicable in other settings (see Sim 2005; Rodan 2006).

The issue of financial remuneration for MIT is significant in understanding the global aspirations of elite American universities to partner with the government of Singapore. Access to external financial resources that are underwritten by a technocratically inclined national government enables MIT to source monies for desired projects, to hire research staff and to purchase expensive equipment—endeavours which might not otherwise be financially feasible (Magenti 2006). As one MIT-based postdoctoral interviewee observed:

The fact that MIT is very rich doesn't mean that the professors are rich. The professors sometimes don't have a lot of money to do projects.

Despite the seductive largesse on offer, retaining top-drawer foreign talent—established innovators and knowledge entrepreneurs—is an ongoing challenge for Singapore. Although generous funds are available for bright MIT doctoral and postdoc-

toral students to visit Singapore and to establish collaborations and networks with their Singaporean peers, retaining them in the medium and longer term continues to be problematic.

In 2006, the Singapore government announced the establishment of SMART—the Singapore MIT Alliance for Research and Technology—to be sited at CREATE, Singapore's new high tech campus. All indicators point to Singapore assuming responsibility for financing this new endeavour. This state of affairs would suggest that MIT's decision to become involved with a state criticised for illiberal governance by sections of the international media and its own academics has paid off (see MIT FNL 2006). As with its Ivy League counterparts, MIT's interest in Singapore is also shaped by and responds to Singapore's sales pitch, namely, its equidistance to India and China, countries anticipated to be economic powerhouses of the twenty-first century.

To summarize, the Alliance articulates the ambitions of foreign educational institutions with the broader structural and micro-level changes being driven by Singapore's government. The SMA is premised on, and creates particular subjectivities for the institutions and the nation-states in question. The government promotes Singapore to the electorate as a pupil nation, that must seek (and pay for) tutelage from an established and esteemed centre of knowledge because of the pedagogic inferiorities of its education institutions. Red carpet treatment is afforded to “foreign talent” and “world-class” universities and this helps to constitute a binary between enterprising, creative foreign talent and risk-averse, plodding Singaporeans whose mindsets have to be changed to transform them into entrepreneurial citizens.

As Ong (2007) argues these changes are transforming the very notion of citizenship in the city-state. The accumulation of marketable intellectual capital has become an obligation of citizenship. Those who can meet this demand are accorded special entitlements and accommodations. At the same time, in response to growing public disquiet, the state is working to counteract the likelihood of providing a free ride to nomadic, economically rational (techno)entrepreneurs, promiscuous in their affiliations and relations.

What this case study suggests is that achieving research synergies between institutions with histories, missions and trajectories as vastly different as those of MIT, NUS and NTU presents many challenges, not all of which can be surmounted by generous funding and state-of-the art technological equipment. Our insights into the nuts and bolts of the SMA suggest it is premised on, and perpetuates, a subordinate intellectual identity for Singapore's universities, contrary to NUS' Global Knowledge Enterprise strategy, which we now discuss.

NUS: A Global Knowledge Enterprise

Established in 1905, the National University of Singapore enrolled 26,000 undergraduates and 10,500 graduate students in 2010.⁴ For much of its history, the university's contribution to national development was geared towards furnishing a professional and bureaucratic labour force. The shift towards an entrepreneurial model began in earnest at the end of the 1990s, gaining momentum with the recruitment of President Shih Choon Fong, a "Harvard trained" former Singaporean, with a background in US industry and research administration experience at an Ivy League university in the USA.

In response to national narratives of building a "new economy", a number of key initiatives were announced to enable "NUS to be to Singapore, what Stanford is to Silicon Valley" (Shih 2000). President Shih outlined a goal of transforming NUS into a "Global Knowledge Enterprise". This was elaborated first as "changing the mindsets of staff", "making room for the entrepreneurial spirit", "shutting out the bureaucratic mindset", and "becoming resourceful, innovative and pioneering". Second, it meant building borderless departments and faculties, in effect, establish a borderless knowledge community. The Life Sciences were noted as presenting significant intellectual challenges which required the strategic expertise of Medicine, Dentistry, Science, Engineering and Computing, disciplines singled out for their potential to contribute to Singapore's nascent pharmaceutical and biotechnology industries. NUS' Social Sciences, Law, Humanities Faculties were also noted to be well placed to contribute to Singapore's development by providing critical analysis and indigenous insight into Asian economy, polity and society. Third, transforming NUS into a "Global Knowledge Enterprise" meant producing citizens of the world, versatile and alert to global as well as local opportunities, willing participants in lifelong learning, with a sense of personal responsibility and moral obligation to contribute to society' (Shih 2000).

Re-making NUS into a research intensive university requires the state to provide generous funding to further its mission. At the same time, there is recognition that the university must be able to exercise greater autonomy over its affairs if it is to succeed in becoming a world-class university. The goal of becoming a "Global Knowledge Enterprise" also resonates with the broader national imperative to re-engineer the institution of citizenship. It requires staff to assume the role of development architects who are willing and able to transform Singapore into a knowledge and innovation hub. It requires disciplinary boundaries and parochialisms to be subverted and it asks Singaporeans to appreciate and model themselves on foreign talent.

A new division, NUS Enterprise, has been created to coordinate all aspects of the global knowledge enterprise. An Entrepreneurship Centre has been established under the auspices of NUS Enterprise to promote and undertake research on entrepreneurship, while a Venture Support unit provides assistance to students, staff and alumni engaging in innovation. An Overseas College Programme has also been set

⁴ Accessed 9 June 2011: www.nus.edu.sg/registrar/statistics.html.

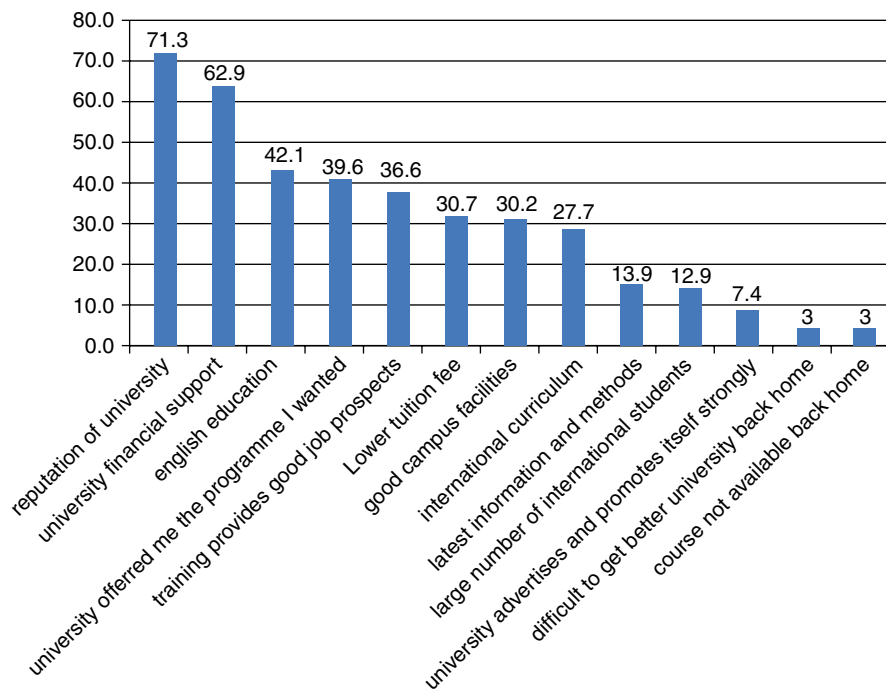


Fig. 13.1 Reasons given by NUS international students for studying in Singapore (%)

up, enabling the university's brightest undergraduate students to work as interns at high tech start up companies located in five key sites—Silicon Valley, Philadelphia, Shanghai, Stockholm and Bangalore (Wong et al. 2007).

NUS is distinctive from other enterprise universities in the primacy it gives to attracting overseas talent. The question of who chooses Singapore as a study destination, and the reasons underpinning their choice are significant to understanding the sustainability of NUS' endeavour to become a global knowledge enterprise,⁵ and contribute to Singapore's development.

Figure 13.1 highlights the significance extended to the reputation of the university by international students enrolled at NUS, confirming previous studies undertaken by established education exporters about the importance of academic reputa-

⁵ The non-random quota sample is designed to replicate the international student population in NUS along the following dimensions: gender, science versus non-science enrolment, undergraduate and graduate enrolment. In terms of sending countries, the sample contained 20% from the highest sending country; 20% from the second highest sending country, 10% from the third highest sending country, 30% from all other East, South and Southeast Asian countries; and 20% non-Asians. The international student sample was asked to complete a 15-minute questionnaire which collected data on how they selected NUS, their adjustment process and their future plans. The funding for this project comes from the National University of Singapore. The principal researcher (Ho) thanks the Office of Student Affairs for providing the enrolment figures for international students which allowed for the sampling design to be operationalized.

tion in student decision making (see Mazzarol and Soutar 2002; Soutar and Turner 2002; Veloutsou et al. 2004). An overwhelming 71.3% of the students surveyed mentioned the university's reputation for choosing NUS. Reputation is premised on the provision of quality teaching and training and adequate resourcing of research activities as well as international recognition of NUS' degrees (including in students' home countries). Twenty-seven per cent of our sample chose to study in Singapore because of the international curriculum offered at NUS (see Fig. 13.1). NUS's internationalized curriculum draws on the global and regionalized networks of its academics and researchers, and includes instruction in English, now regarded as a global language. NUS does not relegate undergraduate teaching to casual sessional staff as is the case in many US public universities and Australian universities, and this, we suggest, can only further its reputation for teaching, learning and supervision. Its institution-wide commitment to interdisciplinary research and education is also likely to improve NUS' reputation in the longer term.

About 62.9% of the international students surveyed mentioned having financial support (either in terms of a scholarship, tuition grants or student loans) as a reason for studying in Singapore. Given that the majority of foreign students in NUS are from either Southeast Asia, East Asia (China being the major sender) or South Asia (India being the major sender), the presence of financial support is attractive for academically strong students from middle and possibly working class backgrounds. We anticipate that access to regional higher education centres like NUS for bright students from more diverse socioeconomic backgrounds could create the conditions to reverse existing patterns of elite formation in the region.

It is significant that the students in our survey were not selecting NUS as a default choice because of their failure to obtain a place in their local universities, or because their preferred courses were not available. Only 3% of the sample we surveyed cited these factors—course unavailability or failure to secure a place as reasons for enrolling at NUS. The majority of students interviewed wanted an overseas study experience and NUS figured highly because of its reputation and provision of financial support.

The literature on international student suggests that international students do not just select a good university but also consider attributes of the host country, giving consideration to safety from urban violence, racism, and crime, along with the cost of living. Our survey confirmed these findings. Figure 13.2 shows that safety is uppermost in the minds of international students, with 63.4% of participants listing its safe environment as a reason for studying in Singapore.

Given the focus on talent attraction, one indicator of Singapore's success in retaining talented individuals is employment opportunities after graduation. That more than a third of those surveyed mentioned good job prospects as a reason for coming to Singapore suggests that the government's promotional messages of an economically dynamic global city in a bustling region is being heard. Besides job prospects, the other significant economic factor is the relatively lower cost of living (compared to major higher education markets in the North America, Europe and Australia), cited by 28.2% of the students.

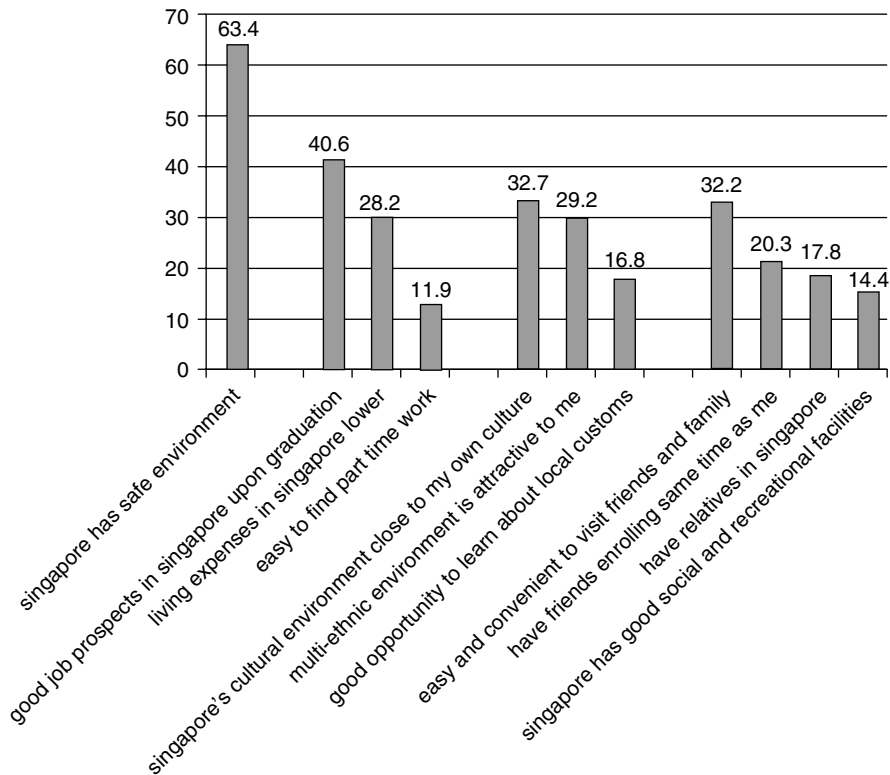


Fig. 13.2 Country attributes and its influence on NUS international students’ education choices (%)

Figure 13.2 captures the collective cultural and social reasons that shape the decision to study in Singapore: its strategic location in a region noted for its youthful demography, spatial proximity to home countries, familial and diasporic networks and a multi-cultural environment which offers a (perceived) cultural proximity to students’ home cultures. These factors combined to convince close to one-third of the students to select Singapore as a study destination.

Conclusions

Singapore has instituted major policy changes aimed at re-making itself into a knowledge-based economy in order to remain a relevant actor in the regional and global economy. We examined two programmes nesting within the broader Global Schoolhouse project: the Singapore MIT Alliance (SMA) and the strategies used by the NUS to remodel itself as an entrepreneurial “Global Knowledge Enterprise”.

Two points are worth re-iterating in relation to Singapore's knowledge economy initiatives. First, this broader platform is bolstered by the resources of a wealthy developmental state with reserves that would be the envy of most countries. Second, Singapore's knowledge economy aspirations rest on re-engineering the institution of citizenship, an undertaking that could have ramifications for social equity.

Officially, the rationale for the SMA was to enable Singaporean universities to develop capacity to deliver a more entrepreneurial engineering curriculum to local and international students. MIT's global prominence was also anticipated to throw a favourable light on Singapore's hub aspirations. In keeping with its citizenship re-modelling project, the SMA became a governmental instrument to steer Singaporean staff to benchmark themselves against a real and imagined standard of global excellence embodied in MIT. Although hailed by Singapore's government and by MIT as a success, it is significant that the SMA is no longer operating. It is not entirely clear either whether Singaporean SMA staff have a place at the new Singapore MIT Alliance for Research and Technology, sited at the state-of-the-art (Campus for Research Excellence and Technological Enterprise (CREATE)).

NUS has made a good start in internationalizing its student body, and its leadership has exhibited awareness of the need to distinguish between a strategy of crafting an attractive market image versus building a reputation (see Helmsley-Brown and Oplatka 2006). Initiatives like the SMA and various joint teaching and research programmes with elite foreign universities have been used to get the university noticed, however, NUS' reputation ultimately will be determined by its capacity to develop a distinctive research and education platform, one that engages with national and regional interests and changing geopolitical forces.

In the face of the Global Schoolhouse's citizenship re-engineering imperatives, NUS faces the challenge of balancing the needs of domestic students and citizens with the interests of a growing body of international students. There is increasing concern amongst sections of the middle class about the inability of Singaporeans to obtain places in their national universities, forcing many families to send their children overseas for higher education. Local universities have also been cautious about receiving graduates from the city-state's numerous polytechnics, propelling significant numbers to study overseas at considerable personal expense to upgrade their diplomas into degrees. Singapore lags behind OECD countries in higher education participation, with only 23% of high school leavers obtaining a university place. This figure is anticipated to increase to 30% when Singapore's fourth university, the Singapore University of Technology and Design becomes operational in 2015. Early indicators are that the university is unlikely to provide opportunities for mass enrolments. The new university is expecting to enrol 4,000 undergraduates and 2,000 postgraduates (Davie 2008).

In a vastly unequal region, Singapore stands out as a country which has been transformed from a city of *coolies*, *taukehs* and privileged Europeans to a global metropolis with a sizeable middle class and a reasonably well paid working class (Trocki 2006; Yeoh 1996). This is an achievement that is all the more remarkable given the extremes of poverty and wealth left by its colonial governors. That stated, the possibility of a fall-out from Singapore's citizenship reengineering project

should not be ruled out. Can NUS contribute to debate and strategy to reconcile the current brand of meritocracy with equity and social cohesion? These are critical questions confronting Singapore's premier seat of higher learning. Its potential contributions to this area may lie in the university borrowing selective aspects from a liberal arts model of higher education, thus allowing for a greater focus on issues of social equity instead of a whole-sale emulation of an elite research intensive institutional model (see Price et al. 2003)

Although economic nationalism is often regarded as an anachronism in this age of globalization, the Global Schoolhouse reveals the co-constitutive relations between economic nationalism and economic globalization. To sustain its economic progress, Singapore is crafting a new type of national identity for its citizens: transnational, self-sufficient, innovative, entrepreneurial and committed to self-betterment. The city-state's economic future and survival is portrayed by government to be reliant on such a citizen, suggesting that the accumulation of innovativeness and entrepreneurial potential is increasingly becoming an obligation of citizenship. For Lim (2006), these expectations construct an identity for Singapore as a place to be used instrumentally by all who pass through, rather than as a nation commanding emotional attachments, loyalty and belonging.

Singapore's knowledge economy aspirations and practices reflect its development trajectory. It has always demonstrated a historic openness to embracing foreign ideas and foreign expertise, and its education policies have followed its broader economic development policies. The city-state is now seeking to gain innovation leverage in much the same way that it acquired capacity in manufacturing expertise—by using foreign institutions and foreign talent to learn to do the job. As a wealthy nation unencumbered by political opposition and interest groups, Singapore has been able to provide the requisite resources to play in the high stakes of knowledge-driven production. Aware that its earlier industrialization strategy has displaced local entrepreneurial talent, the governing PAP is now seeking to develop indigenous capacity, at least to some extent. However, remaining relevant in a global and regional economy will require Singapore to respond to new geopolitical forces (see Mahbubani 2008). It is notable that the city-state is now foregrounding the need to recruit regional talent—the Asia literate and Asian affiliated who are regarded as having the potential to commit to Singapore's longer-term development.

When announced, the Global Schoolhouse project was portrayed as creating rich opportunities to bring a US-centric model of world's best practice to Singapore's universities and schools. The 2008 global financial crisis has highlighted the critical importance of regionalization for Singapore's future. Singapore's knowledge economy initiatives like the Global Schoolhouse project may well seek greater engagement and alliances with the region's best universities. These regionalization initiatives may catalyse a shift away from a predominantly British and American template of academic excellence, to include new expressions of global excellence.

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Chapter 14

Strategies for Higher Education Reform in Thailand

Nattavud Pimpa

Introduction

The goal of higher education in Thailand has long been to support national social and economic advancement, since the national reforms instigated during the reign of King Chulalongkorn (King Rama V: 1868–1910). The modernization and internationalization of Thai higher education is another phase in the country's long-standing practice of adopting ideas from abroad and adapting them to suit local circumstances (Chalapati 2008). Initial European influence has been evident since the founding of Thailand's first university, Chulalongkorn University in 1917, when "curriculum was crafted after English models" and "classes were mainly taught by foreign teachers" (Sinlarat 2004, p. 204). After the Second World War, American educational models dominated Thai higher education. There are many factors pushing Thailand to develop its higher education system. For instance, the global movement towards more autonomous and commercialized education is already well advanced in many of Thailand's major trading partners. International expectations in the global education marketplace are now shaped by measures and perceptions of service standards or "quality". Entrepreneurial universities, largely from the USA, the UK and Australia, actively seek commercial relationships with Thai academic institutions as thousands of Thai students opt for expensive education in these countries.

The current focus of higher education development has shifted from the advancement of the bureaucratic system to the development of "quality" rather than "quantity" (Phongpaichit and Baker 2005). The increasing number of public and private higher education institutions, students, and demands for quality in higher education system from the public are the major challenges for the Ministry of Education. There are now 20 public (13 autonomous and 7 under the management of Ministry of Education) and more than 50 private universities in Thailand, while the

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number of higher education students has increased from 890,000 in 2003 to 1.4 million in semester 2007 (Ministry of Education (Thailand) 2008). Most higher education institutions (44%) are concentrated around the Bangkok metropolitan areas, so that students in Bangkok are twice as likely to have access to such institutions, compared with other provinces. In addition, 70% of higher education students are from families of high income (Sangnapaboworn 2003).

Today's higher education system in Thailand emerged from changes in the modernization and internationalization era almost a century ago. In that period, the nation needed to adapt the socio-political structure to the challenges brought by western superpowers, in order to maintain its sovereignty in the regional and global arena. The primary purposes of higher education then were to "cultivate intellectuality" in "our young and capable people" so that they could become involved in government services for the modernization of the nation (Sangnapaboworn 2003). At that time, Thailand may have been influenced by higher education philosophies and systems from a western perspective. King Rama VI, who established Chulalongkorn University declared his intention to cultivate the consciousness of being Thai alongside modern knowledge (Sangnapaboworn 2003). The statement he made reflected upon his intention to continue his father's legacy on modernizing Thailand by way of higher education.

...I, as his heir (King Chulalongkorn), feel it is one of my immediate duties to carry out the royal project, knowing that once completed, the university will serve not merely as a commemorative monument to the glory of H.M. King Chulalongkorn, our country's most beloved monarch, but also as one enduring educational institution for our country... (Chulalongkorn University 1968)

The above-mentioned statement also explicitly demonstrated the long-term vision to expand the common higher education institution that focused on the production of civil service officers to a sophisticated university that include more disciplines so as to meet the expanding needs of the kingdom. Such disciplines included law, international relations, commerce, agriculture, engineering, medicine and health science and teacher education.

The second wave of change to the higher education system was just over a decade ago. Prior to the Asian economic crisis in 1997, Thailand enjoyed rapid growth and industrialization. However, without the necessary investment in higher education, research and development, and human resource development, this expansion was not accompanied by productivity gains (Savatsomboon 2006). As a result, the economy's growth potential diminished and its vulnerability grew, and the Asian economic crisis hit the country hard in 1997–1998. Thai society began to question the causes of the crisis, such as an overall lack of educational qualifications, and deteriorating moral and social values that had contributed towards materialism and corruption. From the economic boom in the 1980s to the economic bust of 1997 and afterwards, Thailand has experienced problems arising from the mismatch of graduate profiles and skills required in the employment market, particularly, in the international sector (Phongpaichit and Baker 1998).

Several questions were raised about the role of higher education in cultivating model citizens. There was a call for a new design of education, which would em-

phasize cultivating moral values as well as intellectual knowledge in learners at all levels of the education system. Furthermore, following the suggestion of the Asian Development Bank (ADB), the cabinet decided that all Thai public institutions must become autonomous, for transparency and efficiency of administration. It was deemed necessary to establish a system of quality assurance at higher education level in order to ensure these institutions' responsibility, accountability, and transparency (Ministry of Education Thailand 2005).

The argument that higher education institutions can stimulate innovation and the good citizen is very new in the Thai society. It is generally agreed by many scholars that economic growth in developed and industrializing countries was enhanced through significant investments in education and major educational reforms. In Thailand, the policy connection between education, entrepreneurship and economic development became explicit in Thai political discourse in the late 1990s (Chalapati 2008). After the economic crisis in 1997, the public identified a shortage of professional skills as a key reason for Thailand's crisis. Thai higher education institutions were deemed deficient in that they lacked the capacity to prepare graduates for work in a globalizing world. The Thai Government, hence, believed that a strong foundation in higher education needed to be established for the country to regain its competitive position in an increasingly globalized economy (Ministry of Education Thailand 1999). The free market and economy system in Thailand has accelerated the demand of global human resource who are equipped with global workforce skills. Thus, the modernization of higher education in Thailand has been introduced as a strategy to upgrade the quality of education and global skills of the graduates including technology literacy and improving foreign languages competency of Thai graduates to make them employable in the competitive international employment markets. One of the top priorities challenging the role of universities worldwide is producing and training graduates who meet the characteristics of the new "global professional" and the new knowledge economy (Marginson 2006), Thailand is not an exception.

Since 1999, the Thai Government decided to accelerate the national reform of the higher education system. Higher education reform has long been one of the top agendas for the Thai government, and is one of their primary responses to changes in the global social and economic markets. International government policies, economic integration, movement towards a knowledge-based economy, and environmental challenges: all can be seen to be impacting strategic planning for the higher education system (Ministry of Education Thailand 2003). The strategic movement and implementation in the Thai higher education system, however, has been criticized by a number of critics on the lack of co-ordination in planning, implementation and substance (Sinlarat 2004). A number of social critics in Thailand identified the government's response to the global short-term situation, not the long-term impact of global changes. Therefore, the current issues on higher education public policy reforms, institutional restructuring to accommodate a more entrepreneurial approach, changes to curriculum and teaching methods, recruitment of international students and the development of strategic partnerships with foreign universities are popular among politicians and their education policy consultants. However, there is

a danger that the nation-building role of education can be lost and forgotten through the sole pursuit of economic objectives (Chalapati 2008). As Sinlarat (2004) pointed out:

In the Thai higher education policy, there is still a lack of the “production of new knowledge” and research to serve the country’s needs as historically the production of knowledge did not have its root in higher education.

With the strong criticism on lacking in co-ordination and proper strategic implementation, strategies for higher education reform began to be implemented in 2003. Substantial in-house research projects and national studies of public and private universities in Thailand were conducted during 2003–2004 by the Ministry of Education and various higher education institutions. Key issues addressed in the management of higher education were a lack of unity in educational policy, goals and direction; the absence of an effective supervisory state system/mechanism to monitor and evaluate the performance of higher education institutions; the further need for a mechanism to support and assist these institutions in initiating and developing innovations; a lack of flexibility and efficiency in the administration and management of the institutions; and an absence of cooperation within and outside of the institutions.

Later on, the Thai Ministry of Education set up nine steering committees under the *Higher Education Commission*, with a focus on six key areas in higher education reform: (1) reform of the structure of the administrative and managerial system; (2) reform of higher education financing; (3) increased manpower production and access to higher education; (4) reform of teaching, learning and research; (5) reform of the system for development of faculty staff and educational personnel; and (6) support the participation of the private sector in the administration and management of the national higher education system. The Higher Education Commission endorsed in principle the draft strategy and road map, which was subsequently approved by the Council of Ministers on 16 September 2003 (Ministry of Education Thailand 2008). The commission was funded by the government to identify key problems related to higher education system in Thailand, as the pioneer for transforming higher education quality. This chapter will analyse these key strategies that led to the structural reform of the Thai higher education system, since a number of lessons can be learnt from the implementation of these strategies.

The overall picture of the higher education system indicated that the key problem impeding the effectiveness of the Thai higher education system was a lack of strategic management at both national (ministry) and institutional levels. Therefore, in 2003, The Thai Ministry of Education urged the education reform to be the key national agenda for the government.

The goal of the reform is to enable higher education to be an effective mechanism empowering Thailand to become a knowledge-based society. Higher education will serve as the main mechanism for national development in various aspects—economic, social, political, cultural and environmental; it will also provide the driving force empowering Thailand to become a self-dependent society able to benefit from innovations and increased competitiveness in the international arena (Ministry of Education Thailand 2003)

From the above-mentioned statement, the major goals of the higher education reform are to modernize the structural process, and to create a system that quickly

responds to social and economic changes in Thai society. To achieve these goals, the Thai government identified two steps to the reform process: reform of higher education commission (policy) and reform of universities (practice).

Challenges for Higher Education Reform in Thailand

Previous studies (Ministry of Education Thailand 2003; Krongkaew 2004; Schiller and Liefner 2006) in higher education policy and structure in Thailand identified a number of challenges springing from both international and domestic change that have put pressures on Thailand to reform the structure of higher education. In the public focus of higher education reform, following the economic crisis in 1998, the Thai government has seen the impact of globalization on national economic development as the force enabling Thailand to restructure itself for a better global economic position. To some extent, the crisis revealed the country's weakness of labour and professional skills. Producing knowledgeable and skilled workers, including science and technology literacy and English language skills, was the country's focus since the Eighth National Economic and Social Development Plan (1997–2001). The emphasis on the importance of the quality of educational standards and human resources stated clearly the country's needs for modernizing and internationalizing the higher education system. The 1997 constitution of Thailand and the National Education Act 1999 mentioned challenges and emphasized educational reform at all levels.

The first key challenge is the strong demand for higher education, which may have a major impact on quality. With the provision of a 12-year basic education, it is estimated that the number of upper secondary school graduates wishing to continue their study in higher education institutions will increase tremendously (Office of Basic Education [OBEC] 2003). More available seats are required to cope with the growing demand. Although the number of higher education institutions in Thailand has been increasing, due to the more relaxed policies in private higher education, most are criticized for their quality and standards (Ministry of Education Thailand 2005). Compared to other countries, Thai higher education institutions have produced very few innovations because there are not enough incentives, or an adequate system to encourage faculty staff to conduct research. Many of them lack the opportunity to undergo further development (Sangnapaboworn 2003).

A second challenge is research and development, which is one of the crucial weaknesses of the Thai Universities. Although research is one of the key agendas in the policy of most universities, a lack of funding and technical support from higher education institutions and government is one of the factors impeding academics (Nitungkorn 2001). In terms of the technical aspect of the research from Thai universities, most modern science and technology universities (such as Suranaree University of Science and Technology, King Mongkut Institute of Technology, or Mahidol University) revolutionized the research culture in the Thai higher education system through gaining more industry support than government funding. As leading

agents in enhancing the country's competitiveness in science and technology and its economy prosperity, higher education institutions in this cluster need to enrich their research work both in quantity and quality and encourage the development of students' creativity (Ministry of Education Thailand 2005).

To achieve the modernization of higher education reform, one of the major challenges is improvement of English language skills among graduates from the Thai universities. The impact of globalization on national economic development had forced the Thai government to restructure itself for a better global economic position. To some extent, the crisis revealed the country's weakness of labour and professional skills. Producing knowledgeable and skilled workers, including English language skills, was the country's focus since the Eighth National Economic and Social Development Plan (1997–2001). The 1997 economic crisis highlighted both the significance and weaknesses of English language skills of graduates in a global employment market in relation to international business industries. The Thai government recognized English language as the key to internationalize the higher education system and to keep up with national competitive advantage.

The next issue relates to the reduction of personnel in the government service system and the retirement of professors. This factor is forcing most public higher education institutions to restructure their administration system in order to provide more flexibility, autonomy and efficiency, and to attract capable personnel to replace retired academic staff. Thamrongthanyawong (2005, p. 14) estimates that the number of Thai PhD graduates is insufficient to replace the professors who retire within the next 5 years. Since 2004, according to the common practice of autonomous universities, new lecturers do not enter the academic system on a permanent government contract. All public higher education institutions use a short-term contract with new university lecturers. This issue is one of the crucial factors in demotivating young blood from entering the higher education system (Thamrongthanyawong 2005).

Competition among higher education institutions is also seen as one of the new challenges in the Thai higher education system. Private higher education institutions have demonstrated high flexibility and effective management, which has contributed to their rapid growth in the past 15 years. Such practice put pressure on public higher education to achieve more efficient management and keep up with domestic competition.

International Education in Thailand

Internationalization was intended in Thailand's First Long-range Plan for Higher Education Development (1990–2004) to facilitate international and regional cooperation with Thailand's ASEAN neighbours. This first 15-year Plan was formulated to direct desirable development of higher education in order to respond to the needs of the country and to determine appropriate economic and social positioning amid competition and dynamic international cooperation. These strategies contribute to

the growth of cultural and economic interdependence between Thailand and the international community. Significantly, it creates international movements as proved by increasing numbers of students, especially from ASEAN countries as well as increases internationally focused curriculum opportunities for Thai students (Chalapati 2008).

The Thai government started to include the response to the global factors in the seventh social and economic plan (1992–1996). By so doing, the policy included raising educational quality as well as foreign language proficiency of the workforce, and increasing vocational training and raising professional vocational skill requirements. In addition, the government also promoted and encouraged

... foreign higher institutions to establish according to the laws of their respective countries and have their public accreditation organisations or agencies concerned provide international programs in Thailand. These efforts, however, must adhere to the Private Higher Education Institution Act to ensure quality for consumer protection. (Kanjaniyot 2003, p. 36)

As a result, international programmes have been developed and increased from about 100 in 1992 to 465 in 2003 (Kanjaniyot 2003). By 2006 there were over 727 international programmes teaching in English under international cooperation and local establishments (Commission on Higher Education website 2006). At present, the number of international students enrolled at higher education institutions in Thailand has increased by almost 100%, from 2,240 in 2001 to 4,342 in 2002 and then by a further 16% to 7,893 in 2006 (Ministry of Education Thailand 2008).

The boom of international higher education program occurred during the country's economic crisis of 1997–1998. The policy on internationalization of higher education services developed dramatically. At that period Thai students studying abroad suffered the double-cost of overseas tuition fees and living expenses, due to the dramatic devaluation of the baht in 1997. The crisis, therefore, created an international education boom in Thailand as more Thai students chose the less expensive option to access an international education at home (Fry 2002). In the meantime, Western offshore degree programmes expanded through cooperation and collaborations with well-established Thailand's international higher education institutions (such as Assumption University, Asian Institute of Technology) and local universities (such as Chulalongkorn University, Thammasart University, or Kasetsart University). The circumstances have created pressures in the international education market in Thailand. International degree programmes, both those managed by Thais in collaboration with Western institutions and others managed by Western institutions with minimal Thai participation, were encouraged by the Thai government's internationalization strategy designed to achieve internationally recognized standard in higher education.

Regarding the current internationalization policy in the Thai higher education system, it can be seen that Post-Thaksin governments aim to cultivate a globally skilled workforce and has directly encouraged the establishment of English-medium business, engineering, and science academic programmes. Thailand now offers various forms of international undergraduate and postgraduate degree programmes in various disciplines with English as the sole medium of instruction. Local univer-

sities in Thailand are offering programmes from both their own established international masters degree program and with the ones from mutual agreements with international institutions mainly from the USA and Australia. Obviously, business degrees such as Master of Business Administration (MBA) and Master of Commerce or Management programmes are among the most popular programmes offered by Thai institutions. This is in line with regional trends in Asia Pacific where English-medium graduate programmes in business management and Information Technology (IT) studies are still popular in the international education market (Chalapati 2008). In Thailand, such programmes are both established and managed by local Thai institutions solely and with international collaboration.

The economic downturn in 1997 forced the Thai government to rethink the country's past strategies, especially in terms of "international competitiveness" (Fry 2002). Although Thailand invested a high percentage of annual budget in public education, it still "lags behind internationally on many major indicators of educational quality and human resource development" (Fry 2002). A powerful message from Krugman (1994 cited in Fry 2002) influenced Thai educational policy makers to realize Thailand could not depend on its cheap, semi-skilled labour the way that countries such as Bangladesh, Cambodia, Vietnam and China could. Apart from producing an educated and skilled workforce, the government needed to rework new higher education strategies to face challenges from the globalization (Chalapati 2008).

The Thai Ministry of Education based its six key strategies on these challenges to the higher education system in Thailand. Their implementation requires collaboration involving both government and institutions. The next section studies the key strategies for higher education reform as identified by the higher education commission from 2003 to 2006 in the roadmap for reform.

Strategies for Higher Education Reform in Thailand: What Has Been Done?

Reform of Teaching, Learning, and Research

Learning in the national higher education system has long been criticized for placing too much emphasis on memorization of content, which does not relate to real situations, labour demands or the development policy of the country. Students are not cultivated with the necessary skills for self-learning, critical thinking, problem solving and creative ability (Sangnapaboworn 2003). Consequently, strategies in learning and teaching reform were addressed as the key reform area. To achieve this long-term strategy, the Thai government started prototype projects to work collaboratively with the key higher education institutions in the nation: the elite, the regional, the technological, and the former teachers' colleges.

Traditionally, the elite universities in Thailand are Chulalongkorn University, Thammasat University, Kasetsart University, Mahidol University and Srinakarin-

wirot University. There are some other key “regional” universities such as Chiang-mai University in the north, Burapha University in the east, Khon Kaen University in the northeast, and Prince Songkhla University in the south. There are also a few technical and agricultural colleges including King Mongkut Institute of Technology. The rest were former teachers’ colleges (Rajaphat system) in individual provinces. These higher education institutions were the key focus when implementation of the teaching, learning and research reform strategy began. The major goals of this reform strategy were to enable the students to acquire critical thinking skills and problem-solving abilities; to foster the creation of innovations and the desire for lifelong learning; to develop the ability to create new tasks; to enable self-adjustment to the world of work; self-dependence; and the capability of attaining social benefits (Office of National Education Commission (ONEC) 2006).

In terms of research and development, strategy has long been a major drawback in the Thai higher education system. Since any strategy has to be based on a long-term vision and the support of excellent researchers, very few Thai universities have been able to succeed. In science and technology, for example, research activities started only 10–15 years ago on a regular basis. Public funding does not cover research expenditure and research agencies only pay for current expenditure, not for investment in equipment, so only 20% of Thai academics conduct research continuously (Weesakul et al. 2004).

To achieve the reform goal, higher education institutions have been encouraged to be more proactive in carrying out basic and applied research, to develop a unique academic profile and to improve academic quality and funding. Each higher education institution was encouraged to serve as a centre for specialized research, a centre of excellence, or research centres for policy study in selected fields (Ministry of Education Thailand 2004). They will, thus, serve as mechanisms for initiating research activities and encouraging researchers, as well as coordinating the research networks for intra- and inter-institutional research activities. Each institution was also encouraged to set up a central unit in charge of management of the overall research activities in order to facilitate researchers in carrying out their tasks and disseminating information on the research work of the institutions (Ministry of Education Thailand 2004). Furthermore, most higher education institutions agreed to allocate more financial support to the professional development of researchers. It is expected that researchers will be retained by providing the possibility of advancement in their career path, and mechanisms for their continuous development (Office of National Education Commission (ONEC) 2006).

Reform of Structure and Managerial System of Higher Education

With the view to attaining efficiency in the administration and management of higher education, higher education institutions are expected to be flexible in their functioning. Most higher education institutions were urged by the taskforce committee to improve their managerial system by collaborating closely with the higher education commission and also considering local industries and the community

(Ministry of Education Thailand 2004). However, the lack of experience contributed to the delay in the implementation of this structure in some regional higher education institutions (Ministry of Education Thailand 2008). To elucidate the issue, the commission of higher education coached most regional universities on the goals of higher education reform, and the ideal structural and administrative system. From 2004 to 2006, the higher education commission supervised the functioning of higher education institutions regarding their policies, quality and standards by using budgetary allocation as a mechanism for supervision. Performance was monitored and evaluated through post auditing. The commission also encouraged these institutions to function in consonance with the policy, goals and plans for national development. Issues such as strategic planning, policies on university management, long-term and short-term plans, and the quality and standard of educational management were encouraged to adhere closely to the commission of higher education.

One of the major practices under this strategy was the creation of intra-institution managerial systems through grouping or networking of higher education institutions. These took the form of vertical networks, comprising institutions with differing developmental levels, roles and responsibilities, and horizontal networks to coordinate between similar institutions or groups of institutions. To achieve this convergence in strategic management, higher education institutions were categorized for excellence in accordance with their respective roles (Ministry of Education Thailand 2008).

At an institutional level, an emphasis on the clear responsibility of higher education institutions to match their own strategic work plans with the policy, goals and plans for national development was clearly addressed as the key goal to reforming the management of most institutions. The Ministry encouraged all public and private higher education institutions to follow three goals in the managerial reform process: good governance, flexibility, and accountability (Ministry of Education Thailand 2004).

In terms of the governance of the institutions, the electoral process for appointing administrators (rectors or presidents) was replaced by a search for desirable academic candidates with strong leadership (Ministry of Education Thailand 2004). Most university councils assume responsibility for supervising, and monitoring their functioning in order to attain quality, efficiency and consonance with the policies and direction of national development.

Recently, international cooperation in education is a part of the Thai government's policy on regionalization and internationalization. It is considered "as an effective means to enhance the quality of higher education through the sharing of knowledge and experiences within the region and beyond" (Krongkaew 2004). Ongoing collaboration with international universities in seminars, conferences and workshops around the world and in the region is a further step for Thailand in terms of improving the national educational structure. For this purpose, a number of partnerships were established with international organizations such as the Association of South East Asian Institutes of Higher Learning (ASAIHL), the International Association of Universities (IAU), the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) as well as the Centres of the Southeast

Asian Ministers of Higher Education Association (SEAMEO). This form of international cooperation accelerates the degree of internationalization in the Thai higher education system and academic development.

Reform of Higher Education Financing

In 2004, the higher education commission identified that public funding still accounted for over 80% of the budget of most private universities, with 10–20% tuition fees or support from the industry. The National Education Act of 1999 permits universities to generate their own income from endowments and assets. However, with the exception of Chulalongkorn University's property in downtown Bangkok, there does not seem to be much potential in this area. In theory, public funding pressures could lead to a greater openness to alternative income sources (Schiller and Liefner 2006). For university autonomy in financing, budgeting and asset management, university councils are able to make decisions on their own financial and accounting systems, and manage their own properties and assets. Universities are also able to mobilize, handle, maintain, generate and utilize incomes generated from various sources and devise their own financial audit system. Annual financial audit reports are required to be submitted to the government.

Under its policy of utilizing budgetary allocation as a mechanism for ensuring higher educational institutions attain the standard required through efficient administration and management, and in consonance with the policy and direction for national development, the government has implemented a number of sub-strategies. For example, in 2006, a demand-based funding system was introduced to all public higher education institutions. Basically, the budgetary allocation system was adjusted from supply-side financing to demand-side financing. The government also introduced the Income Contingent Loan Scheme (ICL) which is very similar to the Australian financing higher education model (Schiller and Liefner 2006). Unlike previous loan scheme in Thailand, the ICL is an interest-free loan for all students. The government proposes that individuals who make payments higher than those stipulated in the loans be eligible for additional deductions on the principal. For those students who could not reach the earning threshold, the government would absorb the costs.

Obviously, most financing models and resource-allocation strategies in the modern Thai higher educational system were developed in early 2000s when Thaksin Shinawatra was the Thai prime minister. Under his leadership, the implementation of western concept of micro-financing in education, entrepreneurship, and health scheme has been practiced in the nation, due to his key policy on increasing access to people of disadvantaged socio-economic background. Furthermore, under Thaksin's administration, all public higher education institutions were encouraged to increase mobilization of resources from various sources with the state providing supporting mechanisms. The funds thus raised were added to the state budgetary allocation for implementation of the projects for quality improvement.

In order to set up a transparent system of funding and budgeting, the Thai government had to identify criteria for measuring performance. The government introduced performance-based measures for all public higher education institutions. The national key performance indicators for universities were designed by the steering committee of the higher education commission to set out the standard indicators for budget allocation to the institutions. Block grants from the national budget were distributed to higher education institutions on the basis of their performance (relative to the different roles of the institutions), and the products and the production costs of the education. Accordingly, contracts on performance and funding were signed by the institutions for their functioning in accord with these established conditions and criteria, with the state supervising through post auditing. In this way, the national budgetary allocation for capital and unnecessary construction costs were decreased. The amount saved is duly transferred to the general subsidy of projects for the quality improvement of higher education.

Because of the pressure on financial reform and a desire to become autonomous, most higher education institutions have begun to search for more ways to obtain both financial and technical gains. Most are setting up special undergraduate programmes (such as an English programme or an International joint programme) in the humanities and social sciences, or Master of Business Administration, Master of Education, and Master of Arts programmes, as well as Doctorate programmes in business, education, mass communication, and political sciences with full fees. However, these new programmes will not alleviate the shortage of graduates from science and technology programmes and are not subject to efficient quality assurance procedures (Schiller and Liefner 2006)—if the quality of graduates from such programs is taken into consideration.

Human Resource Production and Access to Higher Education

With the view to increasing human resource production, particularly in science and technology, and providing equal access to higher education for all in consonance with their knowledge and capability, strategies on increasing opportunity and public access to higher education have been encouraged by the Thai government (Ministry of Education Thailand 2004). The higher education institutions, especially public universities with limited admission and certain private institutions, plan to produce human resources in the fields in which there is a shortage, and which are essential for national economic and technological development. The government also encouraged the production and long-term development of teaching and research staff in science and technology, law, and health (Ministry of Education Thailand 2003).

With the aim of increasing the number of graduates in these areas of study, higher education modalities have been diversified to reach different target groups. The acquisition of additional knowledge through cross-institutional transfer of credits and learning outcomes or inter-institutional registration has been encouraged by most public higher education institutions. Furthermore, most higher education insti-

tutions have expanded their programmes by offering both regular and other types of courses, in order to respond to the needs for informal education and career development. The government has put a lot of emphasis on the development of information communication technology to provide access to those who are in need of higher education. An on-going development of an open university system such as that in place at Ramkhamhang University and Sukothai Thammatirat University has been supported in both financial and technical aspects by the government (Ministry of Education Thailand 2005).

Furthermore, some regional higher education institutions have already initiated their own flexible admission system to increase access to higher education for local students. Several universities have given priority seats to local graduates on a quota basis. For example, Burapha University has given a special quota to students from the east who have demonstrated great achievement in music or sports, and provided them with special privileges such as an exemption of tuition fees, flexibility in learning methods, rent free dormitories, and by offering special classes at appropriate times to help strengthen their academic ability (Burapha University 2005).

Reform of the System for Development of Faculty Staff

Compared to other countries, Thai higher education institutions have produced very few renowned philosophers. The key problem is a lack of incentives and a positive system to encourage faculty staff to conduct quality academic activities (such as research, projects, or innovations). Many of them lack the opportunity to experience continual development (Sangnapaboworn 2003; Schiller and Liefner 2006). With the view to motivating personnel with the knowledge and capability to join the higher education system; and developing administrators, and other faculty staff in the system, the government has implemented a number of strategies.

A system for continuous development of administrators, faculty staff and academic support personnel in higher education institutions has been implemented to encourage more people to join the higher education system, and to continuously improve the faculty staff in the system. Such development will be consonant with the roles and responsibilities of the institutions. In this matter, private higher education institutions are perceived to be more flexible in their resource allocation for staff professional development. Therefore, competition for the best academic staff among private and public higher education institutions is inevitable. The Thai government has realized that financial incentives to work in the public higher education system are less competitive than those offered by private institutions. For example, at Chulalongkorn University, a full professor in the top salary bracket will earn approximately 1,500 US\$ per month, a recently graduated PhD holder about 350 US\$—a fifth of the prospective salary in the private sector. As a result, professors are teaching for additional hours to increase their income (Weesakul et al. 2004). The government has encouraged most public higher education institutions to become autonomous and create their own pay scale for staff. If a

university has a better pay scale, the government believes that it may attract more qualified staff.

A long-term strategy for human resource in higher education systems has also been implemented. Post-graduate programmes with strong research combinations have been developed to serve as a mechanism for creating new faculty staff (mostly in science and technology). A majority of higher education institutions have been working on providing more financial and technical incentives for their staff members to complete their doctorate studies either in Thailand or from overseas. Thousands of scholarships from the government have been granted to support new-blood for the modern higher education system. This strategy was established with the view to attracting people with competence and integrity to the research and teaching force. This strategy, however, raises an issue of the use of academic qualification as a professional upgrading, rather than education for the sake of personal development. There are always some dubious international education providers that take opportunities to illegally offer doctorate degree programmes in Thailand's provinces. For instance, there was a scandal caused by a group of Thai academics from Rajabhat University who completed a doctoral degree from a university in the Philippines, even though this particular program was not legally accredited by the Ministry of education. The same university had conferred degrees to 29 Thai students in Songkhla, Chiang Mai and Udonthani provinces since 1999 (Matichon Sud-sup-da (Weekly Matichon) 2002). Apparently, there are many university lecturers who want to receive doctorate qualifications from foreign institutions but, are unable to go abroad due to family or other commitments, lack of academic proficiency, or general lack of understanding in research. Acquiring doctoral qualifications in order to be called a "doctor" regardless of the quality of the degree is a reason for upgrading 'personal status' rather than professional qualifications (Chalapati 2008). This is a common phenomenon in the Thai higher education system.

To encourage Thai university lecturers to keep their research activity a priority, the government has created a system for networking of faculty staff and personnel at inter-disciplinary and inter-institutional levels, both within the country and abroad (Ministry of Education Thailand 2005). Such networking aims to lead to academic co-operation, mutual assistance and both technical and knowledge exchanges regarding teaching and learning, academic service, and implementation of various tasks for the benefit of the country.

Participation of Business and Industry in the Higher Education System

The final strategy in higher education reform is to encourage the private sector, industry, and the community to participate in the management of higher education system in Thailand. This strategy was set to foster the key strategies on teaching, learning and financing the higher education system (Ministry of Education Thailand 2005). Schiller and Liefner (2006) reported that the potential for university-

industry relations in Thailand has been limited to a few technological fields where universities' and companies' capabilities overlap (e.g. agriculture, food processing). They also further discovered the barriers in collaboration with industry: lack of motivation, lack of trust between institutions and industry partners, and poor communication. Furthermore, the Office of National Education Commission (ONEC) (2006) reported a lack of flexibility in research and education management in most higher education institutions as a major problem in collaborating with the industry and local community.

In response to these problems, the government has encouraged a number of enterprises to invest in the provision of higher education, especially in the fields responding to market and social needs. A number of short and long-term strategies, such as tax exemption for businesses participating in the collaboration, low-interest loans for universities or research centres, academic and technical support for both business and higher education institutions, and increasing community participation in the management of higher education institutions, have been implemented to further collaboration. Furthermore, the government has provided administrative and managerial freedom to those members of the private sector participating in education provision. There will be, however, a system for supervising and monitoring the performance to attain the quality and standard set by the state.

Conclusions

Global factors, such as economic crisis, demand for global skills, or the free movement of international education services, have brought challenges to the Thai higher education system. At the same time, local conditions have urged the need to reform the structure of the higher education system in Thailand. The promulgation of the National Education Act in 1999 was a landmark of reform process, which has led stakeholders in the Thai higher education system to strategically respond to the changes to both local and global demands on higher education. Challenges for the higher education system in Thailand may be similar to those in most countries in the world. Strategies to respond to such challenges, however, differ from countries to countries. In the case of Thailand, globalization has been integrated into the education policy since 1990 as a mechanism for the improvement of economics and social standard. The policy addresses the need to strengthen the nation's competitiveness in the face of the economic challenges of globalization. Thailand is also responding and adapting to the new requirements of the global market to achieve international recognition for its graduates and to ensure that students are internationally oriented in foreign language as well as acquire knowledge of foreign cultures and develop intercultural sensitivity. Changes in a global economy have brought significant changes to Thai higher education system. A severe economic crisis in 1997 forced Thailand's national policy makers to redirect and reform the higher education system. Higher education institutions are also changing the ways in which they operate as they are facing changes in administrative re-structuring, autonomy, research, cur-

ricula or financing. These and other adjustments affect social and cultural values of the country normally reflected in the higher education system.

In the case of Thailand, increasing the flexibility and transparency of higher educational management is the key to the reform strategies in the six areas. The bottom line of management problems in the higher education system in Thailand was the absence of a strategic management culture (due to centralization and a government-orientated system). It is believed that flexibility in higher education management via ways of increasing autonomy will accelerate the reform process. As suggested in a number of studies in education reform (Sangnapaboworn 2003; Ministry of Education Thailand 2004, 2005; Schiller and Liefner 2006), the process can be facilitated by a strong link between policy and practices at both national and institutional levels. A paradigm shift in perceptions of the role of institutions, academic staff, and community must be swiftly achieved in order to foster effectiveness in the reform process. In particular, the government must demonstrate a win-win situation of change to stakeholders in higher education system. More importantly, there must be political support from the government and members of the parliament, including public understanding and participation (Sangnapaboworn 2003), so that the reform of higher education will become a reality. Reform only emerges from careful planning and management of strategy.

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Chapter 15

National Policies on Skilled Labour and the Cross-border Student Market, with a Focus on Vietnam

Cate Gribble

Introduction

One of the ramifications of the rapid socioeconomic change that has taken place in Vietnam in recent years is the increase in the number of Vietnamese students studying overseas. In the past, overseas study was made difficult because of tight government controls. However, it is now relatively easy for Vietnamese students to pursue their studies abroad. While the number of students on government scholarships has also increased, a majority of Vietnamese students studying overseas are self-funded and choose to remain in the host country. Although there are no available data on the return rates of Vietnamese students, conversations with a range of sources in Vietnam indicate that few students are returning. This loss of talent clearly points to a potential brain drain of talented young Vietnamese with the types of skills and knowledge required for a modern economy.

Until recently, the Vietnamese government appeared to be taking a largely *laissez-faire* approach to any student brain drain that might be occurring, believing that apart from persisting with broad economic reforms, there was very little that it can do to encourage students home. There are signs, however, the government is considering adopting tighter controls over overseas students. Under a draft regulation introduced in late 2009 by the MOET, no overseas student will be allowed to work in the host country for more than 3 years after graduating. The regulation applies to all overseas Vietnamese students regardless of their funding. Those overseas students sponsored by the Vietnamese government who choose to work abroad would also be required to pay income tax. MOET has justified the proposal saying that it will provide the Government with more exact statistics on self-funded overseas students while protecting students' rights. The proposal has promoted much debate among overseas students in online forums and websites who have said that rather than prevent 'brain drain' as intended, the measures may well prevent the flow of human resources (Hang 2009).

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Vietnam's private sector has adopted a proactive stance with our research revealing that a number of private sector organizations are taking important steps to establish links with the Vietnamese student diaspora. The creation of these links is considered critical to the future return of overseas Vietnamese students, many of whom have the potential to make a highly significant contribution to Vietnam's social and economic development.

The apparent trend for Vietnamese students to remain abroad after the completion of their studies is worthy of further investigation. While Vietnam is a country that has experienced significant economic growth since the 'Doi Moi' opening up process began in 1986, particularly in the last 10 years, many challenges remain. Vietnam's recent accession to the World Trade Organization (WTO) has resulted in concerns about how Vietnamese enterprises will cope with increased foreign competition. One key concern is the lack of qualified personnel needed to supply foreign companies in Vietnam. A 2006 survey indicated that the shortage of senior managers and other qualified personnel is more acute in Vietnam than in any other ASEAN country (Vietnam Net Bridge 2006c). Shortly after the WTO accession, Vietnam's Prime Minister acknowledged that the country's incomplete legal system and lack of experience under a market-driven economy represented significant challenges (Vietnam Net Bridge 2006a). Others involved in international business and trade have emphasized the importance of Vietnamese people having global visibility and good foreign languages in order to survive and prosper under the WTO Regime (Vietnam Net Bridge 2006a). At this juncture in Vietnam's history, there is an obvious need for personnel with expertise in key areas to ensure continued social and economic success. Vietnamese who have studied abroad represent an important resource to be tapped with many graduates of foreign universities possessing skills and knowledge that are vital for Vietnam's economic and social development.

Vietnam's Higher Education System

The Vietnamese higher education system has witnessed rapid expansion which is a reflection of the significant socioeconomic development and related growth that the country has experienced in recent years. These developments have led to a surge in demand for higher education in order to meet the increasingly diverse requirements of a modern economy. The successful universalization of primary education along with the aim to make lower secondary education universal over the next 20 years has led to additional strains being placed on an already overburdened higher education system. Annually one million tertiary age students sit university entrance exams hoping to secure one of the 300,000 places available (Vietnam Net Bridge 2008a). This situation is only likely to worsen as 65% of the Vietnamese population is under the age of 30 and within 10 years the Vietnamese government estimates that 2,000,000 students a year will be seeking tertiary education (Ashwill and Le 2004).

Given the pressure the domestic higher education sector is already under, it is little wonder that the Government encourages those students with private means to pursue their studies abroad.

Vietnamese Students Abroad

While the Vietnamese government does not collect official data on international student mobility, UNESCO estimates that in 2007 there were 27,866 internationally mobility Vietnamese students (UNESCO 2007). Reports in the Vietnamese press indicate that 10,000 Vietnamese study overseas every year and that in 2008 there were approximately 50,000 Vietnamese students studying abroad (Anh 2008). Others reports estimate that there are approximately 4 million Vietnamese living and working in 101 countries around the world, including a large number of tertiary level students in the United States, Australia, Canada and Singapore (Down 2009).

While some overseas Vietnamese students are scholarship funded, a majority of Vietnamese students studying abroad are self-funded and this portion of overseas Vietnamese students is on the rise (Valley and Wilkinson 2008; Vietnam Net Bridge 2006b). The Vietnamese government encourages students with private means to pursue overseas study. Conversations with a spokesperson for MoET reveal that the Government recognizes the many advantages associated with an international education and encourages students to pursue overseas study. As well as promoting international student mobility, the Vietnamese government also encourages foreign investment in the domestic higher education sector in the form of joint training and research programs, foreign owned universities and overseas fellowships.

Overseas study is not a new concept in Vietnam. In the recent past, many Vietnamese students undertook tertiary studies in other former socialist countries. Between 1951 and 1989, former socialist countries helped train over 30,000 undergraduates, 13,500 postgraduates, 25,000 technicians and thousands of other scientists (Kelly 2000). It is only recently that there have again been opportunities for Vietnamese students to study abroad. While in the past Vietnamese overseas students were government funded, today a majority of Vietnamese students studying abroad are privately funded. The USA, Australia and the UK are among the most popular destinations for self-funded Vietnamese students with recent statistics showing that overseas study trends are on the rise. In 2009 student flows increased by 45% to the USA while in Australia annual growth of Vietnamese enrolments was 69% in 2009 (AEI 2009). China has also emerged as an increasingly popular choice for Vietnamese students. More affordable tuition fees, subsidized accommodation and the close geographic proximity to Vietnam make China a very appealing destination. According to MoET the number of Vietnamese students in China in 2006 was 6,000, rising from 500 per year in 2000 to more than 1,500 students per year in 2006. As majority of these students are self-funded and according to MoET they mostly return to Vietnam after their study, with many finding good jobs with Taiwanese, Singaporean or Malaysian companies located in Vietnam (Hung 2007).

The Rise in Self-funded Overseas Students

So what is fuelling the rise in self-funded overseas students? As mentioned earlier, increasing numbers of young Vietnamese are choosing to study at a tertiary level and Vietnam's young population is driving up the demand for tertiary education in general. While for the majority of students the cost of studying abroad is prohibitive, Vietnam's emerging middle class is increasingly likely to seek out international alternatives to local institutions, many of which are considered substandard. Problems in the domestic tertiary education sector are clearly fuelling the movement of self-funded overseas students. Firstly, Vietnam's education system does not currently have the capacity to cater for the strong demand for tertiary studies. Secondly, the popular perception among the Vietnamese population is that what is on offer is substandard. In recent times the poor state of Vietnam's tertiary sector has been widely reported in local media (VIR 2009; Le 2008). The Government, too, has acknowledged that there are a number of weaknesses in the system that need to be addressed. The general consensus appears to be that Vietnamese universities have been slow to respond to market changes with outdated curricula and teaching styles producing graduates who find it difficult to obtain work in their field. Vietnam is currently in need of skilled workers to serve in hi-tech industries. However, the technical and higher education sector is unable to supply appropriately trained recruits for this sector (VIR 2009).

While the problems and deficiencies found in the domestic education and employment sector certainly encourage many Vietnamese students to seek higher education abroad, the opportunities that exist overseas—the pull factors—are a crucial element in the equation. The chance to study in fields not offered in Vietnam, the prestige associated with a foreign qualification, the opportunity to earn higher wages and gain valuable international experience are key motivations when it comes to considering overseas study. Countries such as Canada and Australia, and more recently the UK and France, have adopted immigration policies that make it easier for foreign students to remain post graduates (Batalova 2007). The combined 'push' and 'pull' factors persuade Vietnamese students and their families with the financial means to make considerable sacrifices in order to send their children overseas to study, believing that an international education will give them a brighter future.

Return Home or Remain Abroad?

The absence of any research or data on return rates of Vietnamese students makes it difficult to determine the actual flows of students to and from Vietnam and the reasons for their decisions to either remain abroad or return to home. However, discussions with representatives from a number of groups and associations, as well as the Ministry of Education, suggest that few Vietnamese students return home immediately after graduation, and that the decision to remain abroad after graduation

is largely economic. Many Vietnamese students who study overseas want to stay and find work in order to earn money and gain valuable international work experience. Some Vietnamese international students may have incurred debts that they need to repay meaning that the chance to earn much higher wages may be the main motivation to remain overseas. Gaining valuable international work experience is also a compelling reason for many Vietnamese students to remain abroad. While in the past, a degree from an international university was sufficient to secure a good job either back home or in a third country, employers are becoming more discerning, preferring graduates of foreign universities to also have overseas work experience. It may also be the case that students are able to better apply the knowledge and skills they have acquired via their international education in the host country than at home.

Despite recent economic and social developments that have occurred in Vietnam, there are still limited opportunities for graduates to both employ new knowledge and skills and receive suitable remuneration. Recent reports in the Vietnamese press indicated that those students who did return found it difficult to find suitable employment despite their international qualifications, fluency in foreign languages, and up-to-date knowledge in their field (Thanh Nien News 2005; Thanh Nien 2008a). Some anecdotal evidence suggests that some Vietnamese students choose to remain abroad in order to secure permanent residency status, not because they intend to remain abroad in the long term, but rather to keep their options open for future return. While there are still no data on the stay-rates of Vietnamese overseas students, anecdotally, it would appear that many are choosing to remain abroad, at least in the short term.

Tackling the Brain Drain

The growing trend for international students to remain in the country in which they study after graduation is a consequence of increasingly globalized education and labour markets. The challenge for many developing countries is to formulate policies that take full advantage of the positive consequences of increased student mobility while limiting any negative effects associated with an outflow of highly educated people. While the loss of students has traditionally been seen to have a detrimental impact on sending countries, a growing body of research suggests that sending countries can in fact benefit if the emigration of tertiary educated persons is counterbalanced by the feedback effects associated with remittances, investment, technology transfer and trade (Szelenyi 2006).

The term 'brain circulation' is often used to describe the increasingly circular and temporary nature of migration with many migrants maintaining financial, cultural and sometimes political links to their home countries. Increased student mobility improves access to higher education in sending countries by addressing unmet demand at little cost to the sending country. Sending countries may also benefit

from financial remittances, technology transfer, entrepreneurial partnering and the development of personal networks and diplomatic ties (Hugo 2003).

According to the brain drain literature, there are three broad strategies that sending countries like Vietnam can employ in response to international student brain drain. These strategies are sometimes referred to as retain, return and engage or the 'diaspora option' (Gribble 2008). Sending countries can attempt to *retain* tertiary students by expanding the domestic tertiary education sector thus providing them with a viable alternative to studying overseas. They can encourage them to *return* home by offering targeted incentives and repatriation schemes. Developing a strong research and development environment is another approach, along with encouraging economic growth that will hopefully lead to attractive employment opportunities for returning overseas students. The third option is to accept that while some students may not return permanently they can still contribute to their home country's development. By establishing and maintaining links with the student diaspora, countries can engage with current and former students, encourage them to remit savings, and act as bridges for foreign investment and trade and the transfer of knowledge. The creation and cultivation of links with overseas students is central to this third option. These links provide a conduit for the sending country to advertise investment and employment opportunities, promote the transfer of knowledge, skills and technology, and communicate up-to-date information on the country's economic, social and political environment that may facilitate return migration.

The Vietnam Government's Current Approach to Student Brain Drain: Retain, Return, Engage

The Vietnamese government's apparent lack of concern for non-returning overseas students appears to stem from a number of contributing factors. Firstly, Vietnam is currently benefiting significantly from the remittances sent by overseas Vietnamese. In 2008, overseas remittance was \$ 7.2 billion, or 8% of Vietnam's GDP (ref). Secondly, while Vietnam's accession to the WTO promises many opportunities, significant improvements in the business and investment climate need to occur before the country can fully benefit from international economic integration. According to the Vietnamese Foreign Minister, Vietnam remains a low level developing economy with many weaknesses in the national economic structure, institutions and policy (VIR 2005). Vietnam may not yet be ready to take full advantage of the skills and knowledge of its internationally trained student population, nor may they be able to offer salaries comparable with what many students might hope to earn overseas. Many reports suggest a flood of investment will follow Vietnam's WTO accession (John 2007). However, it may still be too early for returning Vietnamese overseas students to benefit from Vietnam's international economic integration. In 2008, amid double-digit inflation and in the shadow of world economic turmoil, some commentators expressed concerns that the Vietnamese economy was in se-

rious trouble while other reports suggest that inflation was soon to peak and that government measures would restore confidence (The Economist 2008). While the long-term outlook for the country is positive, there may be some turbulent economic times ahead before Vietnam can cope with an influx of highly skilled overseas Vietnamese returning with the intention of obtaining good jobs back home.

However, Vietnam can also ill afford to lose this talent forever and must therefore develop policies to either curb the outflow, promote future return or encourage the engagement with Vietnamese tertiary students who remain abroad.

Retain: Higher Education Reform

Major higher education reform is a top priority for Vietnam if it is to appropriately train personnel for the global economy and reduce the number of students studying overseas. According to a 2006 World Bank *World development report*, more than half of the Vietnamese population of 83 million people is under 25 years old, and 27% are between 12 and 24 years of age. The education levels of Vietnamese youth have increased significantly in recent years with growing numbers completing secondary education and seeking some form of tertiary education. The tertiary education system has expanded rapidly over the past 10 years. In 2004 the gross enrolment rate was 13% compared to just 2% in 1992 (World Bank 2007). Vietnam's young population coupled with the country's strong and sustained economic growth means that the demand for higher education is set to increase in the future.

In 2007 the government announced a plan to overhaul Vietnamese higher education sector with the overall aim of achieving changes that will allow the tertiary system to cater for the increased demand for further study and respond to Vietnam's socio-economic development. The government intends to ease the pressure on the public system by creating a series of for-profit institutions as well as establishing a number of new institutions linked to the development priorities in remote parts of the country. There are also plans to increase the number of PhD recipients from 500 in 2007 to 20,000 by 2020 and have at least one Vietnamese university in the world's 'top' 200 universities (Lasanowski 2008).

MoET has nominated improving higher education participation rates as a top priority, as well as developing the infrastructural capacity to support the increased numbers. In order to expand participation rates across the country, there are plans to establish new institutions in rural areas as well as expand the non-public sector encouraging companies to engage with universities and colleges to improve outdated curricula, develop student internship opportunities and even open their own tertiary education facilities (Lasanowski 2008). The adoption of the higher education reform program, which some have suggested is over ambitious in its objectives and time frame, is a positive development and evidence of the Vietnamese government's recognition of the vital role that higher education must play in Vietnam's development. While the scale and time frame of the reform agenda may require some modi-

fications if the goals set are to be realized, the prioritization of higher education is an encouraging sign (Hayden and Thiep 2006).

Retain: Increase in Private and Transnational Provision

The Vietnamese government sees the expansion of foreign and ‘non-public’ or private provision as a way of addressing the capacity problems currently facing the sector. The reform agenda estimates that enrolment in higher education will be three or four times that of current levels by 2020 and that nearly 40% of all enrolment in higher education will be in the non-public higher education sector (Varghese 2007). Recent trends indicate strong growth in private sector enrolments. While the growth in private higher education is generally seen as positive step towards meeting the increasing demand for higher education in Vietnam, quality has emerged as a key issue to be tackled if the sector is to continue to expand and produce the calibre of graduate needed for Vietnam’s future. Corrupt entry procedures, over-enrolment, overworked and often poorly qualified academic staff are some of the problems emerging from the private sector. It has been suggested that a robust regulatory framework is needed to ensure the provision of high quality education among private higher education institutions in Vietnam (Welch 2006; Ashwill and Le 2004).

The expansion of transnational provision is also part of the Vietnamese government’s desire to establish itself as a ‘regional hub’, curbing the outflow of Vietnamese students as well as benefiting from an inflow of foreign students from neighbouring countries (Lasanowski 2008). While Vietnam’s goal of becoming a regional hub may be a longer-term ambition, there are a number of other advantages associated with cross border education that will benefit Vietnam in the more immediate future. Foreign providers can help cater for unmet demand, offer students study choices that are not available locally as well as having a positive impact of the higher education sector in the importing country by developing capacity in teaching, curriculum design and research. Foreign providers may have access to research funds that stand to benefit local students, academics as well as local business and industry.

The case of Malaysia illustrates how a country can use cross border education to help meet its particular higher education needs. Since 1996 the Malaysian government has sought to attract foreign institutions and programmes to Malaysia thereby creating more tertiary options for students locally, thus stemming the flow of students abroad, as well as building the capacity of domestic institutions. This has resulted in a wide range of transnational provision becoming available on Malaysian soil, reducing outflows of students and assisting the emergence of Malaysia as an ‘education hub’ (McBurnie and Ziguras 2001). While Malaysians still continue to study abroad, data from UNESCO and the Australian government, suggests that the number of Malaysian students studying abroad has moderated in recent years (UNESCO 2007; AEI 2007).

While the Malaysian government appears to have had some success in curbing the flow of Malaysian students abroad, it is also keen to attract increasing numbers of foreign students to Malaysia. According to the Ministry of Education in Malaysia, there are a number of benefits stemming from increased numbers of foreign students. Firstly, the presence of foreign students on campus helps to internationalize Malaysian institutions providing local students with a more global perspective. Secondly, relationships that develop as a result of contact between foreign and local students have the potential to lead to the emergence of important networks thus creating many benefits to both individuals and the country. Finally, Malaysia stands to benefit enormously from the economic impact of increased numbers of foreign students who, according to the Ministry of Higher Education, each spend around MYR 27,000 (approximately US\$ 7,760) annually. Currently, there are 50,000 foreign students studying in Malaysia, however, the government hopes to double this figure by 2010 (Ziguras and Law 2006).

Like Malaysia, Vietnam stands to benefit from increased transnational provision. Vietnam's tertiary education landscape has changed dramatically in recent years with the arrival of twinning arrangements, franchised/joint degrees and the first foreign-owned university with Australia's RMIT University opening its Vietnam campus in 2003. Partnerships also exist between a number of Vietnamese institutions and foreign universities including the Hanoi School of Business and the University of Hawaii MBA program, the National Economics University and Washington State University, Hanoi University and Taiwan Asian International University, Hue University and Dalhousie University Canada to name a few. In 2007 Vietnam opened its first international university, the Bac Ha International University, in partnership with Cambridge University (UK), North-West Polytechnic (USA) and Griffith University (Australia). Located north-east of Hanoi, the university aims to become an international-level university in the next 10–15 years. The university has contracted almost 200 teaching staff, including foreign and overseas Vietnamese academics, and hopes to foster collaboration between reputed international universities.

Students at Bac Ha International University will study a foreign curriculum and receive foreign diplomas (Lasanowski 2008). Also in 2007, Malaysia's Berjaya Land Bhd signed a US\$ 3.5 billion contract with Ho Chi Minh City Council to construct an international university township project that will include several institutions as well as housing and commercial property, hospitals and other public services, hotels and information technology centre. In the short term, this type of development will provide more options for Vietnamese tertiary students, perhaps even dissuading some from pursuing overseas. In the long term, there is the potential for Vietnam to attract foreign students from the region and beyond (Lasanowski 2008).

Over time, higher education reforms may stem the flow of Vietnamese students abroad, however, in the more immediate future it is likely that growing numbers of Vietnamese students will continue to pursue tertiary studies and work opportunities abroad. There may be some positive ramifications associated with this trend. Many believe that 'brain circulation' has the potential to provide enormous benefits to both sending and receiving countries and that by promoting transnational networks,

sending countries in particular, can benefit greatly from citizens who choose to remain abroad (Saxenian 2006; Teferra 2005).

Return: Fostering a Strong Research and Development Environment

If overseas Vietnamese students are to return home, either in the short or long term, the Vietnamese government must create the conditions and opportunities likely to promote return migration. Countries that foster strong research and development environments are often successful in attracting returnees. China doubled its spending on research and development between 1995 and 2002, and in 2006, the Chinese government's expenditure on research and development surpassed Japan (OECD 2006). India has invested heavily in its science and technology sector and has also provided opportunities for returnees to pursue unusual and innovative projects (Padma 2008; Gentleman 2008).

In Europe, poor public funding, slow career progression, low salaries and lack of opportunities in the private sector mean that many Italian students remain abroad (Pelzion 2002). In Switzerland, however, high quality higher education, good support for emerging researchers and an environment that values collaboration between academia and industry has led to considerable success in retaining tertiary students, encouraging their return as well as attracting outside talent from abroad (German Research Foundation 2005).

Taiwan is another example of a country that has managed to successfully attract many former students back as well as gain economic advantages from those that remained abroad. Government policy has been central to Taiwan's success in tapping its diaspora. The Hsinchu Industrial Park, modelled on Silicon Valley and designed to create the sort of environment needed to attract a critical mass of well-educated returnees was an important government initiative. So too was the emphasis the government put on tracking overseas Taiwanese, many of whom were former international students. The National Youth Council developed a database to track skilled migrants and connect them with Taiwanese businesses. The National Science Council and the Ministry of Education also successfully recruited thousands of migrants as professors and visiting lecturers in the country's growing tertiary education sector (O'Neil 2003).

Return: Incentives and Repatriation Schemes

Some developing countries offer repatriation schemes to assist post-doctoral scholars and scientists re-integrate which are either government funded or a combination of government and private sector funding. Mexico's National Council of Science

and Technology has an initiative that repatriates recent PhD graduates and increases the salaries of productive academics (Lowell et al. 2004). In 2007 the Chinese government allocated funds to attract graduates with urgently needed skills and announced new incentives designed to lure Chinese students home after graduation (Fangchao 2007). More recently, the Chinese government announced the ‘Thousand Talents’ plan which aims to attract up to 2,000 top-level academics over 5 to 10 years by paying relocation costs and offering competitive salaries and research funding. While about half of the recruits are expected to go into the private sector to drive advances in science and technology, the other half will be employed at top Chinese universities (Wheeler 2009).

There are signs that Vietnam is serious about luring talented Vietnamese home. In 2008 the Vietnamese Ministry of Education and Training announced a multi-million dollar programme aimed at luring some of the 300,000 Vietnamese graduates and post-graduates living abroad (MOFA 2008). The aim is to attract overseas Vietnamese experts and scientists to participate in research and technology transfer in educational establishments. While details of the program, which will take place between 2008 and 2020, are scarce, the experience of other countries suggests that by offering a vibrant science and technology sector, competitive salaries, the opportunity to participate in innovative projects that bridge academic and industry, Vietnam is more likely to be successful in attracting returnees.

Engage: Establishing and Maintaining Diaspora Networks

A common complaint among skilled professionals living overseas is that while many are keen to contribute to their home country’s development they are unaware of how to go about it (Seguin et al., 2006). According to a recent study of overseas Vietnamese students, many intend to return home to seek employment opportunities after graduation. However, the vast majority of those surveyed complained about the lack of available official information about the Vietnamese labour market with most gleaning information from relatives and friends (Vietnam Net Bridge 2008b). By forging strong ties with overseas students, and ensuring they are provided with up-to-date information on the Vietnamese labour market, there are clearly opportunities for Vietnam to meet the growing demand for high-quality human resources by tapping into the pool of talent existing abroad.

The Vietnamese government now recognizes the importance of links with overseas Vietnamese. In the past the Viet Kieu, many of whom left Vietnam after the fall of Saigon in 1975, were largely viewed as traitors or enemies of the state. Now the Vietnamese government is keen to cultivate good relations with those Vietnamese living abroad seeing them as an integral part of Vietnam’s growth. Resolution 36, passed in 2004, reflects this shift. Resolution 36 recognizes the important role that Viet Kieu play in the country’s development and advocates the creation of policies that will create favourable conditions for overseas Vietnamese returning home. These include changes in migration and citizenship law to allow dual citizenship,

as well as permitting Viet Kieu to purchase property (VIR 2004). While some have suggested that more needs to be done to implement Resolution 36, these changes are a positive sign of the Government's willingness to engage with the diaspora.

The Vietnamese government has also taken some small steps towards creating links with overseas Vietnamese and encouraging their participation in the country's economic and social development. The Overseas Science and Technology Club (OVS-Club) is a government initiative stemming from Resolution 36 that affirms overseas Vietnamese as an integral part of the nation and a significant factor in the country's foreign relations. The OVS Club is a network of 130 senior scientists and experts, whose primary goal is to create links with overseas intellectuals and their domestic counterparts, as well as international and domestic sci-tech organizations and centres (OVS-Club 2005). While the OVS club's aim of linking overseas Vietnamese experts with individuals and organizations in Vietnam is well intended, evidence that the OVS Club is making any significant contribution to Vietnam's development is scant.

There are also a number of private sector organizations in Vietnam that aim to foster links with the Vietnamese diaspora. The Overseas Vietnamese Business Club (OVBC) and the Overseas Vietnamese Business Association (OVIBA) are two private sector organizations which provide information to overseas Vietnamese on conducting business in Vietnam as well as hosting seminars and social events. However, it is unclear how successful these networks have been in achieving their aims. An examination of their websites reveals a lack of up-to-date information and little or no information on opportunities for employment, research or consultancies, or advice on relocating. In 2007 the OVBC had 400 members while in 2005 OVIBA had just 150 registered members suggesting that their current sphere of influence is quite limited (OVBC 2007; 2005).

Engage: Tapping the Student Diaspora

While there is evidence to suggest that the Vietnamese government, at both national and local level, recognizes the importance of tapping the Vietnamese Diaspora, the focus appears to be largely on senior or well-established Viet Kieu. While in the short term, it makes sense to focus on attracting those overseas Vietnamese who are experienced in their field and are well placed financially, efforts should also be made to establish and maintain links with overseas students. Overseas students represent an important pool of expertise and policy that fails to recognize the importance of maintaining links with Vietnamese students is potentially flawed.

Structures need to be put in place that allow for ongoing communication between the home country and the diaspora. Countries with large diaporas such as China and India actively court the diaspora for nation building purposes. India has established a Ministry of Overseas Indian Affairs to deal with its extensive diaspora, many of whom are current or former overseas students. Over the past decades, China has successfully educated large numbers of students abroad and is now benefiting from

both return flows and the contributions made by those who remain abroad in the form of technical and financial transfer, as well as the promotion of China in other countries. China has been very strategic in its dealings with the student diaspora. A national data bank of overseas students and talented professionals and proactive Chinese Consulates who invest considerable time and energy into cultivating ties with talented mainlanders who remain overseas are central to China's approach. China recently committed US\$ 25 million over a 15-year period to establish a website and centre to assist permanently and temporarily returned overseas Chinese Scholars.

While the OVS Club, OVB Club and OVIBA are largely aimed at professionals, entrepreneurs or those already established in their field, the Vietnamese Graduates from Australia (VGAC) and Vietabroad are two organizations that target current and former overseas Vietnamese students. The VGAC is sponsored by the Australian Embassy in Vietnam and is made up of around 4,000 Vietnamese alumni from Australian universities and colleges. The VGAC is largely a social club, although it also hosts career seminars and networking events (VGAC 2008). Based in the USA and with a membership of about 12,000, Vietabroad is a student-run, non-profit organization that links local students in Vietnam with Vietnamese students studying overseas, primarily in the USA. Vietabroad aims to encourage Vietnamese students to explore the idea of overseas study by providing guidance and information on overseas study opportunities in the USA. Vietabroad also organizes workshops in Vietnam on studying in the USA and in 2008 ran a business conference in Ho Chi Minh City with the aim of creating a venue for students to interact with the business community and to learn and exchange ideas on doing business in Vietnam. (Vietabroad 2008). Considering the size and projected growth of Vietnam's student diaspora, there is great potential to expand and develop the role of organizations such as Vietabroad and VGAC.

Conclusions

The Vietnam government's largely laissez-faire attitude toward international student brain has meant that fostering important links with Vietnamese students abroad has been largely left to the private sector. However, this approach may change with recent press articles, as well as a government sponsored conference aimed at attracting overseas educated Vietnamese back, suggesting the government is concerned about potential student migration and prepared to take action. Notably, reports in the Vietnamese press indicate the Government is prepared to take steps to prevent overseas Vietnamese students remaining in the host country long term. Under a draft regulation introduced in late 2009 by the MOET, no overseas student will be allowed to work in the host country for more than 3 years after graduating.

Lack of research makes it difficult to reach any conclusions regarding the future intentions of overseas Vietnamese students. However, anecdotal reports suggest that while many students are keen to remain abroad temporarily in order to earn money

and gain international work experience, the majority hope to return to Vietnam at some stage in the future. Creating a favourable social and economic environment for returning Vietnamese students is a central element of Vietnam's long-term plan to reverse any brain drain that may be occurring. Providing the right opportunities and conditions for returning students will undoubtedly facilitate future return of overseas students. However, it is also vital that while pursuing broader economic and social reforms, the Vietnamese government maintains ties with its student diaspora in order to keep them abreast of changes taking place at home, as well as informing them of opportunities as they arise. Our research identified a number of private sector organizations fostering links with overseas Vietnamese, including two dealing specifically with overseas students. By collaborating with and supporting these organizations, the Vietnamese government may be able to establish and maintain important links with overseas Vietnamese students, as well as other highly skilled expatriates.

Today's international student is intimately connected through communication technology and globalized media forms and many overseas Vietnamese students are eager to maintain personal and professional connections with Vietnam. They are also keen to remain informed of changing social and economic conditions in Vietnam. However, some reports suggest that overseas Vietnamese are dissatisfied with official information available about the Vietnamese labour market. Notably, major companies in Vietnam have also expressed frustration with the lack of official information about overseas Vietnamese students who represent an important pool of talent for companies facing shortages of highly skilled employees. Research on return migration shows that potential returnees want information on business and employment opportunities, academic exchange, as well as information on legal topics such as buying property and starting up a business (Berkhout et al. 2005). The Vietnamese government needs to consider options such as online news services and overseas consulates, widely used by the Chinese government, to convey information about the local domestic labour market. These channels of communication can also be used to promote investment, employment and research opportunities and have the potential to lead to greater engagement with the student diaspora and potentially increased levels of return migration.

Governments of developing nationals need to send an important message to overseas students. Overseas students must know that their international qualifications and experience are valued and that their return or professional engagement is vital to their home country's economic and social development. The Vietnamese Government's apparent lack of concern for the student brain drain that might be occurring may be sending the wrong message to overseas Vietnamese students. The absence of policies that aim to facilitate the return of overseas Vietnamese students may result in students believing that they are not valued therefore discouraging them from either returning home or maintaining professional links with Vietnam. A study of overseas students in the US revealed that Chinese students were influenced by their government's efforts to facilitate their return. In contrast, Italian students were conscious that their government had made little attempt to lure students home and were also unaware of any broader policies that the European Union had in place

(Szelenyi 2006). According to the InterAcademy Council, a multinational organization of science academies, the importance of attracting, cultivating and retaining the highly skilled cannot be underestimated because it is self-perpetuating (IAC 2004).

Bright young talents go on to become the leaders required for the sustained development needed in many developing countries. In Vietnam, the development of policies that emphasize the important contribution that overseas Vietnamese students can make to their home country, both by returning home and engaging from abroad, are vital for Vietnam's future social and economic development.

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Chapter 16

Two-Way Flows of Higher Education Students in Mainland China in a Global Market: Trends, Characteristics and Problems

Mei Li and Yongjun Zhang

Theories of International Student Mobility

World System Theory

Phillip Altbach and certain other scholars working in the field of higher education studies draw on world systems theory to explain the unbalanced development and unequal relations between developing (or third world) country higher education systems, and those of the developed countries, and the effects of these inequalities in shaping patterns of student mobility (see, for example, Altbach 2004; Chen and Barnett 2000). World system theory divides nations into ‘core’ countries and ‘peripheral’ countries on the basis of their political economic status in the global system. The core countries are the developed countries. The peripheral countries are the developing countries. The global higher education system and the pattern of international student flows reflect the uneven development and unequal relations of politics, economy, education and culture in different countries.

Dominating the higher education international market, the developed countries are the major exporters of education and the major importers of international talents. Emerging countries (Singapore, South Korea, and Malaysia) and developing countries (China, India, Africa and Latin American countries) are major importers of education, knowledge, technology, and major exporters of students and talents. The United States, Britain, Germany, France, Japan, Canada, Australia and other industrial countries have the major international market shares in this increasingly globalizing market. In 2006, the top eight host countries of international students were the United States (22%), Britain (14%), France (10%), Germany (10%), Australia (7%), China (6%), Japan (5%), and Canada (3%). The United States, UK and Australia absorbed 580,000, 280,000 and 230,000 international students, respectively (IIE 2006; UNESCO UIS 2006). Because of their huge demand for higher

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education, China and India have become the largest exporters of international students. Japan is not only an important sending country, but also one of the main receiving countries.

Education Markets and Positional Goods

Higher education has become part of the globalization process, through the cross-border matching of demand and supply. The global education market is not a single unified market, but is comprised by hierarchical and segmental niche markets with different echelons and categories. Cross-border higher education contains demand for and supply of various qualifications and certificates, including non-degree, associate degree, bachelor's degree, master's degree and doctorate. Marginson (2006) identifies the educational suppliers on the global market into five categories, namely world market of elite universities, exporting national research universities, nationally bounded research universities, teaching-focused export institutions and lesser status national/local local institutions.

From the perspective of consumers, higher education in general and cross-border higher education in particular acting as positional goods can bring to individual students economic benefits such as employment prospects and income advantages, social status and cultural capital. Marginson (2006) argues that with the increasing integration of global markets, higher education institutions' national competition and global competition interact and complement each other. In a positional market, there is severe competition between both producers and consumers. Producer universities compete for the custom of preferred 'customers'. Students compete for entry to preferred institutions (Marginson 2006). According to WTO trade rules, higher education institutions and their consumers co-produce market position, reputation and quality of educational products. Cross-border higher education services are a special form of trade in services. The production and consumption process are integrated: on the supply side cross-border education is a production process but to the students this is a consumption process (Marginson 2006). At the same time, student mobility in the job market also produces the market position and social reputation that feed into the supply side of education.

Push–Pull Model

In the literature on the cross-border mobility of students and talents, the push–pull model is a widely accepted analytical framework. The push–pull model argues that a combination of 'push factors' in students' own countries and 'pull factors' in receiving countries shape individual students' decisions to study abroad and also their choice of destinations (Altbach 1998, p. 240; Mazzarol and Soutar 2001). 'Push factors' in students' own countries include a lack of higher education opportuni-

ties, poor quality local educational facilities, government policies and scholarships favourable to mobility, the perceived and actual comparative advantage of the value of a foreign degree in the job markets both home and abroad, the low level of internationalization of education, and so on. The 'pull factors' in receiving countries include scholarships, higher-quality education and advanced research conditions, the superiority of the social and economic environment, better employment opportunities and career prospects. 'Push factors' inspire student's interests in foreign education but do not specify the destination, while 'pull factors' suggest the destination countries and educational institutions (Mazzarol and Soutar 2001).

Mazzarol and Soutar (2001, pp. 55–57) carried out investigations in China Taiwan, mainland China, Indonesia and India concerning the determinant factors that affected students' choices of foreign education. They found that the four most important push factors were: (1) a perception that an overseas course of study is better than a local one; (2) students' ability (or inability) to gain entry to programs in their own countries; (3) a desire to gain better understanding of the west; and (4) an intention to migrate after graduation.

Another study of particular relevance focused on high-achieving undergraduate students in Tsinghua University, Beijing (Zheng 2003). It indicated that among 241 respondents, 51.5% intended to continue their studies abroad, 38.5% had no intention to do so and 10.0% were unsure. The survey showed that the important factors impacting on respondents' intention of study abroad were: economic factors (29%), education factors (27%), personal factors (15%), social environment (13%), cultural factors (9%), and political factors (7%) (Zheng 2003, p. 226).

While the push–pull model provides an instructional framework for understanding the macro determinant factors of cross-border student mobility, it neglects the nature of the mobility process on the micro level and the internal elements of actors' particular personal characteristics. The individual students' characteristics include socioeconomic status, academic ability, motivation, aspiration, gender and age. The decisions that students finally make depend partly on the interplay of the push and pull factors at home and the push and pull factors abroad, and also on the students' personal characteristics and perceptions. An appropriate way of fully understanding the nature of a particular group of students' mobility lies in exploring the dynamic interaction between the internal factors of a particular group of students and the external factors of push and pull.

Chinese Studying Abroad

In 1949–1977, the first 30 years after the founding of People's Republic of China, China's policies were full of political and ideological colour. Power was centralized. Thus policies concerning studying abroad, and the pattern of student activity, were affected greatly by the political situations at home and abroad, including Sino-foreign relations. In the 1950–1957 period, students were mainly sent to the former Soviet-led socialist countries, with 7,053 studying in the former Soviet Union. From

1972 to 1976, China sent 1,629 students to 49 countries, including UK, France, Italy, Germany, Belgium, Austria, Japan, Canada and Spain (Zhang 1984, p. 666). All aspects of recruiting and management of study abroad, such as subjects studied, the destination countries, student selection and returnees' placement, were directly supervised by the central government.

During the 30 years of reform and opening up since 1978, the pattern of Chinese students studying abroad has exhibited very different features to the preceding period.

The Growth Trend

There has been a sustained increase of Chinese study abroad in the past three decades. Table 16.1 shows that the number of government-sponsored students was maintained at a relatively stable level, compared to the number studying abroad at their own expense during 1980–2006. The total number studying abroad grew rapidly because of the surge of self-funded students, growing from 6,124 in 1980 to 13,400 in 2006. The increase of Chinese study abroad is particularly significant

Table 16.1 Chinese studying abroad: 1980–2006. (Sources: Government of China (1981–2007), China Education Yearbook: 1980–2006, Beijing: People's Education Press.)

Year	Total number of students	Number of self-funded students	Number of gov-ernment-sponsored students	Number of work-unit sponsored students
1980	6,124	4,000	2,124	–
1981	7,922	5,000	2,922	–
1982	8,326	6,000	2,326	–
1983	10,412	7,000	3,412	–
1984	9,950	6,877	3,073	–
1985	12,688	7,800	4,888	–
1986	14,676	10,000	4,676	–
1995	14,216	12,600	1,616	–
1996	20,905	13,600	1,905	5,400
1997	22,410	14,720	2,110	5,580
1998	17,622	11,443	2,639	3,540
1999	23,749	17,884	2,661	3,204
2000	38,989	32,293	2,808	3,888
2001	83,973	76,052	3,495	4,426
2003	117,346	109,200	3,002	5,144
2004	114,663	104,281	3,524	6,858
2005	118,557	106,500	3,979	8,078
2006	134,122	121,000	5,580	7,542

– Data not available

since 1999, coinciding with the domestic expansion of higher education. There were a total of 706,772 Chinese studying abroad during the 1995–2006 period (China Education Yearbook, 1996–2007).

Destination Countries

The factors that affect Chinese students' choices of destination countries include the following aspects: the historical, cultural, political and economic relations between China and the destination countries; the development of education and the advantages offered by the destination countries; educational costs and funding, such as tuition and scholarship policies; the language environment and the medium of instruction (the English-speaking countries have certain advantages); enrolment policy; and visa and immigration policy. Countries with relatively loose visa and immigration policies are more likely to attract international student applications.

The recruiting and admission policies of higher education institutions vary from country to country. Some countries adopt more lenient recruiting and admission policies, and open the door to language students and precollege students, such as Australia and Japan. But some countries have adopted very strict selection criteria. In the 1970s and 1980s, students studying abroad were mainly young scholars, postgraduate students and undergraduate students who were sent abroad by government. This was mainly so-called 'elite mobility'. Since the early 1990s, with the self-funded students as the main form of student outflow, more and more self-taught students, vocational school students and high school students have joined those flooding abroad. China's study abroad movement has developed from elite education to the parallel evolution of two flows of students: the elite studying abroad and the massive outflow of self-supported students.

Table 16.2 shows the fast growth of Chinese students in the major host countries during the period of 1997–2006. All the major receiving countries are the indus-

Table 16.2 Number of Chinese students at the major host countries: 1997–2006. (Source: Verbik and Lasanowski 2007)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Japan	22,323	22,810	25,907	32,297	44,014	58,533	70,814	77,713	80,592	74,292
Australia	3,828	5,273	4,633	6,191	11,640	23,332	31,255	41,562	54,274	63,543
US	42,503	46,958	51,001	54,466	59,939	63,211	64,757	61,765	62,523	62,582
UK	2,660	2,883	4,017	6,310	12,095	20,710	35,155	47,740	52,675	50,755
Germany	4,980	4,773	5,054	6,256	9,109	14,070	20,141	25,284	27,129	27,390
France	–	–	1,374	2,111	3,452	5,535	8,774	11,908	15,963	–
NZ	88	139	890	3,821	9,652	19,135	27,180	29,876	26,546	–
Canada	1,005	1,765	3,527	5,337	9,399	10,126	9,068	6,783	6,880	7,259

NZ = New Zealand, – indicates data not available

trialized countries. There are fierce competitions for the market share of Chinese students among these countries. The past decade has witnessed the fundamental growth of number of Chinese students at Australia and UK. Japan surpassed US as the first destination for Chinese students in 2003, meanwhile Canada lagged far behind of the other leading countries.

Sources of Funding: Public-Sponsored and Self-Funded Students

The difference between students who are publicly sponsored and those who study abroad at their own expense refers to whether the cost of studying abroad was funded by the Chinese governments, work units or by students themselves and other sources. All those financed by the sources other than Chinese governments and work unit are categorized as self-funded studying abroad (*Zifeiliuxue*). The sources of self-funded studying abroad include individual students and their families, the receiving governments, the receiving higher education institutions, international organizations, and so on. The rapid development of self-funded studying abroad reflects the market opening up that has resulted from China's open door. Before 1978, there were very few cases of self-funded studying abroad. In the early 1980s, the number of students engaged in self-funded studying abroad started to increase, but most were children and relatives of overseas Chinese. In the mid 1980s, study abroad was opened to all those who met specific conditions; for example, college graduates had to pay training fees and fulfil a period of service before going abroad. After 1993 study abroad was unconditionally opened to all.

More than half of all overseas students studied at their own expense in the 1978–1986 period. From 1978 to 1992, the financial channels of studying abroad diversified, including national government-sponsored, local government-sponsored, work unit-funded, self-funded and overseas scholarships. The number of self-funded students increased rapidly. The central government has granted the work units more responsibility in financing and sending personnel to study abroad. The central government's functions have transformed from direct control and constraint to facilitation, supervision and guidance. As to the issue of students' returning home, it has become more flexible, focusing on policies to create an attractive return environment and supporting facilities.

Since 1992, the absolute number of students returning home has increased substantially, with an especially rapid increase in the number of students returning at their own expense. Table 16.3 shows that from 1996 to 2000, the proportion of students going abroad at their own expense increased from 65% to 83% of all study abroad students. Since 2001, the number of students at their own expense accounted for 90%. In 2006, the total number of studying abroad was 134,000, among which 121,000 people were doing so at their own expense, 558 people were government-funded and 7,542 were financed by their work units.

Table 16.3 Self-funded and public-sponsored students studying abroad, 1980–2006. (Sources: Ji, M. M. (ed.) (1997) *Encyclopaedia of China Education Administration* [Zhongguo Jiaoyu Xingzheng Quanshu]. Beijing: Economic Daily Press. pp. 1577 & 1592)

Year	Total number of students studying abroad	Number of self-funded students	Number of publicly-sponsored students			Self-funded students as a proportion of all students studying abroad (%)
			Number of students funded by national government-	Number of students funded by work units and local government	Total	
1980	6,124*	4,000*	2,124	–	–	65
1982	8,326	6,000*	2,326	–	–	72
1984	10,289	6,877	3,073	–	–	68
1986	14,676	10,000*	4,676	–	–	68
1995	14,654	12,600	1,616	–	–	86
1996	20,905	13,600	1,905	5,400	7,305	65
1998	17,622	11,443	2,639	3,540	6,179	65
2000	38,989	32,293	2,808	3,888	6,696	83
2001	83,973	76,052	3,495	4,426	7,921	91
2003	117,307	109,200	3,002	5,144	8,146	93
2004	114,663	104,281	3,524	6,858	10,382	91
2005	118,500	106,500	3,979	8,078	12,057	90
2006	134,000	121,000	5,580	7,542	13,122	90

* Estimate only, – Data not available

Public-Sent Personnel and Returnees

Study abroad poses the dilemma of brain drain. This is particularly true for a developing country like China. On the one hand, China adheres to an open door policy, expecting that more professionals will be trained as a result of overseas education. On the other hand, the State government must take active and effective policies and measures to solve the problem of brain drain.

Table 16.4 shows the number of state-sent students and the number and proportion returning for each year from 1978 to 2000. Since 1992 the proportion of students' returning home has improved. This suggests that with improved policies in relation to studying abroad, and the sustained domestic social and economic development, there is a rising tide of overseas Chinese talent returning to the homeland.

In summary, since the 1980s, Chinese study abroad has been large scale, exhibiting wide scope, diverse destinations and multi-levels of study. It has taken place mostly at a young age; and in the majority of cases at the students' own expense. Policies and regulations have been gradually improved. Government management has begun to focus on macro-regulation and intermediary management. The estab-

Table 16.4 National government-sponsored personnel studying abroad and returnees, 1978–2000. (Source: Authors' edit from the original data in Ji 1997)

Year	Number of sponsored students studying abroad	Number of returnees	Returnees as a proportion of sponsored students studying abroad (%)
1978	860	248	29
1979	1,777	231	13
1980	2,124	162	8
1981	2,922	1,143	39
1982	2,326	2,116	91
1983	2,633	2,303	87
1984	3,073	2,920	95
1985	4,888	1,424	29
1986	4,676	1,388	30
1987	4,703	1,605	34
1988	3,786	3,000	79
1989	3,329	1,756	53
1992	2,489	1,601	64
1993	2,398	1,878	78
1994	2,071	2,196	106
1995	2,054	2,160	105
1998	2,639	1,964	74
1999	2,661	1,558	96
2000	2,808	2,456	87
<i>Total</i>	<i>17,120</i>	<i>14,813</i>	<i>87</i>

lishment of China Scholarship Council in 1996 marked the transfer from direct state management to indirect management through a professional agency under the guidance of national policies. In 2001, following China's entry into the World Trade Organization (WTO), China's policy on international education has been required to follow international rules, and integrate into the international framework and system of trade. The market in Chinese educational consumption has been gradually opened up, and progressively integrated into the worldwide market. Thus the market changes from disorder to order, and from the partially open to the all-round opening up.

International Students Studying in China

From 1950 to 2006, China received a total of 1,047,010 international students from various countries. Figure 16.1 shows that since 2000, notwithstanding the impact of SARS in 2003, the number of international students in China has shown sustainable growth, from 52,150 in 2000 to 162,695 in 2006. Especially since 2004, not only has China received more overseas students, but also the students' structure of subjects, original countries, and levels of study has developed. In 2004, the number of international students reached 110,844, an increase of 33,129 (42.6%) from the level in 2003. This was the biggest increase in the past 10 years. In 2005, there

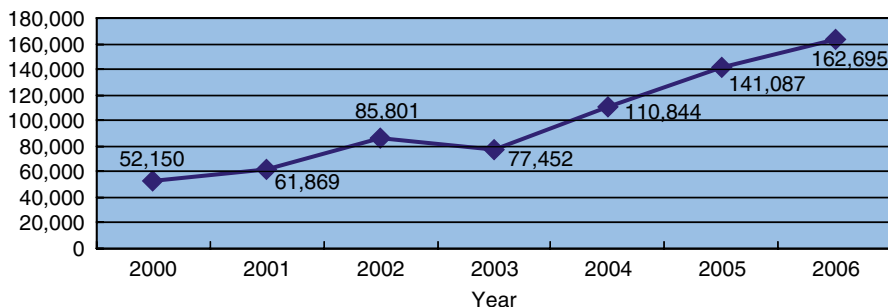


Fig. 16.1 Growth of international students in China, 2000–2006. (Source: The authors edit using date from the website of the Chinese Ministry of Education in China (www.moe.edu.cn))

were 141,087 foreign students, an increase of 30,243 (27.3%); in 2006 there were 162,695 overseas students, an increase of 21,608 (15.3%) (Ministry of Education 2005, 2006, 2007).

Up to December 31, 2006, there were in total 162,695 students from 184 countries and regions studying in 519 colleges and universities and other teaching and research institutions in China, distributed in 31 provinces, autonomous regions and municipalities (excluding Taiwan and Hong Kong, Macao Special Administrative Region) (MOE 2007). The following will describe the characteristics and changing tendency of foreign students studying in China during 2004 and 2006 (Ministry of Education 2005, 2006, 2007).

The Scale Increases Each Year, the Level of Study Is Not High

Among international students in China, the percentage of non-degree students is twice the proportion of degree students, and the proportion of graduate students is relatively low. In 2004, degree students accounted for 28.5% of all international students, with 22.9% at undergraduate level, 3.5% at masters level, and 1.7% at doctoral level (MOE 2005). In contrast, non-degree students accounted for 71.5%. Thus among degree students, four in five were undergraduates and less than one in five were postgraduate students. Among the non-degree students, a majority were visiting and short-term students. Advanced visiting students accounted for a very small number. This was a sharp contrast with the composition of Chinese students studying abroad. A majority of Chinese students studying abroad are postgraduate students, and the proportion of undergraduates is low.

However, changing trends suggest a more positive picture. The level of study of overseas students in China is improving year by year. During 2004 and 2006, the number of long-term students grew faster than that of short-term students. The growth rate of degree students is almost twice than the growth rate of non-degree students (see Table 16.5).

Table 16.5 International students in China by level of study in 2004–2006. (Sources: The authors edit from original data from China’s Ministry of Education (www.moe.edu.cn))

	Long-term*		Short-term*		Degree-oriented		Non-degree-oriented	
	Number (and %)	growth from previ- ous year	Number (and %)	growth from previous year	Number (and %)	growth from previous year	Number (and %)	growth from previous year
2004	76,486 (69%)	–	34,358 (31%)	–	31,616 (29%)	–	79,228 (71%)	–
2005	103,712 (74%)	35.59	37,375 (26%)	8.78	44,851 (32%)	41.86	96,236 (68%)	21.47
2006	119,733 (74%)	15.45	42,962 (26%)	14.95	54,859 (34%)	22.31	107,836 (66%)	12.05

* Long-term students study more than 6 months. All other students are short-term students

The Absolute Majority Are International Students at Their Own Expense

In 2004, China recruited 6,715 scholarship-based international students, accounting for 6.06% of the total. This included 6,540 long-term students and 175 short-term students. There were 104,129 students studying at their own expense, 93.94% of the total, of which 69,946 were long-term students, and 34,183 were short-term students.

In 2006 the number of international students in China increased by 21,608 (15.3%) compared to 2005. Among them, 8,484 students were funded by Chinese government scholarships, 1,266 more than 2005, an increase of 14.9%; while 154,211 students studied at their own expense, an increase of 20,342, or 13.2%.

They Mainly Come From Asia and the Developed Countries

Table 16.6 shows, in 2004, the top 22 countries in sending students to China were 14 Asian countries and eight developed countries (the United States, Russia, Germany, France, Canada, Australia, Britain and Italy). South Korea, Japan, the United States, Vietnam and Indonesia were the top five countries for the four consecutive years from 2003 to 2006 inclusive.

The Main Subjects Studied Are Chinese Language and Applied Sciences

Table 16.7 shows that in 2004–2006, the liberal arts, medicine, economics, engineering, management and law were the top five subjects for international students. Liberal arts accounted for three-fourths; a majority were language courses students.

Table 16.6 Countries sending more than 500 students to China in 2004. (Source: Ministry of Education (2005))

	Country	Associate degree	Bachelor	Master	Doctoral	visiting students	Short-term students	All students
1	Sth. Korea	99	12,467	1,203	695	20,160	8,993	43,617
2	Japan	32	2,069	277	85	7,913	8,683	19,059
3	USA	15	219	78	75	2,678	5,415	8,480
4	Vietnam	7	1,936	196	81	1,895	267	4,382
5	Indonesia	156	672	25	6	1,690	1,201	3,750
6	Thailand	36	212	81	28	1,223	791	2,371
7	Russia	4	523	21	4	917	819	2,288
8	Germany	10	28	32	12	1,101	1,004	2,187
9	France	2	107	21	4	857	963	1,954
10	Nepal	0	1,283	135	12	49	16	1,495
11	Philippines	25	252	3	0	250	845	1,375
12	Mongolia	4	405	74	28	694	128	1,333
13	Malaysia	1	814	94	29	118	185	1,241
14	Canada	1	198	54	45	331	576	1,205
15	Australia	3	60	31	9	407	649	1,159
16	UK	2	63	6	9	403	563	1,046
17	Singapore	7	227	141	62	126	366	929
18	Pakistan	0	648	51	144	40	11	894
19	India	1	655	15	18	54	22	765
20	Italy	0	8	6	1	341	324	680
21	North Korea	0	274	32	46	257	17	626
22	Laos	1	260	92	23	102	31	509

Table 16.7 The subject distribution of international students in 2004–2006. (Source: Ministry of Education (2005))

Subject categories	2004	2005	2006
Liberal arts *	83,266	99,816	114,846
Medicine #	10,971	18,032	20,355
Economics	4,525	6,665	7,308
Engineering	3,519	4,455	5,803
Management	2,838	3,555	5,954
Law	2,438	2,906	3,667
Education	992	3,236	1,730
History	742	755	904
Philosophy	700	546	681
Science	555	741	1,007
Agriculture	298	380	440

* Liberal arts include Chinese language and arts. # Medicine includes both Chinese medicine and Western medicine

The number of students of medicine, including both Chinese and Western medicine, grew at the fastest rate, doubling in the 3 years. In the same period, economics majors, management majors and engineering students also grew rapidly. In contrast, the number and proportion of foreign students in agriculture, science, philosophy, history and education, and other subjects was small, and there was slow growth in those fields. It seems that the attractiveness of natural sciences and technology in Chinese universities is yet to be cultivated. In contrast, most of the Chinese students studying abroad cluster in natural sciences and technology subjects.

International Students Cluster in Beijing, Shanghai and Key State Institutions

The regional distribution of international students in China is very uneven, mainly in the east and northeast coastal areas (see Table 16.8). Society, economy and education in these areas are more developed, and there are more colleges and universities. The north-eastern region, close to East Asia, has a geographical advantage in attracting Japanese and Korean student. In 2004, more than 50% of all international students gathered in Beijing and Shanghai. Some western provinces had very few students.

The 29 colleges and universities which host more than 1,000 international students are mainly key state colleges and universities, and colleges and universities specifically focused on language and culture. Among the top 15 colleges and universities receiving international students in 2004 (Table 16.9), 11 of them are the '985 project' institutions (the most distinguished research-intensive universities in China), three are language and culture universities, and one is a foreign trade university. This suggests that the quality of education and reputation of institution is still the main factor impacting international students' choice of destination institution.

Table 16.8 The top ten host provinces /autonomous regions/municipals of international students in 2004. (Source: Ministry of Education (2005))

Provinces, autonomous regions and municipalities	Number of international students	Proportion of all students international students (%)
Beijing	37,041	33.42
Shanghai	22,197	20.03
Tianjin	7,371	6.65
Jiangsu	6,051	5.46
Liaoning	5,122	4.62
Guangdong	3,933	3.55
Jilin	3,286	2.96
Shandong	3,098	2.79
Fujian	2,805	2.53
Heilongjiang	2,785	2.51

Table 16.9 Universities with the largest number of international students in 2004 (Source: Ministry of Education (2005))

	Institution	Number of international students	Proportion of total number (%)
1	Beijing Language and Culture University	9,883	8.92
2	Fudan University	4,634	4.18
3	Peking University	4,590	4.14
4	Shanghai Jiaotong University	4,005	3.61
5	Beijing Normal University	3,689	3.33
6	Tsinghua University	2,842	2.56
7	East China Normal University	2,346	2.12
8	Nankai University	1,912	1.72
9	Tongji University	1,842	1.66
10	Zhejiang University	1,792	1.62
11	Shanghai International Studies University	1,680	1.52
12	Foreign Economic and Trade University	1,602	1.45
13	Beijing Foreign Language University	1,565	1.41
14	Xiamen University	1,481	1.34
15	Jiling University	1,431	1.29

To recruit and host foreign students is one important aspect of international education cooperation and exchanges. As expressed in 2006 official documentation concerning the "expansion of scale and improvement of the level, quality assurance, standardized management" of international students in China, the Ministry of Education is focused on exploring new channels for international students coming to China, encouraging foreign governments and Chinese enterprises to set up scholarships for international students, further optimizing the study environment in China, improving the quality of international education, actively advertising in foreign countries and helping international graduates to find jobs in China. In 2007 the national government increased scholarships for international students.

Comparison of Chinese Students Abroad with International Students in China

As demonstrated by the above data on characteristics of Chinese students studying abroad and international students in China, there are both similarities and differences between the two groups. These will now be summarized.

Similarities Between Outflow and Inflow Students

There are several similarities between the outflowing and inflowing students. Firstly, both Chinese students studying abroad and overseas students studying in China are characterized by large scale, fast growth, a wide range of sending and receiving countries, and the transition from elite groupings to a parallel development of elite group and mass group.

Second, central government policies both in relation to sending Chinese students to study abroad, and hosting international students in China, have gradually improved.

Third, with the opening up of Chinese market and gradual decentralization of administration, the market mechanism has gradually formed and it now plays an increasingly important role in matching the demand for and supply of cross-border higher education. In relation to both the supply side of the market (education institutions, and subjects available) and the demand side (individual students and their family) there are more diversified choices and there is fiercer competition.

Fourth, students who study at their own expense are now the clear majority of both Chinese students abroad and international students in China. Among the two groups, students studying at their own expense account for 90%.

Fifth, for both groups, in terms of geographical distribution and the host institutions distribution, there is high level of clustering and concentration. Both Chinese students abroad and international students in China are concentrated in the first-class universities and the educationally developed regions. In 2004, a vast majority of the 29 universities hosting 1,000 more students in China are 985 project universities. International students in the United States also show a similar picture—that is, well-known colleges and universities attract the main group of international students. In 2006/2007, the 156 colleges and universities in the United States receiving more than 1,000 international students attracted 58% of the total number of international students in America (Chow and Marcus 2007).

Sixth, there is a core network of influx and outflows. Some of the major destination countries for Chinese students are also the main countries from which China attracts international students. The top seven countries for hosting Chinese students, all major developed capitalist countries, are the United States, UK, Australia, Canada, Germany, France and Japan. These seven countries are also among the top 20 countries from which international students come to China. At the same time there is much diversity overall. After joining the WTO, Chinese students studying abroad and international students coming to China have certainly entered the era of globalization, with more 184 countries involved in higher education exchange with China.

Differences Between Outflow and Inflow Students

There are also significant differences between the two groups.

First, Chinese students abroad reached the mass level earlier than did overseas students studying in China. Chinese study abroad has been developing for 60 years

since the formation of the People's Republic of China in 1949 and in particular, the mass and self-funded study dimensions have grown rapidly since the early of the 1980s. Even though China recruited a small number of overseas students from the developing and former socialist world in Mao's era; a large scale number of overseas students studying in China began only in the 1990s. It has developed especially rapidly since the beginning of the twenty-first century.

Second, there is a structural unbalance between Chinese studying abroad and international students in China, in the levels of study and the fields of study. With regard to the level of degree pursued, Chinese students studying abroad are mainly degree students (undergraduates and postgraduates), with the majority being postgraduate students. International students studying in China are mainly non-degree students who undertake less than 1-year experience in China. In terms of subject distribution, Chinese students abroad study a wide distribution of specialized subjects; while overseas students coming to China tend to study subjects with Chinese characteristics in the humanities, language and medicine).

Third, there are differences between the outflow and inflow groups in financial support policies and in the level of maturity of the market mechanism. In many developed countries, support policies and scholarships and subsidies are well-developed. Governments and institutions have clear goals and targets in relation to the kind and quality of the professional talents they want to recruit. Their scholarships and immigration policies are designed to attract the desired skilled personnel. The marketization of higher education is much advanced. The academic and professional resources and climate are favourable. All these factors have led to a massive outflow of qualified personnel from China. In contrast, in China, scholarships and funding system of international students are underdeveloped. The marketization of higher education is at an early stage. The autonomy of the universities in international student recruitment is yet to develop. Market-oriented strategy at institutional level lags far behind that of the colleges and universities in developed countries.

Fourth, there are differences in the implications for brain drain and brain gain. The rate of returnees from Chinese study abroad has increased but is still not high. This is particularly true of those who are self-funded for study abroad. The return rate of government-sponsored studying abroad is about three-fourths but the return rate of self-funded students is less than one in three. The majority of international students studying in China returned to their own countries after graduation.

Problems and Suggested Solutions

Brain Drain, the Intellectual Diaspora and the Global Knowledge Neural Network

Global outflow of students and intellectuals caused by overseas education is a universal problem in many countries across the world. We need to consider this issue from a holistic and dynamic perspective. The negative effects should not always be emphasized. It is important to take positive measures not only to attract overseas

talents to return to China but also to help them to serve the country in various forms abroad. This is crucial not only in relation to government-sponsored students and scholars, but also for privately sponsored studying abroad.

Research on international education conceptualizes the phenomenon of students staying abroad less as brain drain, more as ‘brain circulation’ (Zweig and Fung 2004; Welch and Zhang 2008). Welch and Zhang adopt the concepts of ‘knowledge diaspora’ and ‘global knowledge neural network’ when studying brain drain in developing countries overseas. The notion of ‘diaspora’, embodying the key idea of talent located ‘in-between’ staying overseas and returning, emphasizes the temporary and dynamic nature of overseas study and work. In this vision, global outflow students are all nodes within an international knowledge neural network and the era of global information. This offers the sending nation valuable intellectual resources with tremendous potential. In the form of the global knowledge neural network, intellectual outflow can play a role in narrowing the centre-periphery gap in science and education. The key to connecting with and attracting outflow intellectual labour is knowledge and technology transfer policy. Chinese scholars serving in overseas high education and scientific research institutions can maintain close academic ties to domestic counterparts and conduct research projects and cooperation with related research institutions

Overall, the patterns of China’s reverse brain drain since the 1990s, and the phenomenon of researchers and scholars serving the country when studying abroad and staying overseas in various forms, not only indicates China’s socio-economic development and the enhanced attractiveness of the nation to both Chinese students abroad and international students, but also shows that the nation’s policies are moving in a favourable direction.

Social Class and Cross-border Higher Education

Social stratification in self-funded cross-border higher education is much more significant than that of domestic higher education, because the cost of self-funded studying abroad is several times higher than that of domestic education. In 2004, the average yearly tuition fee of regular higher institutions in mainland China was about 6,106 Yuan (\$738).¹ That of the top 100 institutions was around 5,066 Yuan (\$612). In contrast, the annual tuition fee charged by the University of Hong Kong was 70,000 Yuan (\$8,458) for fee-paying mainland undergraduates; and in the Macao University of Science and Technology it was 42,000 Yuan (\$5,075). It is estimated that the cost of overseas students in Australia and New Zealand is 100,000 Yuan (\$12,085) per year, and the annual cost of studying in the United States is about 150,000–300,000 Yuan (\$18,127–36,254) or even higher.

For mainland Chinese students, cross-border higher education is not only their study goal, but also their means of enhancing social status. Higher education in

¹ 1.00 U.S. Dollar=8.275 Yuan RMB.

general, and elite national and transnational higher education in particular, is the most effective tool for achieving the goal of upward social mobility. In this process, fee-paying and scholarships become two different mechanisms for social stratification and social mobility. Students' accessibility to cross-border higher education is fundamentally related to their socio-economic background and academic performance. Self-financed students tend to come from affluent families. In contrast scholarship students come from a wide range of social-economic background. Full fee-paying studying abroad leads to social stratification, while scholarships lead to promote social mobility.

An empirical survey by Li and Bray found that due to the convertibility in different forms of capital and its inter-generational transmission and inheritance, it is the upper-middle classes—including cadres, professionals and businessmen—that predominantly secure opportunities for external higher education through their access to the various forms of capital (Li and Bray 2006). Scholarships open the way for upward mobility for students from the peasantry and the working class. But given the role played by self-support, in cross-border higher education, workers and peasants tend to be marginalized, more so than in national higher education because of the greater cost of cross-border study and living support.

While the research literature contains much concern about the relationship between social class and education opportunities within a national higher education system, as yet hardly any have paid attention to the social stratification and social class reproduction function of cross-border higher education. In the globalizing higher education market, which is growing rapidly, the impact of cross-border higher education on social stratification, social mobility and social class reproduction cannot be ignored.

Disequilibrium of Higher Education Export and Import in China

There is a serious trade deficit in relation to educational services in China. The structure of inflows and outflows is unbalanced. Studying abroad has exhibited fast growth, large scale and covers a wide range of subjects and destination countries. Brain drain coexists with brain gain. Recent years have witnessed a rapid growth of international students, as noted, but the quality of educational export badly needs to be improved and structure of export should be modified. There is clustering at a low level of study, and from certain source countries. The international competitiveness of Chinese higher education institutions is weak. Attractiveness to foreign students is low. Policies and management can be improved. The Chinese government and the various colleges and universities need to seriously consider how to enhance the competitiveness of China's higher education by taking proper strategies and policy measures.

More attention needs to be paid to the international students' academic and socio-cultural adaptation in Chinese system and environments; and to facilitate accommo-

dition of the international students, and their integration with domestic students. China should aim for balance between exporting and importing higher education.

The Thorny Problem of Moving from a Peripheral to a Central Position

The early twenty-first century has seen China emerging onto the political arena of the world. In the Western media, this is often perceived as a threat to the industrial countries. In its in-depth interaction with industrialized world and further integration into the global market and knowledge community, China is destined to face daunting challenges and difficulties. This is true in higher education exchange as it is in many other areas. On the one hand, China enjoys increasing attractiveness to international students and improved higher education quality. On the other hand, Chinese higher education institutions face fiercer competition and challenges. With the growth in the numbers of students studying abroad and coming to China, China is playing a more important role in the global stage. Both student inflow and student outflow will keep on growing.

Along with the surging tide of globalization, and China's increasing international strength, its international influence in the knowledge community is increasing. On the one hand, developed countries cannot ignore and evade China's role and growing influence. China enjoys certain favourable conditions in future international competition. Its profound cultural depth enhances its absorption ability. It exhibits sustained economic development. There is a strong political power and increasingly sound policies and systems, a harmonious social environment and the continuing maturity of the market system.

China is moving from the global periphery into the global centre. In this process, on the one hand it will be suppressed by the developed countries. On the other hand, domestic higher education sector in China is facing the challenge of quality problems. The arduous task of mass higher education, the low international level, lack of competitiveness and comparative advantages in the world will render very thorny China's pathway in moving from the periphery to the centre of the international knowledge and higher education system.

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Chapter 17

The Internationalization of Japanese Higher Education: Policy Debates and Realities

Akiyoshi Yonezawa

Introduction

Globalization and the knowledge economy are principal issues facing almost every country around the world. In many East Asian countries—for example, Japan, China, South Korea and Taiwan—governments have taken strong initiatives in the process of forming strategic responses of higher education to the challenges of globalization. One typical example is policies for fostering “world-class” universities, whereby governments concentrate public investment in a limited number of flagship research-oriented universities in order to augment their status worldwide (Altbach and Balan 2007). Project-based funds for enhancing globally competitive research at flagship universities have been introduced and have evolved further since the 1990s; for example the 211 and 985 projects in China, the Brain Korea 21 project in Korea and the 21st Century Center of Excellence program in Japan (Yonezawa 2007). The Korean BK21 project entered its second phase in 2006, and in 2007 the Japanese government replaced the former COE21 project with the Global Center of Excellence program. The governments of these countries are clearly applying pressure on their higher education systems to serve as tools for the development of the knowledge economy by enhancing national capacities in research and development.

At the same time, higher education systems in these countries, with the partial exception of China, rely heavily on financial contributions by students and their parents in the form of tuition fees (Umakoshi 2004). In Japan, 73.3% of 4-year university students, including those enrolled in graduate programmes, are studying at private institutions as of 2009. The share of students in private institutions is even higher in junior colleges and other types of post-secondary education institutions. The largely private higher and post-secondary education systems of Japan and Korea have already achieved universal access and are now facing over-supply conditions due to the demographic decline in younger age groups. Here the question

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of competitiveness, or attractiveness, in international student markets is becoming crucial; both in relation to attracting talented post-graduate students to sustain research capacities, and in compensating for the shrinking market of domestic students mainly at undergraduate level.

Naturally, higher education institutions in these countries face strong pressures both from governments and student markets. The question for each of these countries is—what would constitute a realistic strategy and a solid future vision for the autonomous development of higher education and associated academic activities?

Japan, a non-English-speaking country with a relatively large population (128 million in 2009) is disadvantaged in attracting international academics and students. As Marginson and van der Wende (2007) pointed out, Japan is under-represented in the list of world-class institutions, in comparison with its global economic power. The lack of systemic regional-level frameworks like the EU or ASEAN, and the rapid development of neighbouring countries, are frequently regarded as threats to Japan's effort to maintain a distinguished position. At the same time, while an emphasis on competitiveness appears reasonable as a national strategy, overemphasis on competitiveness risks isolation from the regional and international communities.

Using the case of Japan, this chapter examines policy proposals and realities in the process of internationalizing higher education. First, it establishes a framework for understanding the relationship between state/government, academics/universities and students/market, referring to the “glonacal agency heuristic” model (Marginson and Rhodes 2002). Then the chapter analyzes the strategies for approaching globalization that are presented by these three actors. In conclusion, the chapter calls for a realistic approach towards mutual collaboration in the Asia Pacific region in the face of simultaneous calls for increased national competitiveness.

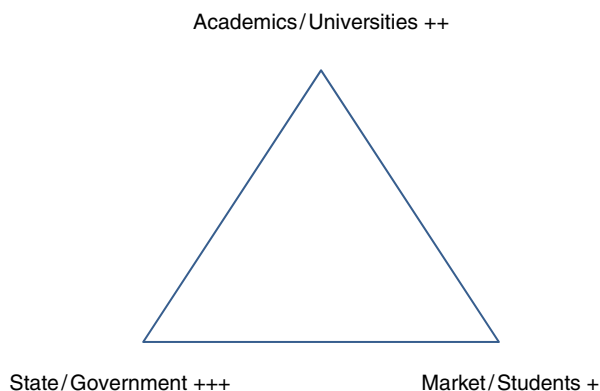
Theoretical Framework

To understand the complexity of the situation now facing Japan, the “glonacal agency heuristic” model proposed by Marginson and Rhodes (2002) is useful. Their basic argument is for the necessity of a new model to understand the relationship between state, market and professional–collegial control, which are the main actors of Clark's “triangle model” (Clark 1983) and may be reasonably expected to act as agents at the local, national and global levels. However, in the case of a country like Japan, it should not be taken for granted that these three main actors can achieve consensus on any single vision or work together as a united agency.

Figure 17.1 is a modified version of Clark's “triangle model”, representing the hypothesis that there is a gap of responsiveness in ongoing globalization trends.

Firstly, a state or government tends to be highly responsive to globalization trends. A contemporary state government is always faced with circulating information regarding policy trends. Policy borrowing among nation states is accelerated under the ideologies of “globalization”, “regional arena” and the “knowledge economy”.

Fig. 17.1 Clark's triangle and responsiveness to globalization trends



Secondly, academics and universities are generally less responsive to globalization than are states and governments, but more responsive than the market and students which represent the general public. International academic exchanges are increasing, and domination of English as common academic language is already taken for granted—at least in the natural sciences and engineering fields. The development of Internet-based communication provides enormous opportunities for borderless academic communication, and research collaboration without physical encounter is very common. The activities of academics and universities are also more decentralized in nature than those of states/governments. Therefore, it is unlikely that globalization trends will reach all of those who are locally established or satisfied with current domestic networks. At the same time, in the case of academics or universities that are dissatisfied, they can expand their activities or even proceed as independent persons without having significant influences on the local/domestic context.

Lastly, students and the market are least responsive to globalization trends. Internationally oriented core groups always exist, but tend to be transnational, or can transfer to higher education systems at the forefront of globalization, such as those in the USA or Singapore. Again, this can be accomplished without affecting other actors, unless significant brain drain occurs. The great majority of students, however, seem to be satisfied with local settings or are much less able to adapt themselves to international settings.

This hypothesis could be applied basically to any country with a different context in internationalization or globalization. For example, in the United States, the federal government clearly applies pressure to higher education institutions and their associations to be more internationally competitive, sometimes by reforming their quality assurance systems, financial budgeting processes, and so on. On the other hand, the great majority of higher education institutions such as education-oriented universities and colleges, community colleges and other post-secondary education providers are mainly serving the domestic or local market. Although it is true that global university rankings are dominated by American universities, the cosmopolitan attraction of human talent is concentrated at the post-graduate level even in

the world-class US universities. For example, the share of international students at Harvard College in 2007 was 9.1% overall, but 26.4% at the post-graduate level (Harvard University 2007). Having said this, there is nevertheless a great difference among the national contexts, in the degree of responsiveness among institutions with regards to approaches to globalization.

Teichler (1999) proposed a typology for the internationalization of higher education, mainly referring to European countries, as outlined below. Here, we should examine possible applications in Asia Pacific contexts.

- a) “Would be internationalization”: a higher education system which hopes to be internationalized but lacks enough resources and needs external help. In the case of Asia Pacific countries, less developing countries such as Afghanistan or Laos could be examples.
- b) “Internationalization for survival”: a higher education system which is required to be internationalized for the survival of the nation or society. In the Asia Pacific, Singapore is a perfect example. Countries such as Malaysia, South Korea and Australia may also share principal characteristics of this model.
- c) “Internationalization in two arenas”: a higher education system which has two parallel orientations towards internationalization, namely: (1) an expansion of their own system towards other countries, and (2) a transformation of learning environments for domestic students. Japan, and more recently China, could be good examples of this category. Those two countries have relatively strong national identities and influence higher education systems in other countries; on the other hand, they are trying to “internationalize” their own campuses by inviting international faculty and students.
- d) “Internationalization at home (or arm-chair in Jürgen Enders’ explanation¹)”: a higher education system which internationalizes itself largely by inviting international academics and students. Apparently, the United States is a typical example.

Japan is a typical example of a country facing “internationalization in two arenas”. Firstly, we could assume that the gap of responsiveness towards global trends among different actors in Clark’s triangle is larger in cases (a) and (c), above. In a country of type (a), academics/universities and markets/students do not have the capacity to internationalize, though they may not be satisfied with current conditions. In this case, even state/government may not be responsive because of a serious lack of resources for communication with other countries or lack of will to open up its higher education system, as is the case with North Korea. In a country of type (c), all actors have enough resources if they exhibit a serious will to internationalize themselves. However, relatively strong domestic social and economic power could work to discourage academics, universities and students from serious efforts to be internationalized. In this case, even if the government tries to exert pressures or offer incentives for internationalization, academics, universities and students may

¹ Presentation at the Workshop on the Changing Academic Profession, Research Institute for Higher Education, Hiroshima University, 7–8 February 2008.

not respond as desired. In the case of Japan, the government has provided strong incentives for the internationalization of higher education, especially since the 1980s (Horie 2002). Yet it is often pointed out that Japanese students and academics are not internationalized, especially from the perspectives of English-speaking countries (Eades et al. 2005; McVeigh 2002).

Secondly, Japan could be a rare example of the coincidence of geographic coverage of a national language and national border. Japan is the only country which takes Japanese as its official language, and linguistic minorities continue to be very small, at least until quite recently. At the same time, Japan is one of only a few non-English or non-Chinese-speaking countries which have realized high-level doctoral education and research in its own language in this region.

Global Trends and Policy Responses

The history of policy responses to global trends in higher education goes back to the latter half of the nineteenth century, namely, the beginning of modern higher education in this country. In 1877, the Japanese government established the University of Tokyo as the first modern university. This university was aimed to be a “world-class” university from the beginning, and the government concentrated its higher education budget into this single university before the second national university (Kyoto University) started 20 years later. Many foreign faculty were invited, with salaries which were extraordinary higher than the national average, who were then replaced by Japanese faculty who had previously been supplied with government scholarships and sent to study in developed countries.

By 1935 Japan already had 45 universities and 218 higher education institutions (Monbusho 1990). However, only nine “imperial universities” had been established by the end of World War 2, including “Taiwan” in Taiwan and “Keijo” in the Korean Peninsula which were given a distinguished position in the higher education system of this country. Although the official distinguished status of “imperial universities” was abolished, these universities have continuously received advantageous treatment in financial allocations, to the present-day (Amano 2008). All are placed favourably in global university rankings.

Full-scale government endeavours to internationalize Japanese higher education started when a plan to invite 100,000 international students was established in 1983. At that time, Japan hosted only 10,480 international students. Having already achieved economic prosperity through the success of export manufacturing industries, the nation was trying to transform its industry based on high technology and information industries. In the 1980s many US universities were invited to set up branch campuses in this country. Aside from the exceptional success of Temple University Japan located in downtown Tokyo and a few small-sized programmes, almost all those campuses, located mainly in small cities or rural areas, were closed. This was partly because they had not been authorized as universities under the Japanese legal framework, and partly because their marketing strategies

Table 17.1 Number and share of international students in Japan (2006). (Source: MEXT 2007)

Country of origin of international students	Number of international students	Proportion of all international students (%)
China	74,292	63.0
South Korea	15,974	13.5
Taiwan	4,211	3.6
Malaysia	2,156	1.8
Vietnam	2,119	1.8
United States	1,790	1.5
Thailand	1,734	1.5
Indonesia	1,553	1.3
Bangladesh	1,456	1.2
Sri Lanka	1,143	1.0
others	11,499	9.8
<i>Total</i>	<i>1,17,927</i>	<i>100.0</i>

did not fit the demand of Japanese higher learners (Torii 2008; Yonezawa 2008a). In the 1980s the internationalization of Japanese higher education was supported by strong government initiatives, especially those introduced by then-Prime Minister Nakasone, who aimed to establish a leading position for Japan in Asia and the world (Hood 2001; Schoppa 1991). International students were absorbed at various types of higher education institutions from elite to mass. The number of international students exceeded 100,000 in 2003, mainly due to a rapid increase in global flows from East and South East Asian countries (Table 17.1).

The rapid progress of globalization at the turn of the century created significant pressure in favour of Japanese policies towards the further internationalization of Japanese higher education. In the 1990s, the Japanese economy experienced a continuous state of economic recession also known as “the ten lost years”, under the severe trials of transforming locally oriented management and governance customs into globally competitive ones. However, compared to the newly industrializing countries of East and South East Asia, the damage generated by the 1997 Asian Economic Crisis was relatively small. In order to support the development of human resource capacities in ASEAN, the Japanese government started to support the AUN-SEED network, a project to develop doctorate programmes in the field of engineering at flagship universities in ASEAN countries through exchanges with Japanese universities (Umemiya and Tsutsumi 2008).

On the other hand, flagship universities in Singapore, China and South Korea showed themselves to be strong competitors for Japan in relation to the global research rankings. At the same time, Australia started to clarify the strategic usage of their higher education system as an exporting industry, and, at the same time, strengthened performance assessment and financial linkages in research activities.

Under these environmental changes, Japanese higher education policy became elevated from merely being education policy dealt with by the Ministry of Education, Culture, Sports, Science and Technology (MEXT), to one of the core economic

and social issues dealt with in the wider policy context at Prime Minister level. The Koizumi cabinet (April 2001 to September 2006) supported the idea of the 21st Century COE plan based on the objective of fostering around 30 world-class universities (Yonezawa 2003). The succeeding administrations of Prime Ministers Abe (September 2006 to September 2007) and Fukuda (September 2007 to September 2008) also stressed initiatives in educational reform, and strongly argued for the importance of the internationalization of higher education.

In January 2008, Fukuda declared a plan to invite 300,000 international students to Japan by 2020. In July 2008, six ministries including MEXT, Ministry of Foreign Affairs and the Ministry of Economy, Trade and Industry (METI) released a joint basic framework. It is believed that the figure of 300,000 was designed to maintain the current share of Japanese higher education in the international student market. But the achievement of this target appears to be very difficult. The Fukuda cabinet also revealed its intention of supporting around 30 universities as core universities for the internationalization of Japanese higher education, also known as the “Global 30” plan.

At the same time, the quality assurance system of Japanese higher education has been strengthened. For many years quality assurance relied on the Standard for the Establishment of Universities, which is the legal standard utilized for the authorization of newly established universities by governmental committees. An American-type accreditation system was introduced in 1947 under the supervision of the occupying command; however, it was characterized by voluntary participation. From 2004, all universities and colleges were required to accept a regularly based quality assurance review called a “certified evaluation” by external evaluation organizations (Higher Education Bureau, MEXT 2006). Representative external evaluation organizations such as the National Institution for Academic Degrees and University Evaluation (NIAD-UE) and the Japan University Accreditation Association (JUAA) are full members of the International Network for Quality Assurance Agencies. The Japanese government also established a professional post-graduate school system in order to meet the advanced skills and knowledge needed in professions, by distinguishing them from traditional academic-oriented post-graduate programmes.

It should also be mentioned that there is an underlying transformation of labour and immigration policies underway. The first baby boomers born just after the Second World War are now retiring, and a declining youth population cannot sustain the continuous development of human resources at the level required. The Cabinet’s core policy document, *Economic and Fiscal Reform 2008: Basic policies*, subtitled “a country welcoming the world, growth by and for all, harmony with environment”, clarified Japan’s idea of expanding the acceptance of skilled foreign workers. Naturally, policies for the internationalization of higher education need to be linked with this policy and designed so as to attract globally competitive human resources from around the world. However, Japan has a long history of utilizing foreign workers as a buffer against economic fluctuations, and it is hard to know whether this is a genuine turning point for the internationalization of the labour force in this country.

Responses by Universities/Academics and Students/Markets

The responses to globalization trends by universities, academics and students are much slower and are highly varied. At the same time, at least financially, both universities and students are relying heavily on governmental initiatives.

For academics and universities, there are two main directions to take in responding to global trends. The first approach is to strengthen research capacities to internationally competitive levels. Although the representation of Japanese higher education system as a whole in global ranking is not high, top Japanese national universities are ranked very well when the disadvantage of linguistic isolation is taken into account. This is mainly due to an active research performance in the natural sciences and the long and stable history of engineering. Although it is common to write articles in English in these fields, the absolute majority of classes and daily conversation are conducted in the Japanese language even at top-ranked research institutes. In 2007, the Japanese government started to support five selected key research institutes (World Premier International Research Center Initiative, or WPI). This is the first trial whereby the government has requested the official language of research institutes to be English. This suggests that world-class research does not always require a cosmopolitan environment. On the other hand, it is becoming increasingly common that international reviewers are involved in the selection of large research projects funded by governmental grants. Differently to the situation of European researchers, however, it is rare that Japanese researchers apply for international research grants directly—partly because of the lack of a regional or international research grant system with at least some linkage with Japanese funds representing the largest economy in the region.

The second approach to meet global challenges is to improve the quality of education to meet international standards. However, for a non-English-speaking country like Japan, it is very difficult to define what “international standards” are. Some trials certainly exist. Professional education programmes requiring transnational mobility underscore the need for international viability of qualifications. Engineering is a typical example, and associations of engineers and engineering education have established the Japan Accreditation Board of Engineering Education (JABEE) to implement voluntary-based accreditation of engineering programmes. In 2005, JABEE became an official member of the Washington Accord, the international alliance of accreditation bodies of engineering education.

Other institutions seek official recognition by foreign (mainly American) accreditation organizations. The Japanese government has established a national quality assurance framework called “certified evaluation”, and requires all universities, colleges and professional schools to accept regular-based reviews by third-party evaluation organizations certified by the Japanese government (Higher Education Bureau, MEXT 2006). Some universities obtain foreign accreditation. For example, the Business Schools of Keio University and Nagoya University of Commerce and Business, both private institutions, have been accredited by the Association of Ad-

vance Collegiate School of Business (AACSB). Similarly, International Christian University, a private liberal arts college, has received accreditation by the American Academy for Liberal Education (AALE). These examples of foreign accreditation, however, do not necessarily mean that the education programmes concerned are being taught in English.

Top universities such as the University of Tokyo and Nagoya University tend to utilize benchmarking exercises to assess their education and other aspects in comparison with globally competitive foreign universities. However, the main reports are primarily published in the Japanese language, which suggests the main consumers of these benchmarking results are Japanese universities.

The greatest obstacle retarding the internationalization of Japanese universities is financial shortage. According to the result of a questionnaire survey by Tohoku University in 2008 (Yonezawa 2008b) Japanese universities do not expect direct financial benefit from international activities (Table 17.2). More precisely, the internationalization of Japanese universities relies almost completely on government initiatives. Figure 17.2 indicates that national universities tend to generate income from research funds by internationalization. Private universities expect more from governmental subsidies that are allocated according to the number of international students, rather than from tuition fees from those international students. Although about 80% of international students studying in Japan are technically self-financed, private universities expect financial incentives via governmental support for internationalization, while international students frequently engage in tuition bargaining. There are various public support systems for international students. Some

Table 17.2 Internationalization and finance. (Source: Based on the survey by Tohoku University 2008 (Yonezawa 2008b))

	All universities (<i>n</i> =609) (%)	National universities (<i>n</i> =76) (%)	Local public universities (<i>n</i> =67) (%)	Private universities (<i>n</i> =466) (%)
Implement internationalization if it is financially beneficial	2.6	1.3	0.0	3.2
Implement internationalization if it is not a financial burden	18.6	10.5	19.4	19.7
Implement internationalization under the expectations of non-monetary returns such as the enhancement of global image	45.3	53.9	28.4	46.4
Internationalization itself has significance, so there is no expectations of financial returns	32.0	34.2	50.7	29.0
Other	1.5	0.0	1.5	1.7
<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>

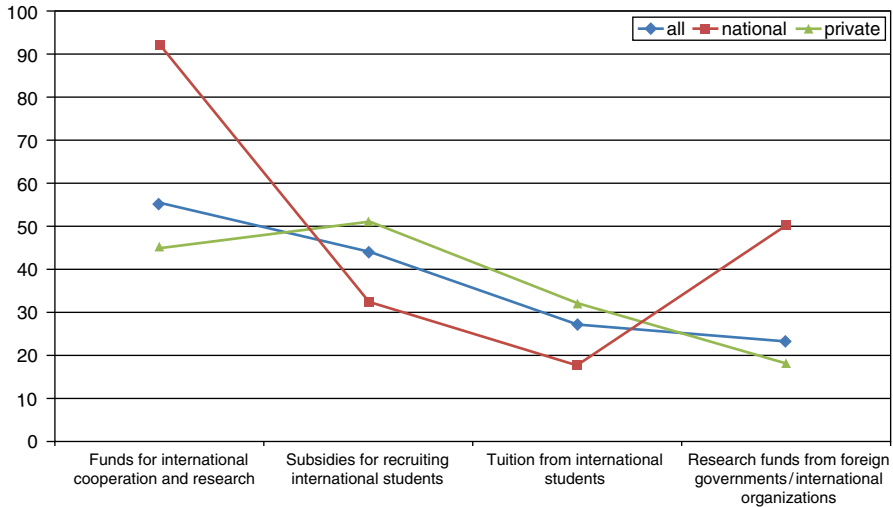


Fig. 17.2 Expectation of income generation through internationalization. (“All”, “national” and “private” are groupings of universities. Source: Based on a 2008 survey by Tohoku University (Yonezawa 2008b))

provide funds to students, and others route finance directly to higher education institutions. Considering the fact that most international students in Japan come from middle-income or developing countries, it can be concluded that Japanese policies for attracting international students have to be supported significantly by public finance.

Government–Market Linkage: A Trap for the Universities?

The observations above suggest that in their internationalization processes, universities and academics rely heavily on government or state initiatives. At the same time, the low responsiveness of the market and students work as barriers to the internationalization of Japanese universities, especially given that they are under increasing financial pressure as seen in most other higher education institutions in the world. Strong initiatives from government are always necessary for the further development or even the sustenance of current conditions. However, this does not mean that long-term commitment by the government to the internationalization process is always assured.

First, in Japan financial contributions to higher education are quite small in comparative international terms. The OECD’s *Education at a Glance 2008* (OECD 2008) revealed that higher education finance in Japan relies highly on private con-

tributions. Government investment in education in GDP per capita, including primary and secondary education, is among the lowest among OECD countries.

Secondly, the Japanese government has been trying to cut the public budget, in a policy climate of neo-liberalism, and under the strong pressure of the rapidly increasing governmental debt as shown in Fig. 17.3. Higher education is not an exception. Public budgeting for basic operational costs for national universities has been subject to an annual reduction of 1% of the budgetary ceiling each year since 2004. In the top universities, increased income for competitive project funds, including “internationalization” or “world-class research”, can be expected. However, most national universities and local-public universities are suffering from continuous decreases in annual income.

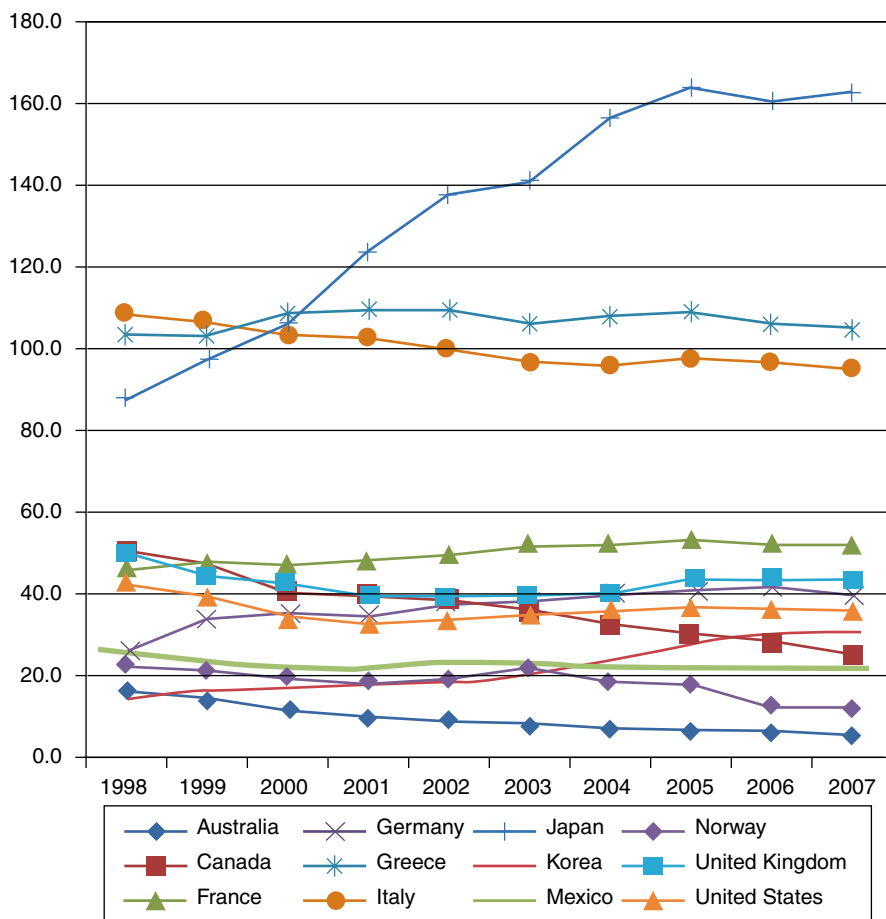


Fig. 17.3 Total central government debt as a percentage of GDP. (Source: OECD 2010)

Private universities struggle in even more severe conditions. In 2009, 46.5% of 4-year private universities were facing difficulty in enrolling a sufficient number of students (PMACPSJ 2008). Some universities attempt to enrol international students to compensate for this trend, with tuition bargaining arrangements being implemented in many cases.

Therefore it would be a mistake to infer from recent government initiatives for the internationalization of higher education that public expenditure for Japanese higher education is actually increasing. Prior to the 2009 election which saw a change of government, the political instability of post-Koizumi administrations was associated with frequent policy changes and unrealized, short-sighted propaganda. The current internationalization policy of Japan is highly related to the rapidly changing diplomatic context in the Asian region. Clearly, the significant increase in China's socio-economical influence throughout the region has a strong impact on Japanese diplomacy and international policy making, including initiatives related to higher education.

In the summer of 2008, two Japanese project teams set out to examine higher education policy from almost completely opposite directions within the ruling Liberal Democratic Party. One project team aimed to improve the world-ranking positions of Japanese universities, without necessarily extending strong budgetary support to the top universities. For example, in April 2008, Heizo Takenaka, a Professor at the leading private institution Keio University and a former Minister of Internal Affairs and Communication under the Koizumi Cabinet, argued for the possible privatization of the University of Tokyo to encourage that university to be more competitive in top university rankings, in line with the general idea of the "privatization of public services" (Diamond Online 2008). The other project team examined existing examples of waste in public expenditure.² Here, many programmes supported by competitive funds, such as Global COE, one of the programmes for improving internationalization of higher education, had come under criticism as "wasteful" or, at least, "ineffective" expenditure of public monies.

Considering the existence of a strong and long-established bureaucracy that has effectively assured the consistency of Japanese governmental policy, it is unlikely that government initiatives for internationalization of Japanese higher education will suddenly cease. However, both the Liberal Democratic Party and the new governing party, the Democratic Party of Japan, want to strengthen the initiatives of politicians against the conservative tendencies of the bureaucracy. In cases where universities and academics are not confident in the measures taken to realize internationalization, universities may fall into a trap whereby the government merely follows the least responsive views of the market or the general public, and suddenly terminates active commitment to the internationalization of higher education.

² The memo of the discussion of this project team is available on the website of Taro (2008).

Conclusions

This examination of the process of internationalizing Japanese higher education concludes that, at least in the case of Japan, a “glonacal agency” has yet to emerge. The coordination in Clark’s triangle is ongoing in the process of internationalization. Compared to the government, universities and academics are less responsive to globalization trends, with action on the part of students and the market least likely of all.

Although it is clear that top—mainly national and some private—universities in Japan are deeply involved in global competition to achieve or maintain positions as world-class research universities, the majority of Japanese institutions are not directly involved in the international market game. Actually, “internationalization” at top universities tends to be narrowly focused on cutting-edge research activities, and is therefore not directly related to the international student market. In contrast, the majority of Japanese universities define internationalization as the provision of international experiences for domestic students mainly at the undergraduate level. Most universities do not expect financial benefit to arise from this, and it is unlikely that they can expect increased financial contributions from the students given the very severe over-supply conditions in the Japanese higher education market. Universities rarely expect financial benefit directly from internationalization or their involvement with the international student market either. This suggests that universities and academics cannot expect the support of market or private funds for further internationalization and have to rely on government initiatives.

But it would be overly optimistic for universities to continue to rely on current, strong government initiatives to provide the impetus for the internationalization of Japanese higher education. It is imperative that universities and academics themselves display some initiatives of their own. In order to sustain a continuous internationalization process, dynamic initiatives by academics and universities for knowledge creation and exchange are indispensable.

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Chapter 18

Internationalization of Japanese Universities: Current Status and Future Directions

Kazuhiro Kudo and Hiroko Hashimoto

Introduction

More than ever Japanese universities are in fiercer competition. Despite the long-standing decrease in the number of undergraduate age cohort, the number of Japanese universities, mainly because of the governmental deregulation of university charter system in 1991 and the widespread optimism about the establishment of new universities thereafter, has increased significantly from 523 in 1992 to 773 in 2009.¹ Accordingly, many universities cannot meet the admission quota and are faced with the possibility of bankruptcy and closedown. For elite research universities, it is imperative to improve and maintain their position in the national and global rankings to ensure their influence and reputation in knowledge creation and dissemination, and to attract talented students and scholars from all over the world. In parallel with these national and global competitions, the Japanese government has recently taken initiatives that increase the pressures.

These government initiatives include steps to improve the quality of higher education in research and teaching, for example the 21st Century Centre of Excellence Program in 2002, Centres of Learning in 2003, the third-party certified evaluation in 2004, the Global Centre of Excellence Program in 2007; trigger structural reform, for example, the establishment of national university corporations in 2004, and the law schools system in 2004; and internationalization, for example, the Strategic Fund for Establishing International Headquarters in Universities in 2005, the authorization of offshore programs in 2005, and the selection of key universities for

¹ Other than 773 universities (86 national, 92 municipal, 595 private), there are 406 two-year colleges (2 national, 26 municipal, 378 private) and 64 colleges of technology (55 national, 6 municipal, 3 private). The participation rate of higher education in Japan has also grown from 38.9% in 1992 to 56.2% in 2009, but the decrease in the youth population has not moderated competitions for student recruitment among Japanese universities.

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internationalization ('Global 30') in 2009. Internationalization, one of the prevalent concepts that have shaped cosmopolitan and nationalistic discourses in Japan in the last two decades (Goodman 2007), has secured a greater importance in the Japanese mass higher education system significantly impacted by globalization and economization (Marginson 2004).

This chapter aims to provide a critical inquiry into the current status of the internationalization of Japanese universities, by focusing on the multiplicity of its connotations and practices from a Japanese socio-historical perspective.² It will also shed light on the institutional hierarchy created and stabilized by universities themselves, and by government bodies that are encouraging a few institutions into global powerhouses on one hand and may be discouraging the vast majority of other universities from innovative research and education on the other.

To this end, the chapter first conceptualizes university internationalization and introduces four emerging phenomena in the internationalization of Japanese universities. It then illustrates what we call the 'stratified diversification' of university internationalization, by presenting a categorical model of five distinctive approaches of Japanese universities toward internationalization. The model highlights the multiple yet stratified modes of internationalization practices, with each approach based upon different rationales and facing different problems and issues. Finally, the chapter will conclude with a brief discussion on the implications of the model for future research and development of Japanese higher education.

Emerging Phenomena in the Internationalization of Japanese Universities

We will begin our discussion by conceptualizing university internationalization (*daigaku no kokusaika*) in a Japanese socio-historical perspective. Any single word induces different interpretations to different people in different contexts, and accordingly, any single definition of it may not be sufficient and satisfactory. Yet, we share Knight's (2003) viewpoint that "internationalization is a process impacted by globalization", and therefore use her definition of university internationalization: "the process of integrating an international, intercultural, or global dimension into the purpose, functions, or delivery of postsecondary education" (Knight 2003). We find this definition useful and broad enough to encompass the multiplicity in the connotations of internationalization (Ebuchi 1997; Goodman 2007) and the 'glonacal', that is the interlocking of the global, the national, and the local dimensions of higher education (Marginson and Rhoades 2002), while taking Japanese socio-historical elements into consideration. With regard to the concept of globalization, we borrow Held and McGrew's (2003, p. 4) definition that "the expanding scale,

² It is also important to consider the presence of foreign universities (for example, Temple University, Japan) and the recent government initiative to accredit these institutions. But it is beyond the scope of this chapter.

growing magnitude, speeding up and deepening impact of interregional flows and patterns of social interaction”, though there is a recent claim that the concept of globalization is faced with problems as a description, explanation, and ideology of world order (Held and McGrew 2007).

In Japan, the issues of university internationalization have almost always been discussed in relation to the issue of Japanese national identity, as universities have made crucial contributions to nation building. In the 140 years since the Meiji Restoration, Japan has attempted to gain and maintain a high politico-economic position in the world, particularly by means of trade, modern science, and technology. To realize this ideal, a national modernization and westernization project, in tandem with the establishment of Japan’s first university, the University of Tokyo, in 1877, was carried out by importing Western knowledge through foreign visiting scholars and books and by sending Japanese students to Europe and the United States of America. This kind of ‘catching up with the West’ (and ‘beating up the West’ during World War II) mentality lasted for over a century and became strongly evident in the 1980s when the Japanese economic growth peaked, and the term ‘internationalization’ (*kokusaika*) emerged as a fashionable goal of Japanese society. It was in this decade that the Japanese government found it necessary to make greater contributions to the international community and initiated several plans to internationalize higher education, including a plan to accept 100,000 international students by the year 2000 (Umakoshi 1997).

Some critiques argue that the Japanese notion of internationalization in the 1980s and the 1990s was dichotomized between on one hand cosmopolitanism, aimed to transcend national identity as such; and on the other hand nationalism, in the form of a backlash against westernization and globalization that attempted to maintain Japan’s culture and tradition and internalize Japaneseness or Japanese identity in people’s minds (Goodman 2007; Sato 2004; Yoshino 1999). Consistent with this binary consciousness, both scholarly and governmental discussions on the internationalization of Japanese universities sustained explicit or implicit assumptions that Euro-American universities were international (thus universal) and that Japanese universities had to be equipped with the efficient international (thus Western) qualities of research, education and administration (Horie 2002; Kitamura 1989, 1998; Yonezawa 2003). In addition, the propensity of Japanese universities to give research higher priority than teaching, in comparison to Western counterparts that better balance the two, was questioned (Arikawa 2007).

In sum, a central theme in university internationalization in Japan that appeared until the end of the last century was the adoption and adaptation of the Euro-American higher education systems, associated with recurring unresolved tension between westernization and Japanization (Kitamura 1989).

However, at the outset of the twenty-first century, with the rise of globalization of higher education discourses, Japanese universities are looking into the future with different sight—though the dichotomous westernization and Japanization mentalities may still be latent underneath. Our literature review suggests there are four emerging phenomena in the internationalization of Japanese universities over the past decade: (1) more awareness of regionalism, or Asianization, (2) the promotion

of greater international student exchange from the perspective of Japan's economic and educational developments, (3) the integration of international/transnational dimensions into curricula, and (4) the steepening of hierarchy with diversification, or what we call 'stratified diversification'.

First, in contrast with the nationalistic and Eurocentric attitudes of the past, many Japanese universities are trying to incorporate Asian dimensions into the purpose, functions, or delivery of education and research by cooperating with other Asian universities. This shows in increasing numbers of Asian language and culture programs, partnership agreements, consortiums, branch offices and research institutes, and student mobility, especially in connection with China, now one of the main study destinations for Japanese students and the main source of international students in Japanese universities (MEXT 2007). Another example of Asianization is the Strategic Fund for Establishing International Headquarters in Universities, initiated in 2005 by the Japan Society of the Promotion of Science, a quasi-governmental organization. Under this five-year project-based competitive fund scheme, 20 universities were selected as pilot institutions to develop strategic and innovative internationalization policies and practices. These universities now work closely with Asian as well as Euro-American universities via bilateral relationships through research collaboration, student exchange and joint degree programs, and by actively joining regional consortiums such as the Association of East Asian Research Universities (AEARU), the Association of Pacific Rim Universities (APRU), and Academic Consortium 21 (AC21).

This approach is distinct from those Japanese government policies on international education that expresses national interests behind cosmopolitan messages (for example, Central Council for Education 2003; International Student Policy Research Council 1999). Other than the University of Tokyo, no university now articulates such a mood in its internationalization policy documents. Other universities envision themselves as cosmopolitan entities and as an interface between global and local, or in some cases, between Asia and local communities (for example, Kyushu University). This is different to earlier twentieth-century notions of university internationalization rooted in the 'Japan versus West' dichotomy.

Second, there is a call for greater international student exchange, both to promote mutual understanding and international friendship between Japan and other countries (Horie 2002), and to bring foreign-born skilled workers into Japanese society (for example, 'Asia Gateway Initiatives' 2007) and have more global-minded (that is, concerned about both global and local issues) youths studying abroad. Due to the greying of the population Japanese society will suffer from a serious lack of workforce in the future, and the intensification of global economic competition requires more globally skilful workers in Japan. To fulfil this demand, the government is trying to create more egalitarian labour system for minorities including foreign newcomers, and a new plan for 300,000 international students has been announced (Fukuda 2008; MEXT et al. 2008). This is philosophically different from the former 'policy to accept 100,000 international students by 2000', enacted in 1983 and achieved in 2003. The rationale for having overseas students on campuses is shifting from development aid (Tsuruta 2003) to the revitalization of Japanese political

economy, society and universities. Thus there is concern about the quality as well as quantity of incoming students.

The discussions about international student numbers have opened a reconsideration of immigration laws. Japan is thinking about immigration policy for the first time ever (Sakanaka 2008), with an increase in the foreign-born population and new multiculturalization discourses such as ‘multicultural co-living’ (*tabunka kyosei*) (Tai 2005).

The number of students outgoing from Japan is another new concern. As noted, during the Meiji modernization/westernization period Western knowledge and ideas were imported by means of international student and scholarly exchange. The importance for Japan of dispatching students abroad was strongly influenced by the post-World War II period of recovery, as exemplified by the significant contributions of Japanese elites and technocrats who studied in the USA on the Fulbright Program (Kaku and Hirano 2002; Kaneko 1991; Kondo 1992). Many full-fee paying students have studied abroad, mainly in the West, and the strong inclination to learn from the West on the part of Japanese students has magnified the imbalance in student exchange and mobility. The majority of Japanese students still study in the West whilst over 90% of international students in Japan are from Asia (MEXT 2007). Now, on the verge of the knowledge-based economy, the Japanese government is trying to encourage more Japanese to study abroad, especially in Asia, by offering both short-term and long-term scholarships (Central Council for Education 2003).

Third, more international/transnational dimensions are added to conventional curricula and programs offered in Japanese universities. An increasing number of universities are offering courses partially or fully taught in English, particularly in the postgraduate programs of natural sciences and management studies and in the undergraduate short-term programs that were mainly developed for the purpose of accepting international students from diverse source countries, especially English-speaking countries, with little or no prior experience of Japanese language learning. While there has been some criticism against the dominance of English in international and intercultural communication from the viewpoint of linguistic and intellectual imperialism (for example, Tsuda 1986), many universities and the government seem in favour of the adoption of English as a medium of instruction (for example, Kisen 1999; MEXT et al. 2008; Otsubo 1999; Sakamoto 1999) as well as offering courses taught in Japanese and Japanese language programs for incoming international students. In addition, a small number of universities have begun transnational programs in collaboration with universities in Europe and Asia-Pacific. Kitamura (1999) submits that these attempts to integrate international/transnational dimensions into the conventional curricula could be referred to as an ‘enclave system’, since only a handful of offices or department have been involved in such activities within the whole university system. Some also warn against an optimistic view that the presence of such transnational programs will contribute to the internationalization of the entire university system (for example, Arikawa 2007). However, there are some proactive universities that have already incorporated the

international/transnational dimensions into a whole university system, as will be illustrated in the next section.

When it comes to the discussion on the internationalization of curricula, though, there is an interesting phenomenon. To the best of our knowledge, in the academic literature, very little ink has been spent on the internationalization of curricula in the context of Japanese higher education. In his pioneering work on the internationalization of universities in Japan, Ebuchi (1997) alluded to the importance of reorganizing the conventional curricula of Japanese universities from broader, international perspectives. Similarly, there is an abundant body of literature that discusses a need for the internationalization of curricula in Japan. However, it has hardly gained scholarly attention, except limited foci on English as a medium of instruction, courses for intercultural communication, and employment of foreign faculty staff (for example, Huang 2006); and even its concept has not been examined in-depth in light of Japanese socio-cultural contexts. Furthermore, in tandem with a call for improved quality in teaching and research, many universities are aware of the importance of faculty or staff development. However, faculty development and university internationalization have been treated and practised in parallel (Arikawa 2007), and the improvement of the curricula from global/international perspectives seems far behind the ideal.

Given that Japan has imported knowledge from other countries, particularly from China for centuries and from the West in the modern era, some may speculate that Japanese universities have always been internationalized in the content of education. However, we are of the opinion that more systematic plans and strategic implementations on the internationalization of curricula are necessary in the era of global competition and cooperation.

Finally and most importantly, the internationalization of Japanese universities can be characterized by ‘stratified diversification’, an interlocking process of stratification and diversification. With regard to stratification, the current institutional hierarchy in Japan, which is usually based upon a few criteria such as selectivity and research performance, can be further strengthened and accelerated by the degree of international engagements and standardized measures and evaluations for internationalization. As Marginson (2007, p. 9) contends, “every national higher education system is shaped by the dynamics of status competition and system stratification between universities”. Consistent with his argument, a recent questionnaire survey distributed to all Japanese universities revealed that national, large-scale, old universities were much more internationalized than other types of universities (Yokota et al. 2006), which suggests that elite universities are in harmony with many aspects of the government initiatives and are advantageous to develop international research collaboration and attract good international students and staff. However, in case of the Japanese mass higher education, where internationalization has become “a much more diversified and stratified concept used by different actors and groups in very different ways” (Goodman 2007, p. 76), each university still has diverse options to cultivate resources and capacities for self-development and survival, including a choice of not engaging in any international activities at all. In other words, various prospects for and approaches toward internationalization lie ahead of Japanese universities, as the discourse of internationalization gains wider acceptance in society in general and higher education sectors in particular, though both diversification and stratification are being pursued conjointly.

Five Distinctive Approaches to Internationalization of Japanese Universities

In this section, we illustrate the multiplicity in the interpretations and practice of university internationalization, by examining how Japanese universities have responded to globalization in the name of internationalization and what issues are at stake in different modes of internationalization strategies. For this purpose, we developed a categorical model of university internationalization that highlights main distinctive approaches to international engagement in a Japanese socio-historical perspective. In order to explain the multiple realities of internationalization of Japanese universities, Goodman (2007) develops a taxonomy based upon selectivity and national-private categorization: elite national, elite private, middle-level private, and lower-level private universities. Yonezawa (2007) focuses on 20 Japanese ‘flagship universities’,³ top national and private research universities, and examines their international strategies. Yonezawa et al. (2009) explore Japanese leaders’ perceptions of internationalization, and suggest that there are two approaches, proactive and passive. Our incipient model, though its validity needs to be tested further, draws upon multiple categorization criteria and examines the entire Japanese university system, which we believe of greater importance to delineate both stratification and diversification in the internationalization of Japanese higher education.

The data set for the model building used in this chapter consisted of the websites of 20 universities that were recipients of the Strategic Fund for Establishing International Headquarters in Universities, the websites of 39 universities which replied that they operated at least one of the transnational education programs,⁴ in a nationwide survey conducted by Yokota et al. (2006), the data on the number of international students in 2006 at 688 universities obtained from a survey covering more than 90% of all Japanese universities and postgraduate schools (Yokota et al. 2007), and journal articles on international strategies of institutions (for example, Kisen 1999; Otsubo 1999; Sakamoto 1999; Takahashi 2007). Related research literature (for example, Goodman 2005, 2007; Kaneko 2004; Yonezawa 2003, 2007) was also taken into consideration.

An interpretive analysis of these publications and prolonged discussions between the present authors led to the conclusion that the following criteria could be useful in identifying major approaches to internationalization of Japanese universities:

³ Flagship universities are defined as “select, top national, and private research universities, the seven former imperial universities (Tokyo, Kyoto, Hokkaido, Tohoku, Nagoya, Osaka, and Kyushu), the Tokyo Institute of Technology and three leading private universities (Keio, Waseda, and Ritsumeikan)” (Yonezawa 2007, p. 483).

⁴ They include double/dual/joint-degree programs, offshore/distance education programs of foreign institution(s) in Japan, offshore/distance education programs and overseas branch campuses operated by Japanese universities. Though 39 universities claimed that they operated one of these programs, our examination of their websites revealed that the reality of the situation was different and many programs could not be identified as transnational education. For example, some universities equated offshore education with a short-term, intensive English language and culture program exclusively designed for their own students, which is not by our criterion transnational education.

1. *The rationale for international engagement* represents an explicit or implicit assumption of university internationalization, whether clearly stated or unmentioned, yet observable from the relevant sources.
2. *Missions/visions for internationalization* represent whether an institution has a clear vision and/or mission of its internationalization. According to the survey conducted by Yokota et al. (2006), only 20% of the respondent universities had a mission statement for internationalization. This factor is significant to determine if a university is proactive or reactive in this area.
3. *Fund for internationalization* indicates whether a university has special funds for internationalization and endowments by corporations and national and/or local governments to establish and/or support a university.
4. *Global ranking* demonstrates a university's concern or obsession with global rankings such as the Shanghai Jiao Tong University ranking and the Times Higher Education Supplement ranking.
5. *Instruction in English* means the use of English as a language of instruction. This does not include English language teaching.
6. *Transnational education* signifies a university's engagement in transnational education programs such as double- or dual-degree programs, offshore campus, and distance learning.
7. *International student enrolment* represents a university's priority in accepting international students, whether the emphasis is placed upon postgraduate or undergraduate enrolments.

On the basis of these seven criteria, five distinctive approaches to internationalization are identified: global, innovative (subdivided into field-specific and intercultural), ad hoc, pseudo-international, and no-international. Table 18.1 summarizes these approaches, with the top column representing the above categorization criteria, and each box representing the status of commitment by each approach (that is, yes, no,

Table 18.1. Five distinctive approaches to internationalization (*kokusaika*)

	Rationales	Missions/ visions	Fund	Global ranking	English	Trans'l education	Interna- tional students
1. Global	Research/ entrepreneur- ship	○	○	○	○	≥	PG>UG
2. Innovative	(Niche strategies)						
2.1. Field-specific	Uniqueness	○	○	×	≥	≥	≥
2.2. Intercultural	International- ism	○	○	×	○	×	PG<UG
3. Ad hoc	Unclear	≥	×	×	≥	×	PG<UG
4. Pseudo-international	Fulfilling quota	×	×	×	×	×	PG<UG
5. No international	Unnecessary	×	×	×	×	×	Almost nil

○: Yes, ×: No, ≥: Depends on faculties/institutions

or depending on universities). The five approaches will be discussed respectively, focusing on the rationales for international engagement and the issues at stake.

Global Approaches

Global approaches are characterized by two rationales for international engagement: research and entrepreneurship. ‘Research universities’⁵ (Altbach 2007), ‘flagship universities’ (Yonezawa 2007) and ‘elite universities’ (Goodman 2007) fall under the rubric of this approach. These are usually in an advantageous position to obtain the government and private funds; above all, they have more academics and students who are able to carry out academic activities in English. As Marginson (2007, p. 10) claims, ‘the super-league universities’ are subject to systematic comparisons by academic rankings of universities in the world, and a factor peculiar to the global approach is the explicit or implicit consciousness of such rankings.⁶ Thus there is a stronger need to attract high-quality postgraduate research students than to enlarge the total volume of international students.

At the same time, various entrepreneurial, transnational education programs have become feasible: for example, Waseda University established double-degree programs with Peking University and Fudan University in 2005 and has expanded such programs to include postgraduate studies and other partner universities (Takahashi 2007).

Similarly, universities with such a global mindset are seeking international networks and global/regional alliances such as Universitas 21, APRU, AEARU, and AC21. Collaboration with foreign prestigious universities through such alliances helps to enhance their domestic status and competitiveness and to rise in prominence in global competitions. Furthermore, the importance of networking between leading universities in Japan, from the perspective of synergetic effects on research, is recognized. One such example is the publicly funded national Centre for IPS Cell Research and Application (CIRA)⁷, widely reported as the ‘team Japan’ in recent Japanese media. Overall, the global approach that only a handful of leading universities can take rests on a dialectic tension between competition and cooperation on both the global and national scales.

⁵ Research universities are defined as “academic institutions committed to the creation and dissemination of knowledge in a range of disciplines and fields and featuring the appropriate laboratories, libraries, and other infrastructures that permit teaching and research at the highest possible level” (Altbach 2007, p. 1).

⁶ For example, an expected outcome of internationalization for Osaka University is a rise in position in global university rankings. <http://www.osaka-u.ac.jp/jp/international/iab/osaka-u.pdf> (retrieved 25 March 2008).

⁷ <http://www.theaustralian.news.com.au/story/0,25197,23073347-23850,00.html> (The Australian, 19 January 2008, retrieved 24 March 2008) <http://www.kyoto-np.co.jp/article.php?mid=P2007122500182&genre=G1&area=K10> (Kyoto Shimbun, 25 December 2007, retrieved 24 March 2008)

Innovative Approaches

The main characteristics of innovative universities are that missions and/or visions about internationalization are clearly articulated, and funds to achieve them are available. The innovative approach is observed mostly in small-scale universities, and because of the smallness, the global rankings that favour large-scale research universities with strengths in natural sciences and medicine are not important to such universities. This approach can also be characterized by niche strategies and is subdivided into two subcategories: field-specific and intercultural.

Field-specific approaches: The distinctive aspect of this approach is uniqueness in knowledge creation and dissemination. Quality assurance of research and international programs becomes an important issue of concern. Aizu University, for example, is a new university established in 1993 by the Fukushima prefecture as a would-be research university in computer science. Kisen (1999, p. 51) submits that the management of the university, where more than half of academics are foreign nationals, is an ‘experiment of internationalization’,⁸ and the university was the only prefectural university among 20 universities obtaining the Strategic Fund for Establishing International Headquarters in Universities. In distinction from many other Japanese universities, the majority of the foreign staff are not language teachers but academics in computer science, and about two thirds of the courses are taught in English (Kisen 1999, p. 53). Interestingly, though, the number of international student enrolments, which is from a Japanese socio-historical standpoint one of the most conspicuous indicators of university internationalization, has been very low, and publicly available information does not explain the concrete results of international research collaboration.

Another good example of this approach is the Nagaoka University of Technology (NUT).⁹ NUT is active in accepting international students, with 222 students from 23 countries and regions in 2007, which represents about 9.4% of all students. NUT is also active in transnational education, and in 2002 the university started Japan–Vietnam Twinning Program. According to NUT (2007, p. 29), this program is “the first twinning program established by a Japanese national university, as well as the first to be formally recognized by the Vietnamese government”. Students in the Twinning Program study at the Hanoi University of Technology (HUT) for the first two and a half years, then study at NUT or one of other Japanese consortium universities for two years, and finally return to HUT for the last semester. Students who complete the program (five years in total) will be awarded bachelor’s degrees (double degrees) in engineering, one from the Japanese host university and one

⁸ According to Kisen (1999, p. 52), the average ratio of non-Japanese full-time staff of all Japanese university in 1995 was 2.8%, while that of Aizu University in 1993 was 58.0%. More recent figure is 40%. The Centre for Strategy of International Programs, http://www.u-aizu.ac.jp/official/csip/honbu_joho/message_j.html (retrieved 24 March 2008).

⁹ Introduction to National University Corporation Nagaoka University of Technology 2007-2008, <http://www.nagaokaut.ac.jp/j/annai/07gaiyo.pdf> (retrieved 26 April 2008).

from the Vietnamese home university. However, there are concerns about insufficient financial and human resources for the program. Some argue that this can cause serious problems, particularly in relation to students with low competence of the Japanese language, hampering their potential academic success in Japan (Hiranami et al. 2007).

Intercultural approaches: A main characteristic of this approach is an institutional commitment to intercultural understanding and learning, with internationalization not necessarily a path to world-class research but an objective itself and significant part of institutional identity. In the 1980s when the term internationalization gained fashionable connotations in Japan, many departments, faculties, and universities were established with the word international in their titles (Goodman 2007). However, very few of them have been able to pursue the ideal of internationalism in visible manners and maintain the ‘international’ standard of teaching, research, and facilities. Thus, with increasing opportunities for intercultural encounters and emergence of globalization and multiculturalization discourses, there has been a growing need to nurture the intercultural competence of youth, and in the last ten years, several universities with an ‘intercultural’ focus have been established. These universities are not strong enough in research to be listed in global rankings, but opportunities for intercultural contact on campus and study abroad as part of the degree programs are affluent. Ritsumeikan Asia Pacific University (APU) is such an example (Goodman 2007; Yokota et al. 2006; Yonezawa 2007), with nearly a half of its academics and students international and almost all of their courses taught in both English and Japanese. The pursuit of building an intercultural campus has been made possible by financial support from Oita Prefecture and Japanese enterprises, and the reputation and achievement of the University’s main Kyoto campus. Another example is Akita International University (AIU), established in 2004, a municipal liberal arts institution with special emphasis on English as the medium of instruction and a one-year study abroad being compulsory for all undergraduate degree-seeking students. In 2007, 22 out of 42 academic staff members and 69 out of total 555 students were international, and most of the international students came to Japan as one-year exchange students.¹⁰

These multinational campuses are not free from tasks or problems, however. With a few exceptions, English as a language of instruction is still new to contemporary Japanese universities, and the standard of education in English is in danger in some institutions, due to the limited language competence of local and international students and teachers of non-English-speaking backgrounds. In addition, there is an abundant body of literature that reports difficulty in harmonious interaction and relational development between local and international students (for example, Hashimoto 2004; Iwao and Hagiwara 1988; Tanaka 2000; Yokota 1991), and it appears that conditions necessary for inducing positive outcomes of student academic and social life on intercultural campuses have not been thoroughly exam-

¹⁰ Akita International University, <http://www.aiu.ac.jp/japanese/university/university12.html> (retrieved 24 March 2008).

ined. Furthermore, the greater opportunities and potentials for employment in international areas have been advertised by such universities and seem to be expected by students in return for studying on their campuses. Considering the tremendous running cost that necessitates additional expenses for staff and student recruitment and support, these universities will have to be able to bear potential criticism or rigorous evaluations about the rationales and outcomes of creating the intercultural environment.

Ad hoc Approaches

In ad hoc internationalization, rationales for international engagement are unclear, and responses to globalization are reactive rather than proactive. It is important to note that the majority of Japanese universities seem to be under the terrain of this approach. While most universities accept international students and send their students overseas for exchange and intensive language/culture programs, there is not as much university-level consensus or even discussion on the missions/visions for internationalization. These become mere formulae in a university prospectus.

Many provincial national universities, for instance, have facilities such as international student centres and international student dormitories as a result of the government policy to increase the number of international students since 1980s, and they have academic and administrative staff specializing in international affairs. However, the range of initiatives taken by each university has been weak and limited. For the majority of universities with no globally competitive research strengths, domestic prestigious advantages, and clear visions and missions of internationalization, it is difficult to attract funds for internationalization. Limited courses, usually short-term exchange programs taught in English are offered, but the quality of such programs is in difficulty due to inadequate resources and the lack of experiences and expertise (Hashimoto 2005).¹¹ The growing pressures on university executives due to globalization and decrease in undergraduate age cohort, create questions about the extent to which the international dimension can be emphasized and how it is implemented in a whole university policy with limited budget and resources.

Pseudo-International Approaches

By pseudo-international is meant that a university has no compelling reasons or rationales for internationalization, but is recruiting international students to fulfil

¹¹ Hashimoto (2005) found that even for universities taking global approaches, the quality of education in English and insufficient human resources are issues of concerns.

the quota. As such, some institutions have an extremely high ratio of international students, mostly from China, and several illegal incidents of enrolments, overstay, and illegitimate visas of international student have occurred and have been widely reported in the media. A well-known case is Hagi International University, established in 1999, which originally targeted at local students from Yamaguchi prefecture and international students from China, but was unable to fill the student quota and finally applied to the court for bankruptcy rehabilitation in June 2005 (for example, Hamano 2005). There were other incidents in which incoming international students turned into criminals or illegal workers/residents, partly due to poor management of host universities.

What is implied from these incidents is that a lack of systematic planning on internationalization may have serious consequences on host institutions and damage the reputation of entire higher education system of Japan. Also important is the role of the government in the occurrence of moral hazard, since it is the Japanese government that has taken initiatives in internationalization of universities, and deregulated the university charter system and the immigration requirements of international students in the 1990s, by which many new departments and universities were upsurged indiscriminately and the number of international students doubled only in five years (Goodman 2005; Horie 2002).

No-International Approaches

According to the survey conducted by Yokota et al. (2007, p. 32), 99 out of 688 universities hosted no international students, and at 159 universities the number of international students were between one and ten. Our examination of the websites of these universities has indicated that international student numbers reported in the survey include erroneous answers and that some universities are engaged in international activities such as study trips, overseas intensive language courses, and student exchange, though these activities seem to remain marginal. Yet, the information obtained from the websites suggests that there are universities that may partake in no international activities. According to Goodman (2007, p. 82), “many lower level private universities have eschewed the overseas student market altogether, seeing it as both too risky and too costly”. The number of international students is not a single measure of international engagement of a university, but for lower-level private universities which usually have limited resources, it is almost impossible to engage in proactive internationalization by other means such as international research collaboration and transnational education.

We are not arguing here that all universities have to be internationalized to the full extent. But what can be inferred from the data and arguments we have presented is that, irrespective of field of studies, it would be extremely difficult to provide students with quality education without any international engagement in the rapidly globalizing world.

Conclusion

This chapter has examined recent trends in the internationalization of Japanese universities from a socio-historical viewpoint, and presented a categorical model of five distinctive approaches to university internationalization. While the validity and generalizability of the model have to be tested further with more detailed and rigorous analysis, our preliminary model highlights the intertwining phenomena of stratification and diversification over the implementations of university internationalization.

With regard to stratification, our analysis demonstrates the existence of winner-takes-all situations, in which elite, global-minded universities and innovative, niche-conscious universities are almost always at an advantage in international engagements, including greater international student exchange, collaboration in research, and internationalization of curricula. These universities may have the option of what we call ‘cosmopolitan internationalization’, by which they can stay aloof from nationalism and become an independent interface between the global and the local communities because of their increasing interconnection and interdependence with foreign elite universities, and their affluence in both human and financial capitals. Conversely, the majority of Japanese universities are inclined to what can be termed ‘domestic-centred internationalisation’, by which the primary concerns become the fulfilment of the student quota and the promotion of an attractive image as an ‘international university’ for the domestic market, whilst international commitments become secondary and confined to conventional activities such as international student exchange and language and culture programs. In such institutions, policies and strategies for internationalization are likely to be nonexistent or ad hoc at most, and the lack of mission and strategic planning further stabilizes the steepening of rigid hierarchy of Japanese universities.

In addition to revealing the significant rift between the haves, that is, global and innovative approaches; and the haves-nots, that is, ad hoc, pseudo-international and no-international approaches; the model showcases diversity within each stratum and illustrates the rationales and common issues underpinning each approach. At both conceptual and practical levels, our model suggests the need for a wider spectrum for research and discussion on the internationalization of mass higher education systems, because most studies and public debates, especially in Japan, have examined innovative and proactive cases while paying scanty attention to ad hoc and reactive ones, except when illegal incidents occur in some institutions. For example, the future of the recently announced target of 300,000 international students by 2020 lies in the hands of universities with currently ad hoc as well as global/innovative orientations. By looking into the future prospects of such underrepresented universities, more constructive, nation-level analysis and development of mass higher education in general and those of university internationalization in particular may become possible. Here the roles of the Japanese government must not be forgotten, since its competition-based distribution of internationalization funds may further diversify university strategies as well as intensify competition among Japanese universities.

As globalization and internationalization of higher education are conjointly progressed at an unexpectedly rapid pace, Japanese universities are forcibly located amid dialectic tensions between nationalism and cosmopolitanism and between competition and cooperation. The model we constructed to explain the stratified diversification of university internationalization is a clear indication that the Japanese mass higher education system is becoming much more open, complex, and difficult to generalize. Yet the bottom line of our discussion is the importance and necessity of more strategic and agentic planning of global and/or international engagements by each university; together with harmonious interactions and cooperation among different players such as universities, international organizations, government offices, business organizations, and local communities. Otherwise, many Japanese universities will be swamped by the waves of global as well as national competition.

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Chapter 19

Higher Education in Papua New Guinea: The Need for a Change Towards Globalization

Ravinder Rena

Introduction

A well-developed and equitable system of higher education that promotes quality learning as a consequence of both teaching and research is central for success in the emerging knowledge economy. It is widely acknowledged that education contributes significantly to economic development. The developed world understood much earlier the fact that individuals with higher education have an edge over their counterparts. They have always believed that any amount of investment in higher education is justifiable. It is therefore imperative for developing countries too, to give due importance to both the quantitative and qualitative expansion of higher education (Ved 2007, p. 3249). Here the role of higher education is itself changing under the influence of globalization.

Globalization is the process of world-wide convergence and partial integration.¹ Economy, knowledge, culture and language are partly globalized. Communications ensure that the world can no longer be kept out. Since the mid 1980s there has been an explosion of interest in the idea of globalization, and an unprecedented rise in prominence and influence of a range of multilateral and supranational organizations including those involved with global governance. There is a thickening web of multilateral agreements, global and regional institutions and regimes, and trans-governmental policy networks and summits. Correspondingly, there have also been shifts in the nature of global production networks and the increasing penetration of multinational corporations and International Finan-

¹ Globalization refers to the making or the enhancement of these global spheres of human action, including global spaces, systems, elements, agents, identities and practices. Globalization consists of engagement, integration and convergence on the world scale, the “transformation in the organization of human affairs by linking together and expanding human activity across regions and continents” (Held and McGrew 2000, p. 54).

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cial Institutions (IFIs) across the planet. The period has also produced new social inequalities across the world, particularly as a result of economic globalization. Education is implicated in these transformations and plays a vital role in these processes, with investment in people, skills and knowledge becoming essential for countries like Papua New Guinea (PNG) that want to participate in the global economy.

Universities everywhere are now connected up to every other. Research is world-wide, educational trade crosses borders and we share the ideals of intellectual freedom and student security with colleagues everywhere. Globalization has brought to education rapid developments in technology and communications. Across the world it is associated with changes in learning systems in terms of ideas, values and knowledge. It changes the respective roles of students and teachers. It is producing a shift from industrialization towards an information-based society. Here the role of higher education is not limited to fostering the economic development of nations and providing opportunities for individuals. It extends also to promotion of cultural diversity, political democracy and trade. Emphasis is rightly placed on how higher education can better serve society and promote international cooperation. But as yet little attention has been given to two elements. The first is how higher education and research are among the primary forces shaping globalization. The second is the manner in which higher education and research are themselves being reshaped by globalization, with significant 'feed-back' effects into nations (Marginson 2007b, p. 2).

Globalization is uneven and unequalizing between and within countries. And not everything has become suddenly global, for local and national dimensions continue. Despite student and staff mobility, higher education and research are locally grounded and vested in national policy and funding, all over the world (Marginson 2007a). But the point is that we are now continually affected by universities in other countries. Similarly, higher education in PNG continually affects people beyond PNG. Nevertheless, though the world is partly globalized, governance lags behind in many countries including PNG. We must work with the realities of globalization. Hence academia in PNG talks of a national system of higher education, designed to carry out a national strategy in the global setting, in the national interest.

The new millennium has brought with it new ideas on the financing of higher education. New developments in science and technology, competition, media revolution and internationalization are revolutionizing the education sector. We are witnessing paradigm shift in higher education, from national to global education, from state controlled to an open market economy, from general education to an educational system driven by market forces, from one-time education for a few to life-long education for all, from teacher centred to learner-centred education (Venkatasubramanian 2002). These changes make new demands and pose fresh challenges to established education systems and practices. Universities in PNG are being challenged to change university governance, institutions, management and operational systems, and also academic life. Higher education in PNG needs to develop greater flexibility so as to be more responsive to globalization.

The Context of Higher Education Reform

Since the 1980s, the World Bank has relied on rates of return to education as the main rationale for educational investment (Rena 2000; Psacharopoulos 1994; World Bank 1995). These studies assess the public/private gains and costs of education. They point to the high social benefit of primary education, and the high private benefit of tertiary education to the recipient. Nevertheless, tertiary education has always been an important public priority. It is a repository and defender of culture, an agent of cultural change, an engine for national economic growth, and an instrument for the realization of collective aspirations (Rena 2008). There is a public interest in tertiary education whether the delivering institutions are publicly or privately owned, and/or publicly or privately financed.

However, the modern world of tertiary education is undergoing enormous reforms. The reform agenda in finance and management can usefully be viewed in the context of five themes. The first is expansion of enrolments and participation rates, and diversification of the number and types of institutions. The second is fiscal pressure, as measured in low and declining per-student expenditures and as seen in overcrowding, low-paid faculty, lack of academic equipment or libraries, and dilapidated physical plants. The third is the ascendance of market orientations and solutions, and the search for nongovernmental revenue. The fourth is the demand for greater accountability on the part of institutions and faculty, on behalf of students, employers, and those who pay. The fifth is the demand for greater quality and efficiency—more rigour, more relevance, and more learning.

The World Bank's *Lessons of Experience* report (1994) identified severe quality problems resulting from overcrowding (frequently stemming from laws giving all secondary school graduates a legal right to university matriculation, regardless of student readiness or university capacity), from insufficient control over the quality or behaviour of the teaching staff, and from inappropriate curricula, unrelated to the needs of emerging economies. The Bank's agenda for enhanced quality then included reforms focused on improving the qualifications of teaching staff and the quality of their instruction, the appropriateness of the curriculum, improved student assessment and selection; and the extent and quality of facilities such as libraries, computers, and equipment (World Bank 1994, pp. 66–78).

Since then there have been growing emphases also on internationalization and intellectual property in higher education. Internationalization is linked to globalization. Changes in the labour market have resulted in calls for more knowledge and skilled workers, and workers with deeper understandings of languages, cultures and business methods all over the world. Education is becoming more valuable to individuals. It provides them with a better chance of employment, which in turn leads to a better lifestyle, power and status (Rena 2000). The commodification of knowledge as intellectual property has occurred where the intellectual work of universities connects with community, business, and government interests and priorities.

Higher Education and the Knowledge Economy

Knowledge is the driving force in the rapidly changing global economy and society of the twenty-first century. Global market competence is determined by the quantity and quality of highly skilled human resources. The emergence of knowledge as a driving force creates challenges and opportunities. The growth of the global economy has increased opportunities for countries with good levels of education (Carnoy 1999; Tilak 2001; Stewart 1996; Ilon 1994). The benefits of globalization accrue to countries with highly skilled human capital. This is a curse for countries like PNG without specialized human capital. In a highly competitive world economy, developing and transition countries are also challenged because their higher education systems are not adequately developed for the creation and use of knowledge.

Marginson (2008) opined that the larger part of global knowledge takes the form not of commercial intellectual property but of freely exchanged open source knowledge and digital cultural goods that can be reproduced at little or no cost to the user. He revealed that the knowledge, information, ideas, symbols and knowledge-intensive cultural products are freely created, disseminated and exchanged at a rapidly growing rate. He also stated that the commercial digital goods are subject to the norms of economic scarcity but freely reproduced and exchanged knowledge goods are not. This is true of most of the research produced in universities and disseminated via Internet publication. Formal publication is subject to nominal costs. These costs are artificial, and to the extent they slow dissemination of knowledge are economically inefficient. He concluded that research universities and academic publication play an increasingly crucial role in the knowledge economy not only as producers of knowledge, and trainers of research workers, but along with publishers as the arbiters of the systems for codifying knowledge, assigning formal values and ranking knowledge producers. Global knowledge has pulled the university into an even more central economic and cultural role in modernization.

The conversion of the global challenges into opportunities depends on the rapidity with which those countries adapt to the changing environment. At the same time, though the higher education system and the pattern of financing higher education vary a great deal across countries in terms of their size and strength and degree of diversification of higher education institutions, all face a severe financial crisis in the public finances available for higher education (IIE 2006). In PNG in 1990 as part of the response to globalization economic reform packages were introduced as part of National Higher Education Policy (NHEP). These reform packages imposed a heavy compression on public budgets on education sector, and specifically in higher education. The underlying dynamic was structural adjustment policy, including macroeconomic stabilization and adjustment. This led to fiscal squeeze in social sector investments in many developing countries, including PNG, which trickled down to public expenditure on education in general, and higher education in particular. Cuts in public budgets for higher education were very steep, severely impairing the growth of higher education.

Paradoxically, under the reforming economic conditions, integration of the PNG economy with world economy presupposes efficiency and competitiveness in the domestic front as well as in the international arena. As the process of globalization is technology-driven, and knowledge-driven, the very success of economic reform policies critically depends upon the competence of human capital. But the reverse has happened in higher education in PNG. Even within the education sector, the relative priority assigned to higher education has declined. Yet higher education institutions in PNG play an important role in setting the academic standard for primary and secondary education. And they not only provide the specialized human capital needed to corner gains from globalization, but also provide training inside the country, and such functions as policy advice.

Higher Education in PNG

Profile of PNG

Papua New Guinea occupies 462,840 km² of land and water off the coast of Southeast Asia. PNG includes the second largest island in the world and about six hundred smaller islands between the Coral Sea and the South Pacific Ocean. Papua New Guinea's 6 million people (July 2008 estimate) speak more than 715 different languages. The government recognizes English as the official language, but only 1–2% of the population speaks it. Pidgin, a mixture of English, German, and other languages, is spoken throughout the country.

Papua New Guinea was fairly isolated from Western influences until the nineteenth century, although infrequent contacts were documented as early as the 1500s. The Dutch annexed the western half of the main island of New Guinea between 1828 and 1848. Control later passed to Indonesia after that country secured independence from the Netherlands. Great Britain and Germany divided the eastern half in 1885; Great Britain taking the south and Germany the north. Great Britain transferred control of the south-eastern portion of New Guinea to Australia in 1902, which renamed it Papua (Turner 1994). Australia seized the northern region during World War I and assumed complete control of eastern New Guinea under a League of Nations mandate. The Japanese occupied most of the colonized areas of New Guinea during World War II (Rannells 1995). However, after the war, control of the eastern part of the island reverted to Australia as a United Nations trusteeship. Australia maintained control until Papua New Guinea claimed its independence on 16 September 1975.

Since independence, Papua New Guinea has functioned as a parliamentary democracy, with a capital in Port Moresby and 19 other administrative provinces. About 15% of the population lives in major urban areas. The country's national currency is the Kina (K1,00 equals about US\$ 0,36 as of 28 January 2009). According to the *Human Development Report 2006*, PNG's Human Development Index (HDI) is found to be 0.523 and its GDP per capita US\$ 2,543 (UNDP 2006).

Development of Higher Education in PNG

Until 1963 the Australian colonial administration neglected higher education. That year a visiting United Nations mission criticized this policy and urged the administration to establish institutions for higher education in PNG. In 1964 the administration created a college to train Papua New Guineans for administrative and clerical jobs. In 1966 the government established the country's first university, the University of Papua New Guinea (UPNG), in Port Moresby. The first class graduated in 1970. The government also established the Institute of Higher Technical Education in Port Moresby in 1966. However, the institute later moved to Lae as a result of public objections to having both of the country's universities in the National Capital District. In 1967, the Institute of Higher Technical Education became the Papua New Guinea University of Technology (PNG Unitech). That university awarded its first diplomas in 1971 and its first degrees in 1975.

The universities handle their own administration because, unlike other tertiary institutions, they were established by an act of Parliament. They receive funds directly from the national budget, not through the Department of Education, and report to the national government through the Office of Higher Education.

Since Papua New Guinea attained independence human resource development has been identified by successive governments as a fundamental priority for continuing national development. This commitment includes a focus on strengthening education and training and recognizes that people are a most valuable national resource. Unlike most infrastructure, buildings and equipment which depreciate, the human resources of PNG are of potentially increasing worth. Achievements in higher education since the inauguration of university education in PNG 43 years are diverse and notable (CHE 1999, p. 6). However, investment in human resource development proportionate to other expenditures in PNG has declined in recent years. Social science indicators show increases in some areas but on most indicators for 2007 PNG compares unfavourably with other lower-middle-income countries. The *Human Development Report 2008* confirms a worsening comparative situation. Funding allocations and other support for the social welfare sectors of health and education have neither matched population growth nor demand. The proportion allocated to higher education, research, science and technology within their sectors has diminished, as has the value of the Kina in which education funding is allocated.

The contemporary higher education sector in PNG is mixed and disorganized in structure. The age participation rate is low. Papua New Guinea has four public universities: the University of Papua New Guinea, the Papua New Guinea University of Technology, University of Goroka (UoG) and University of Vudal. There are two private universities: the Divine Word University (DWU, Medang) and Pacific Adventist University (PAU, Port Moresby), established as recently as 2006. Enrolments range from 400 to 3,000 full-time students. Most of the 26 institutions of higher education are single-discipline institutions (eight are teacher education institutions and eight health education institutions). Higher education enrolments are estimated over 10,000 representing about 1% of the 19–24-year age cohort. The

numbers enrolled at the universities have increased by 30% since 1997 (Rooney 2004).

The government pays most higher education costs and provides stipends for books, supplies, equipment, and even travel home for students who attend public institutions. The government also provides scholarships to approved academic programmes at the DWU and the PAU. The DWU offers course programmes in business studies, journalism/communications and Papua New Guinea concerns. The PAU offers courses in education, business, agriculture, and theology. Some university students also study abroad. In 2006, some 1,000 students studied in Australia, the most popular choice for Papua New Guinea university students. New Zealand, the United Kingdom, and the United States also are popular destinations.

Higher Education Institutions in PNG

University of Papua New Guinea (UPNG): At the UPNG students can study liberal arts, sciences, commerce, journalism, social work, library and information services, education, health sciences, medicine, law, creative arts, agriculture, business, secretarial services, police studies, and psychology. The university enrolls 2,000 full-time students and 100 part-time students and provides extension services to another 3,000 islanders. Most of the faculty still consists of expatriates, mainly from Australia, Great Britain, and other British Commonwealth nations. However, they are slowly being replaced by Papua New Guineans. In terms of its web presence, in 2008 UPNG ranked 80 in the Oceania region and 8066 in the globe (webometrics 2008). Students can earn certificates, diplomas, bachelor's degrees, or postgraduate degrees, including masters and doctoral programs. There are no external or correspondence degrees. A master's degree takes one to three years full-time and follows a bachelor's honours degree. Most master's degrees also require a thesis. Doctorates are available in most fields, and require three to four years of additional study after obtaining a master's degree, including a research thesis.

The Papua New Guinea University of Technology: The PNG Unitech enrolls more than 1,500 full-time students and a handful of part-time students. It offers two-year diploma programs in computing, building technology, surveying, and applied sciences which require students to complete tenth or twelfth grade for admission. There are four-year bachelor's degree programs in agriculture, architecture, business, engineering, forestry, languages, math, and applied sciences. Admission to the degree programs requires a National High School Certificate. The university also offers one-year and two-year masters programs and three- to five-year doctoral programs. In web presence Unitech ranked 92 in Oceania region and 9,268 in the world (webometrics 2008; see also SJTUIHE 2007).

University of Goroka (UoG): The UoG is the third largest of the six universities and by far the largest teacher education institution in the country. It was formed in

1997 from two faculties of the UPNG, Goroka Teachers College and the Faculty of Education. Continuous reviews, integration and expansion have driven a process of rationalization and upgrading of programs. It provides diplomas and bachelor's degrees in education, as well as in library and information services. The UoG is one of the fastest growing learning institutions in PNG.

Divine Word University (DWU): DWU is located in Medang. It is one of the newest tertiary institutions in Papua New Guinea. Formerly the Divine Word Institute established by an Act of Parliament in 1980, it was established as a University in 1996. It is ecumenical, coeducational and privately governed with government support. DWU offers its educational services to those interested in improving themselves intellectually and spiritually so they can become responsible citizens and positively affect the development of society. DWU's philosophy of education is rooted in the Catholic tradition and articulated in the University Charter. The University is open to everyone regardless of race, creed, colour or gender, who share its vision to serve society through its teaching and research in a Christian environment. Students come from all 20 provinces of Papua New Guinea and abroad. DWU has a special interest in advancing opportunities for poorer individuals, women and helping to build the economic and social capacity of the South Pacific Region.

Pacific Adventist University (PAU): PAU is a senior tertiary institution with 487 ha operated by the Seventh-day Adventist Church in Papua New Guinea. It is located in Koiari Park about 17 km from Port Moresby. It commenced operation as Pacific Adventist College in 1984, and obtained university status in 1997. The University provides tertiary education to an increasing number of students in the fields of Business, Education, Health Science, Theology and Industrial Arts. A diversity of cultures gives PAU an international flavour.

Educational Research

Three institutions conduct most of the educational research in Papua New Guinea: the Research and Evaluation Unit of the National Department of Education, the UPNG, and the National Research Institute (NRI). To a lesser degree, research also takes place at the PNG Unitech, the UoG and other higher education institutions. In addition, the Research and Evaluation Unit was established in 1981, originally to evaluate World Bank projects in the country. It expanded in 1984 to include an existing research branch of the Department of Education. Today, it provides research and evaluation activities requested by the Department of Education and provincial divisions of education. Most educational research focuses on curriculum development; staff training and development; planning, management, and administration; literacy; higher education; and vocational and technical education (Education Encyclopaedia 2009, p. 1170).

Challenges for Higher Education

Like many developing countries PNG has experienced a serious economic crisis since October 2008. The economic crisis has become joined to political, social, and cultural crisis as the country struggles to establish a more democratic civil society. The various crises have eroded the people's trust of formal government and community-based institutions. The transition towards a more democratic civil society needs to be partnered by a credible moral force. Universities have the potential to fulfil this role. Students and staff at universities are motivated by concerns about the deepest problems—ecology, climate, food, water, disease, poverty, ethnic and military conflict and civil chaos.

As the foregoing argument indicates, it is also important to develop science and technology in national universities like PNG Unitech in order to foster the human capacity of PNG in the global economy. And there are also many internal challenges for universities themselves. Improved national efficiency is vital and government has no choice but to make funding conditional on improved performance. In addition, as part of the nation building, the government also must increase the participation rate in higher education to enlarge the supply of skilled manpower. Thus universities in PNG are required to improve quality, to increase efficiency and to expand quantity all at the same time. Moreover, at the same time that globalization stimulates development of the established universities, it encourages profit-making corporate universities. This could create competition.

Globalization has affected management and operational aspects of the universities, and their academic life. Traditionally, there was always a great degree of mobility amongst professor and students, and research always had an international dimension. The advance of transportation technology enhances these elements. With the introduction of modern information and communication technology (ICT), exchanges of information among scholars and higher institutions of higher education have become almost unlimited and are highly important. Waves of technological advances impose a challenge to the individual in and out of the classroom. The new global economic environment places greater demands on partnerships and alliances. It is also marked by enhanced individualism. Yet individuals are also increasingly responsible for one another, in the sense that we are out to sustain and enhance the environment we are in.

Strategic Change in Higher Education

UNESCO has suggested the problems of higher education are among the greatest challenges confronting human societies in the early twenty-first century. The key to adjusting to globalization is to implement strategic change. This includes:

- The need to develop more externally focused institutional missions. The higher goal of education is to breed men and women with the sense of purpose to contribute to the well-being of their respective countries and work for the greatest

good of the greatest number of peoples. For example, in the case of Unitech, the external aspects in Unitech's strategy are to serve the needs of the nation by contributing to society, to help the development of the national economy, to be socially responsive to change and to provide moral leadership as the leading university in PNG.

- The need to treat students as prime customers who expect professional services. Universities should strive for excellence in teaching and learning. In that respect developing a research-based strategy can be justified only in so far as it supports teaching and community service provision.
- The need to foster the development of more cross-disciplinary provision in order to develop more comprehensive understanding and knowledge.
- The need to develop the use of technology in teaching and learning (including the possibility of some distance learning), and in administration.
- The need for possible revision to the academic structure and activities.
- The need to develop policies on fee levels coupled with a system of grants and scholarships.
- The need to continually reduce bureaucracy and increase efficiency in the use of staff time and other resources, such as space.
- The need for domestic as well as international networking of the university system. Competition and cooperation are not choices. Both can be done. Nowadays, network is power. No country and no university can survive alone in the globalizing environment. Universities have the best opportunity to maintain their basic values and mission only if they are prepared to sacrifice some institutional autonomy and form strategic alliance and partnership with other institutions, both public and commercial, and in national and international forums.

Policy Issues

The Ministry of Higher Education, Research, Science and Technology, overviews the sector and works with the Commission for Higher Education and the Office of Higher Education. The Ministry provides policy advice, coordination, planning, and other services.

Education officials have pushed for a uniform accreditation policy requiring higher education programmes to conform to national qualifications. The lack of clear accreditation procedures in PNG means that most institutions, with a few notable exceptions, offer a narrow range of similar courses with quality that goes unchecked and probably varies from good to very poor (Rooney 2004). The Commission for Higher Education has taken the lead role in formulating policy concerning academic quality assurance and institutional accreditation. It has adopted a new framework for accreditation of higher education institutions. It intends to give universities the leading role in determining how the sector will develop in the future. However, progress has been slow, hampered by lack of finances and lack of commitment from some of the institutions.

Some rationalization of higher education is being achieved through the amalgamation and affiliation of smaller colleges with larger institutions, and by closures. International providers have entered the higher education market to fill existing gaps, but most offer small business-related and distance-education courses. The main overseas involvement comes through the two church-based private universities that rely heavily on the expertise of expatriate staff.

There are doubts among key players, such as the Commission for Higher Education and the Office of Higher Education, that universities have the capacity to undertake the necessary work to improve quality. Public institutions are handicapped by low salaries and demoralized staff. PNG's own brand of nepotism, known as the *wantok* system,² undermines the higher education sector as it does public life generally. There has been much recent public condemnation of corruption but people are still appointed to jobs on the basis of their family and clan connections rather than ability to perform. Many students are awarded places in academic programmes on the basis of who they know, not what they know.

Universities struggle to produce coherent and transparent strategies in curriculum content and design, teaching and learning and assessment. Some universities and the Commission for Higher Education have been working closely with overseas universities, especially those with church affiliations in neighbouring Australia and nearby Philippines. The two private universities have strong links with Catholic and Adventist international communities.

There might be resistance to change, particularly by those who have enjoyed privilege in previous systems. This could create significant turbulence in campus life. To minimize this it is essential to implement a carefully planned socialization programme and the solid management of change. For example, Unitech closed the academic year 2008 with social unrest, as a result of student ethnic violence in October 2008. The possibility of renewed violence and uncertainty amongst student is of great concern.

Failure in attracting non-tuition-fee revenue might drive universities to over-commercialization, resulting in mediocre quality. Market-driven approaches could elevate financial benefit over merit. Universities need to develop a strong quality assurance process to guard against these problems. There is also the opposite risk of possible bankruptcy. Robust budgeting and financial control procedures are needed to guard against this.

Conclusions

Education is a matter of great concern to PNG policy makers and educationists, and PNG society. In terms of quantity, PNG universities are producing more graduates than ever before. In terms of quality, such as curricula, teaching and learning, no significant changes have occurred for the last two decades. The main innovations

² A *wantok* is an informal association based on kinship, ethnicity, language and/or friendship.

have been on the general staff side, in relation to services and recruitment. Academic staff, too, has become very much better at the administration—better in managing large populations of unevenly prepared learners from a variety of backgrounds, within the established learning systems. But teaching and learning have not yet changed fundamentally in line with the potentials of this more global era. There is scope here for development.

Educationists and policy makers are strongly aware that over the next couple of decades, the institutions and nations that introduce successful educational innovations of quality will move to the cutting edge of globalization in higher education, and potentially secure a significant advantage in the global market. These are challenging and exciting times. Higher education institutions are under pressure. They are engaged in their societies and economies more than ever before. Expectations and performance standards are increasing. The need for talented people, local and foreign, is rising. Funding needs are rising. Academic freedom is more essential than before, because knowledge is essential to modernization and innovation. It is also more fraught, as managers and system leaders strive to extract practical benefits and secure first-mover advantages through education and research. Yet many of the changes now taking place in PNG are not securing the benefits of globalization.

Everywhere universities, training, knowledge and research should find themselves at the centre of national and global development. New high-quality institutions and systems are emerging, especially in East and Southeast Asia. The ‘world-class university’ movement is spreading. PNG should also change its University education system in accordance with these global changes. Universities in PNG need to overcome the impacts of globalization through making the appropriate adjustments. The changes may take place in different shapes and phases, but they have to be compatible with the globalized world.

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Chapter 20

Global Position and Position-taking in Higher Education: The Case of Australia

Simon Marginson

Introduction

Higher education is more open than at any time in history. Research universities have become a glonacal sector (*glonacal*=*global*+*national*+*local*). Institutions carry out global actions and relationships; alongside actions conducted within the framework of national policy, regulation and funding; and actions constitutive of local life-worlds (Marginson and Rhoades 2002). Through Internet-based visibility and through global comparisons every institution of higher education that is nationally and/or globally active has become visible to every other throughout the world. The possible permutations of university alliance, competition, strategy and specialization are multiplying. With global, national and local elements to be considered at all times, organizing research universities has become a more complex task than before.

Position and Position-taking

Cornelius Castoriadis notes that while social forms typically claim a fixed identity as part of their process of self-reproduction, in reality they maintain themselves only by continually altering themselves. They alter themselves by what they say and what they do (Castoriadis 1987, p. 372). In this respect universities are no different to other social forms. They carry the burden of their freedom, their self-determination, as a potential that is never resolved. The limits to what they can imagine for themselves, are far distant from them. There is a huge range of possible trajectories.

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But to borrow and adapt Marx's dictum, universities make their own history in circumstances that are not made by them and are inherited from the past.¹

No university faces an array of strategic possibilities fully open and infinite. Not even Harvard is sole master of its own fate. At any given time a university is limited by its resources, by the prior pathways that it has chosen and by the actions of other agents in the local/national/global setting, though no determination is ever finally closed. Following Pierre Bourdieu, the field of higher education is uneven, hierarchical, shifting and contested. Within the field institutions and nations are on one hand *positioned* within the global/national/local setting and on the other hand engaged in "*position-taking*" strategies (Bourdieu 1993, p. 35). In other words both structure and agency are always at work. University self-determination is expressed in the context of position. Yet universities can change their position to some degree by their own efforts. The same resource base or university history can be associated with many possible strategies. At the same time this very potential for university self-determination, this strategic freedom, itself varies by time and place. Agency freedom is shaped by historical and material circumstances. As Naidoo (2004, p. 459) puts it: "These position-takings are inseparable from the objective positions occupied by the agent or the institution as a result of their possession of a determinate quantity of specific capital." This includes not just financial capital but cultural capital and social status. The more enabling are the historical and material conditions, the less these conditions are determining ("positioning") in the sense of limiting—and the more that the relationship between position and position-taking becomes positive sum and not zero sum. Here the 'conditions' are not just a matter of GDP levels and economic scarcity. The level of education, linguistic identity and the degree of political freedom (Sen 2000) also affect capacities to imagine and to act. In these equations of the exchange between human agency and its conditions—an exchange that is complex but within the grasp of our understanding—we find the vectors of expanding university freedoms in the global age (Marginson 2010, in press).

The terrain is further complicated by relations between institution and nation-state. Governments normally exercise a measure of control (though this too is never absolute) over universities within their jurisdiction, especially the public institutions. Institutions are shaped by resource-dependency regimes and by regulations both prohibitive and constructive. Universities find themselves positioned within the global position-taking strategies of governments for whom higher education is important to social objectives, economic development and world competitiveness. Research-intensive universities with inherited prestige tend to exercise more independence than others. To simplify, four interacting elements determine the trajectories of national higher education systems and of the individual institutions that have some room to manoeuvre within the field: (1) geo-strategic position within the

¹ "Men make their own history, but they do not make it just as they please; they do not make it under circumstances chosen by themselves, but under circumstances directly encountered, given and transmitted from the past"—Karl Marx, *The Eighteenth Brumaire of Louis Bonaparte* (Marx 1969, p. 398).

changing global environment; (2) national history, regulation, policy, resourcing and positioning strategies; (3) institutional history and resources; (4) institutional positioning-taking.

The changing global environment has become a more important element in the day-to-day life of institutions than it was. Held et al. (1999) note that the discussion about globalization is divided between three main positions. The first argues that global relations and forces are displacing the nation-state. The second argues that globalization has been vastly exaggerated and little has really changed. A third group argues that while the nation-state continues it has also been relativized by global flows and convergences, which are transforming human agents and social institutions whether global, national or local. This third school of thought best fits the higher education environment, which is both open to global flows and often directly shaped by national government. Higher education institutions were long subject to international influences and in many nations were networked to an unusual degree compared to other sectors. In the last two decades the world-wide higher education environment has been transformed by instantaneous communications, ever-expanding people movement, emerging markets in foreign degrees and intellectual property and the growing cross-border flow of ideas and policy models; not to mention the role of foreign education in the expanding frontiers of national educational participation (Marginson and van der Wende, 2009).

Here practice has run ahead of theorization and empirical research. Most of the studies of individual national systems and comparisons between them, are still framed by national rather than global imagining. Such studies tend to underestimate the impact of cross-border flows and the weight of world-wide systems in higher education. The global transformation of subjects is ascribed to national or local factors or is missed altogether. In contrast, another and smaller group of studies is overly focused on the global dimension while treating it as external to the national and local dimensions, a domain of abstract and universal forces pushing in from 'outside' (e.g. Currie and Newsome 1998). Studies using this approach overestimate the impact of globalization and underestimate the manner in which cross-border relations and perspectives work their way inside local identity and day-to-day practice: even a defensive local identity is continually globalized. Other studies have a deeper understanding of global impacts but interpret higher education through an Anglo-American cultural lens. This perspective lacks the critical distance needed to comprehend the global hegemony of Anglo-American higher education itself.

Flows between the global and the local/national are two-way—actions in each dimension tend to affect the others—but this reciprocity is unevenly distributed (Marginson and Sawir 2006). Some universities and national systems are not only shaped by global factors, they help to shape the global factors themselves. In terms of measured performance two thirds of the world's top 100 research universities are located in the USA and UK (SJTUGSE 2010). Other nations and universities do not exercise the same degree of global influence at this time. Nevertheless, two-way global potential is not confined to US and UK universities. It is likely that universities in the emerging East Asian systems of China, Taiwan China, Korea and also

Singapore in Southeast Asia, will become alternate global models in future; and that the Bologna semi-integration of higher education in Europe, associated with the upgrading of the material base and the strategic élan of European institutions—especially in the Northwest of the continent—will underpin a growing global influence.

Our understanding of the dynamics of the global higher education environment is advanced by “situated case studies” (Deem 2001; Sidhu 2004) that examine the transformations taking place in national systems and individual institutions and in doing so enable focus on the global/national/local interactions. Each case study of individual universities and national systems, in the global setting, says something of global dynamics. The chapter² locates the global position and positioning-taking strategies of one national higher education system and its institutions: Australia. Between 1990 and 2007 Australia’s share of the world-wide population of cross-border students rose from 1 to 7% (OECD 2009, p. 314)—a spectacular case of ‘position-taking’ strategies in global higher education that has intrigued policy makers in other nations. At the same time there are limits to the geo-strategic global location of Australia and its universities. These limits are partly a function of Australia’s colonial history and of its present geography, economics and cultural configuration; and partly self-imposed by public policy and institutional choice.

The Global Market in Degrees

In 2004 the OECD estimated the total global market in post-secondary education at US \$30 billion. Later estimates have ranged up to US \$50 billion and more (OECD 2004; Bashir 2007; Verbik and Lasanowski 2007). Most of the fee-paying cross-border education is located in the mass education tier of global educational provision below the level of the leading research universities such as Harvard and Stanford, which are more likely to provide foreign students with scholarships than to charge them full-price tuition. Global mass education takes in three types of provision. One is the for-profit sector, specializing in vocational programmes in institutions that do not conduct research, led by institutions such as the University of Phoenix, the largest private university in the USA and now spread to Mexico, India and Western Europe. The for-profit sector is underpinned by American equity investment. Second is the commercial provision of foreign education by non-profit institutions, which has evolved in order to generate surplus revenues. This sub-sector includes public research universities in the UK, Australia and New Zealand, private colleges and universities in Malaysia, institutions in Singapore and China and some first-degree

² The first version of the chapter was delivered as an address to the 9–11 February 2005 conference of the Australian Technology Network universities in Melbourne, Australia. It was subsequently developed in presentations to the Universities of Western Sydney, Western Australia, South Australia and New England, Curtin and Griffith Universities; and the annual conference of the Tertiary Education Managers, and revised for *Studies in Higher Education*. The author’s grateful thanks go to all of those, too numerous to mention individually, who shared in the processes of discussion, feedback and media debate on the paper in Australia.

and sub-degree programmes in the American four-year and two institutions. Third are those institutions and nations where foreign education is subsidized by governments, foundations and/or universities and an expansionary capitalist dynamic is absent. This includes parts of Japan where cross-border enrolments are subsidized to assist the internationalization of domestic students; Germany where many foreigners pay low tuition or none; and the American doctoral university sector where many internationals are subsidized as a source of research and teaching assistance.

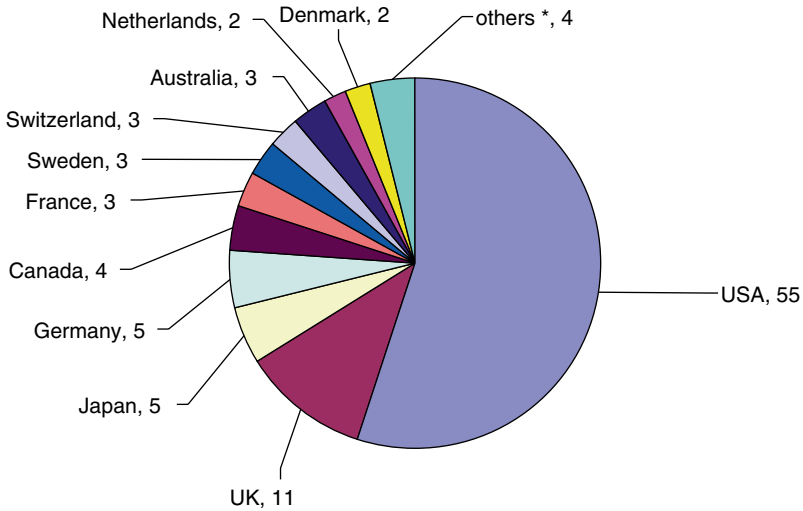
The OECD (2004, p. 266) notes that “in considering where to study, mobile students’ key choice factors are, in order, country (54%), course (18%), institution (17%) and city (10%)”. In 2007 the leading exporters were the USA (19.7% of cross-border tertiary students), the UK (11.6%), Germany (8.6%),³ France (8.2%), Australia (7.0%), Canada (4.4%) and Japan (4.2%) (Fig. 20.1; OECD 2009, p. 314). In the last two decades the mass market has grown rapidly in English-language nations. The map of providers is now becoming more diverse, largely through the growth of income-generating English-language programmes in non-English-speaking nations such as Malaysia, Singapore, the Netherlands, Germany, Finland and Sweden. This growth accelerated as a result of the global financial crisis of 2008–2009 which in much of Europe triggered often sharp reductions in government funding of higher education and increased international student fees (University World News 2010).

Global Stratification

Nevertheless, though the proportion of the world’s three million foreign students enrolled in the USA is falling, studies of student demand persistently find that the USA as a whole commands higher prestige than other nations (OECD 2004, p. 173; Marginson 2008). Like local students, cross-border students aim for the highest prestige university within reach (James et al. 1999). The prestige and the imagined accessibility of American universities sustains a world-wide pattern of stratification in which prestige universities at the national level in other nations find themselves becoming increasingly subordinated. In the age of the global super-league as indicated by Shanghai Jiao Tong research rankings and other best universities lists (Marginson 2007), traditional national leaders such as the University of Buenos Aires in Argentina or the University of the Philippines in the Philippines have lost some of their old power to generate local status. National stratification has been relativized by the global hierarchy. At the same time the American forms of higher education—both those of the Ivy League research universities and the for-profits such as the University of Phoenix—exercise a growing influence in the minds of policy makers, media, university presidents, parents and students elsewhere.

³ However more than one quarter of Germany’s ‘foreign students’ are residents, mostly the children of migrant workers not granted citizenship (OECD 2005, p. 254).

(a) Number of institutions in the world's top 100 research universities



* One each in Israel, Norway, Finland and Russia

(b) Proportion of world's foreign students by export nation

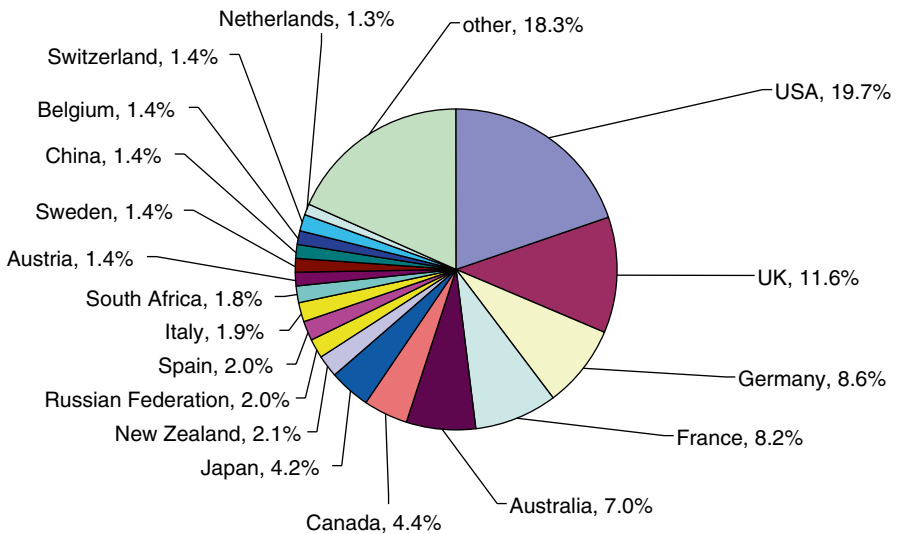


Fig. 20.1 Leading nations in a number of research universities in world's top 100 and b share of the global market in cross-border students. (Sources: SJTUGSE 2010 & OECD 2009, p. 314)

What is the relationship between national research performance and national standing in the cross-border market in degrees? There is some correspondence between research strength and volume in the cross-border market (see Fig. 20.1); but research standing is not a precise guide to export market share and vice versa. The

high-volume nations differ in the selectivity of entry policies and the degree to which they focus on building foreign student volume as a source of export income and university revenues. There is a closer correspondence between national research performance and global standing in doctoral education, than between research performance and export market share. Cross-border doctoral students go mostly to the USA and the UK and also to parts of Western Europe where research students constitute a high proportion of foreign enrolments: for example in 2007 Switzerland (26.5%), Spain (22.3%) and Finland (13.4%). Among the high-volume exporters, 11.9% of foreign students in the UK and 11.4% of those in Canada were enrolled in advanced research programmes. The proportion was just 4.9% in New Zealand and 4.1% in Australia (OECD 2009, p. 332).

The USA has as many foreign doctoral students as the rest of the world put together. There were 108,976 international doctoral students in American institutions in 2007–2008. In 2007, according to the OECD data 15.7% of all foreign students in the USA were in advanced research programmes. According to the Institute for International Education data in the USA, the ratio was 17.8% (OECD 2009, p. 332; IIE 2010). Despite the research strength of Western European nations, the ease of global mobility, visible opportunities and cross-national disparities in remuneration facilitate a net ‘brain drain’ of students and faculty to the USA. One OECD study notes that 53% of PhD students from the UK and 48% from Germany who graduated with doctorates in engineering or sciences in 1996 were still located in the USA in 2001 (OECD 2004, p. 281).

Australia in the Global Setting: (1) The Market in Degrees

The global role of international education in Australia is expressed in the volume and spread of foreign enrolments, the economic character of the industry, the countries from where foreign students come and the programmes they enter. Australia with 21 million people is the smallest of the major export nation and in 2007 its 7% share of the global market in cross-border tertiary study constituted 20.2% of all degree-level enrolments, local and international, the highest proportion of international students recorded for any OECD country (OECD 2009, p. 327). This compared with 15.9% of students in the UK and just 3.1% in the USA.

Australian government data for 2008 list 294,163 foreign students in degree-level higher education alone, 27.6% of all students. Of these 223,508 were onshore students. The remaining 70,655 students were in distance education or at campuses in importing nations—the locations include Malaysia, Singapore, Hong Kong, Vietnam and South Africa—operated either by an Australian institution itself or by a local partner in the name of the Australian institution. Another 361,000 students were enrolled in sub-degree tertiary education, English language colleges, schools and other programmes (AEI 2010). All foreign students are classified as full fee-paying students except for the small proportion with foreign aid scholarships, 0.9% in 2003 (DEEWR 2010). In Australia scholarship support is less important than in other

Table 20.1 Australian higher education providers of international education with more than 5,000 international students each in 2008. (Source: DEEWR 2010)

University and state	Number of international students 2008	Proportion of university students 2008 (%)	International student fee revenues 2007 (AUD \$s million)	Proportion of university revenues 2007 (%)
RMIT U (Victoria)*	22,497	48.3	156.4	26.3
Monash U (Victoria)	19,079	33.7	208.3	18.2
Curtin UT (Western Australia)	16,646	40.8	121.7	21.4
U South Australia (South Australia)*	13,015	36.3	69.7	16.8
U Melbourne (Victoria)	11,719	26.1	221.8	15.5
Macquarie U (NSW)	11,561	35.3	117.4	27.7
U Sydney (NSW)	11,261	23.3	171.9	13.2
U New South Wales (NSW)	10,364	23.2	131.6	14.3
Griffith U (Queensland)	9,780	26.4	103.2	19.4
U Wollongong (NSW)	9,424	40.2	58.0	19.3
Swinburne UT (Victoria)	8,373	41.2	72.4	20.0
U Ballarat (Victoria)	8,116	61.8	65.4	31.3
Central Queensland U (Queensland)	7,566	40.7	109.4	43.8
U Technology, Sydney (NSW)	7,559	23.4	94.8	22.2
U Queensland (Queensland)	7,521	19.8	124.3	11.8
U Southern Queensland (Qld.)	7,383	32.8	25.9	14.6
Deakin U (Victoria)	7,321	20.3	80.5	17.3
La Trobe U (Victoria)	6,679	23.0	55.4	12.8
Edith Cowan U (Western Australia)	6,180	25.5	41.6	15.6
U Adelaide (South Australia)	5,837	27.8	67.3	13.5
Queensland UT (Queensland)	5,832	14.9	75.6	13.7
Victoria U (Victoria)	5,827	27.9	43.3	12.4
U Newcastle (NSW)	5,326	18.8	37.8	9.6
<i>Total Australia</i>	<i>294,163</i>	<i>24.2</i>	<i>2,598.3</i>	<i>15.0</i>

*More than 50% of international enrolments offshore

U University; *UT* University of Technology; *RMIT* Royal Melbourne Institute of Technology; *NSW* New South Wales; *Qld.* Queensland

major exporting countries; and where international doctoral students have financial support this mostly covers tuition only, not living costs. In the USA almost 30% of all international students receive financial support from an American educational institution, the US government or the home country government (IIE 2010) and most have work opportunities on campus. In the UK 46% of all research degree students are international (OECD 2009, p. 327), many supported by scholarships.

There is a substantial foreign presence in all Australian universities. In 2004, 23 of the 39 universities enrolled more than 5,000 foreign students (Table 20.1). The

Table 20.2 Principal source countries for international students in Australian higher education, 2008. (Source: DEEWR 2010)

Source country	Number of international students, 2008	Proportion of international students in Australian institutions, 2008 (%)
China (mainland)	65,149	22.1
Singapore	32,174	10.9
Malaysia	31,227	10.6
India	27,339	9.3
Hong Kong China	22,275	7.6
Indonesia	11,703	4.0
Vietnam	10,038	3.4
USA	9,856	3.4
Korea	6,415	2.2
Canada	4,843	1.6
Thailand	4,663	1.6
United Arab Emirates	3,968	1.3
Japan	3,857	1.3
Taiwan China	3,708	1.3
Germany	3,418	1.2
Nepal	3,269	1.1
Pakistan	2,530	0.9
Bangladesh	2,436	0.8
Mauritius	2,059	0.7
Saudi Arabia	2,028	0.7
<i>All countries</i>	<i>2,94,163</i>	<i>100.0</i>

largest total complement was 22,497 students at RMIT University in Melbourne; while the largest onshore component was 11,866 students at Monash University in the same city (DEEWR 2010). To place these numbers in comparative context, in 2007–2008 the largest foreign enrolment in any American doctoral university was 7,189 students, which constituted 21.5% of all students, at the University of Southern California (IIE 2010). Seven Australian universities derive 20% or more of their income from the market in cross-border degrees, a high level of dependence (Table 20.1). Much as in other English-speaking nations, the majority of international students are enrolled in business studies and computing degrees. In Australia foreign students are also concentrated in first degree and Masters by coursework programmes. As noted, doctoral education plays a lesser role than in the USA, UK and Western Europe.

In terms of nation of origin (Table 20.2), approximately 80% of all international students enrolled in Australian higher education institutions are from East and Southeast Asia. Australia is the world leader in providing foreign education to its proximate region Southeast Asia; it educates far more students from Singapore (32,174 in 2008) and Malaysia (31,227) than does the USA; and also more from Indonesia (11,703) and Vietnam (10,038) than do American educational institutions, though the USA's population is 15 times that of Australia. Australia also has a role

of global significance in relation to students from China. In 2008 a total of 65,149 students from mainland China enrolled in Australian institutions, compared to 81,127 in US institutions. Almost one quarter of all international students enrolled in Australian institutions in 2008 (22.1%) were from China. Remarkably in 2008 Australia took almost as many students from mainland China and Hong Kong combined (87,424) as did US higher education (89,413) in 2007–2008. Australia's numbers from Hong Kong at 22,275 were three times those of the USA. These patterns partly reflect the British imperial heritage that Australia shares with Hong Kong, Malaysia and Singapore. However, the USA has much stronger drawing power than does Australia in Japan and Korea; while in South Asia, Australia with 27,339 students from India in 2008 had less than 30% of the USA's number of students from India (DEEWR 2010; IIE 2010). Australia's standing within Asia varies. Market research indicates that is often the foreign nation of first choice in Indonesia, it might be of growing status in Vietnam and has long enjoyed strong standing in Malaysia. Australian education has lesser status in Singapore, Korea and India.

Dynamics of Expansion

After World War II Australia developed a modest level of international student enrolments, a mix of scholarship-supported places with private student places part funded by the students themselves (except in 1973–1979). No international student paid full-cost fees. Quotas restricted numbers. In 1985 the national government reinvented international education in Australia as a market of institutions in competition for full fee-paying students, following a similar decision in the UK. The government phased out the existing subsidized places, installed full-cost pricing (soon after the price ceiling was deregulated) and lifted all quotas on student numbers. Thus universities could enrol any number of international students at whatever price they liked. The government provided early assistance with marketing in Southeast Asia; and for the first decade, its visa policy supported market growth. Subsequent visa policies were more contradictory in their effects, but the provision of fast-track migration opportunities for graduates in demand in skilled labour markets helped sustain the attractions of Australia, until migration tightened in 2010.

In establishing a commercial international education industry the government had several objectives. It wanted to improve foreign trade balances following a downturn in the prices of Australia's commodity exports. It saw services as a growing part of world trade where Australia could exercise a comparative advantage, including educational services, where Australian universities enjoyed a sound reputation as an established doctoral system organized and funded on British lines. By creating a larger university sector incorporating the former colleges of education in 1987–1990 (Marginson 2003) the government sought to extend this reputation across all higher education institutions. It was also hoped the marketing of foreign education would generate income to supplement public university funding—annual

revenues of US \$200 million were canvassed—and encourage a more outward-looking and entrepreneurial spirit in the institutions (Marginson and Considine 2000). In addition, higher education was expected to facilitate national responses to globalization and was seen as one means of connecting in the Asia-Pacific where Australia's future lay. Here opening up the universities to foreign trade was part of the twin process of opening up Australia itself to global competition while enhancing its competitive power (Marginson 2003).

By comparison with other nations, the development of international education in Australia had three distinctive and related features. One was that the settings were unambiguously commercial. Subsidy was minimized and the regulatory conditions facilitated an open-ended and rapid expansion in the supply of places and hence of university revenues, providing demand was there. Second, there was a marked growth in business functions and non-academic student servicing, more so than in academic capacity. Increasingly marketing, recruitment and non-academic student servicing became managed by commercial companies associated with the university. In offshore operations involving local partners, the commercial companies often came to shape teaching programmes and employ teaching staff. Third, there was an astonishing rate of growth. Between 1990 and 2008 the number of foreign students grew from 25,000 to 294,163. The target of US \$200 million a year was soon exceeded. In 2009, in all sectors of education the export industry earned US \$15.5 billion in fees and other student spending. In 2007 international students provided universities with almost US \$2.4 billion in fee revenues alone, 15% of income (DEEWR 2010) and constituted the main source of discretionary income.

The first explanation for the rise of foreign education in Australia is the growing demand for cross-border education in the Asia-Pacific. Of the developed English-language higher education systems Australia is more closely located and cheaper than the USA and UK. There was never a lack of demand: the growth of Asian middle classes dwarfed the Australian higher education system. Applications for international education places and student visas have always been well in excess of places supplied. The market in Australia is supply driven, not demand driven. The second explanation is that deregulation and the new business models and techniques provided necessary conditions for supply growth. The third and decisive explanation is that the incentive to grow supply has been very powerful. In Australia 95% of students are enrolled in public higher education institutions. The federal government used reductions in the funding of those institutions to install dependence on market revenues and position university leaders as the drivers of the business model and the export sector. By 2002 public funding per student was at half the mid 1980s level (Marginson 2001). Funding per student fell in 1985–1990 amid mergers and the expansion of participation, when commercial marketing was being set up, sharpening the incentive to introduce business models. Funding per student fell again in the second half of the 1990s, speeding growth in international numbers. Between 1996 and 2003 income from foreign students rose from 6.6 to 13.8% of university income (DEEWR 2010). Foreign student fees paid for new staff, buildings and

communications systems. Turning necessity into virtue, universities incorporated ‘internationalization’ and cultural diversity into missions and strategic objectives.

In other words what powered this extraordinary growth was the need for revenues. Spending cuts can be as potent in changing behaviours as new programmes can be. One result was that the government share of total university income fell from 91% in 1983 to 44% in 2003, rising slightly to 45% in 2007. All forms of tuition fees and charges reached 38% of university income in 2007 (DEEWR 2010). The OECD notes that whereas the private source income of tertiary education has increased in many nations, Australia was unique in reducing public spending at the same time. “Many countries with the highest growth in private spending have also shown the highest increase in public funding of education...increasing private spending on tertiary education tends to complement, rather than replace, public investment” (OECD 2005, p. 193). Between 1995 and 2002 Australia private spending on tertiary education increased by 78% while public spending fell by 8%. Total tertiary students grew 31%, public funding per tertiary student dropped by 30% and total spending on education institutions per tertiary student fell by 7% (OECD 2005, pp. 175 & 187).⁴

The fall in total resources per student coupled with expanding business functions and non-academic services triggered a decline in average resources for teaching and research. In the two decades after 1984, the average student–staff ratio in Australian institutions rose from 13 to 20. The growth of non-academic staff outstripped that of academic staff especially in the newer universities (DEEWR 2010). Remarkably, in their positioning-taking strategies Australian universities became more dependent on their business acumen than their academic capacity. This generalization is less true of the old and strong research universities and more true of the newer universities, that are often more aggressive in recruiting foreign students; but all institutions have become heavily dependent on the foreign market, aside from the Australian National University which receives special research funding. There has been less innovation on the curriculum side of international education than might be expected; and it is doubtful if Australian universities are much better than UK or US universities in mixing international and domestic students (Marginson et al. 2010).

In the outcome Australian higher education has successfully fulfilled the business objectives of institutions and the policy objectives of government. Base-level quality is ensured by a national system of quality assurance and periodic audit. The downside is the negative implications of this resource configuration and these policy and institutional cultures, for the infrastructure enabling teaching and research; and hence for Australia’s long-term academic capacity and global competitiveness.

⁴ The UK and New Zealand also adopted a commercial approach to foreign students and have rapidly increase market revenues; but in both nations public expenditure on education institutions increased in 1995–2002. Public expenditure in 2002 was 72.0% of total expenditure in the UK, 62.5% in New Zealand and 48.7% in Australia (OECD 2005, p. 198).

Australia in the Global Setting: (2) Comparative Research Performance

Australia's global position in research is not as strong as in commercial teaching. According to the Shanghai Jiao Tong University data, Australia has 17 (3.4%) of the top 500 research universities, in excess of its share of world population at 0.3% and world GDP which was 1.1% in 2008 (World Bank 2010).⁵ There are established areas of research strength such as astrophysics, analytical philosophy and parts of agriculture and the life sciences. Australians won the 2005 Nobel Prize for Medicine and shared the 2009 prize for Medicine. The Australian National University (ANU), which specializes in research, was ranked by Jiao Tong at equal 59th in the world in 2009, down from equal 49th in 2003. The ANU has strong cross-border research networks and probably houses more experts on China and Indonesia than any North American university. The University of Melbourne is at 75, the University of Sydney at 94 and the Universities of Queensland and Western Australia are in the top 150. The Universities of New South Wales is in the top 200 and Monash, Adelaide and Macquarie are in the top 300. Tasmania, Newcastle, Flinders and Wollongong are in the top 400 and Curtin, James Cook, La Trobe and Swinburne are in the top 500 (SJTUGSE 2010). Curtin and Swinburne Universities of Technology are the only former colleges of advanced education to enter the top 500.

Australia's problem here is that it is weaker in the top 100 than the other English-speaking nations and parts of Western Europe. The most obvious comparators are UK and Canada. In Canada, the Universities of Toronto with ranking of 27 and British Columbia at 36 are well ahead of ANU. Australia made a major commitment to building basic research infrastructure between the early 1960s and the early 1980s but then largely focused on knowledge commercialization objectives. Canada continued to invest in basic research infrastructure and specifically focused on building global capacity and competitiveness in research in the 1990s. Australia doubled its allocation to research project funding in 2001, but not to research infrastructure, which continued to be eroded by declining in public funding. The UK has three times Australia's GDP but five times its funding for research performance and has allocated those funds on a highly stratified basis using measures of comparative research quality. Australian performance measures are primarily quantitative: grant dollars, research student numbers, publication volumes. This creates quantity/quality trade-offs in research outputs (Butler 2003).⁶

⁵ GDP measured in terms of Purchasing Power Parity (PPP).

⁶ According to Butler (2003) between 1988 and 1998 Australia's share of publications in the Science Citation Index increased by 25%, but its share of citations declined from sixth in a ranking of 11 OECD countries in 1988, to tenth place by 1998, and there was a widening gap to ninth place. "Australia's increase in output appears to be at the expense of impact" (Butler 2003, p. 147). One reason was that a growing proportion of Australian articles were published in lower status journals. These achieved the same public funding within Australia as high status journals and were easier to access.

Australia's Global Position and Positioning-Taking

Australian higher education is positioned globally by the nation's history and geography. Australia has a strong economy that rests primarily on commodities and services rather than manufacturing, and a stable polity. Its 2008 GDP at \$ 762.6 billion USD was 18th in size in the world (World Bank 2010, PPP) though the nation was 50th in terms of population size. The higher education system is mature with above OECD average participation rates and doctoral programmes in all fields. The British inheritance is both a strength and weakness of the Australian system. On one hand the similarity between Australian universities and modern British universities has strengthened the global reputation of Australian institutions, though Australian research has been positioned in an upper-middle position, below the UK, by the Jiao Tong survey. On the other hand Australia is a settler state located on the cultural periphery of two older and larger imperial English-speaking powers, the UK and the global hegemon USA. Australia has always drawn heavily on the economic and cultural resources of the UK and USA. Australian imaginings are too readily colonized by British and American mentalities, narrowing the range of global positioning strategies. Yet Australia is geographically located at the South-Eastern tip of the Asian continent, close to the emerging university systems of three of the four most populous nations: China, India and Indonesia. More than 10% of Australia's citizens in the two largest cities Sydney and Melbourne are Asian born. This opens a broader prospect.

Australian higher education institutions have made good but not great positioning use of their location in Asia. As well as building student markets they have become more engaged with Southeast Asian and Chinese universities than British, American and European institutions have done. The journey to a more regionally grounded identity has a way to go. Australia's curriculum is little different to that of the USA and UK, especially in the business and technology programmes where most foreign students are enrolled; programmes that reflect Anglo-American notions of 'global knowledge'. No doubt an industry-driven approach to foreign education, in the context of growth enforced by scarcity, weakening academic resources and economies of scale, privileges a standardized no frills approach to product and inhibits deeper curriculum innovations and richer cultural encounters. But the problem of a lack of deep engagement with Australia's Asian neighbours is also general to Australian society. Despite the fact that one in five citizens is overseas born, Australia remains a monoculture that neglects the potential resources in its cultural and linguistic diversity (Clyne 2005). At bottom Anglo-Australians have yet to move far from the notions of cultural superiority that characterize the majority stance of both the USA and the UK in relation to Asia. But Australia is no global empire and can ill afford the exceptionalism—and hence isolation—that attends such attitudes.

In international education and in the global trajectory of its universities, Australia has sought to differentiate itself from the USA and the UK not through the educational and cultural contents of its programmes, but on the basis of cheaper price due to a depreciated Australian dollar; proximity, safety, tolerance and non-

academic services; climate and other tourist benefits; and generic claims about ‘excellence’. Essentially Australia has promised to supply American education but in a friendlier setting. As a position-taking strategy it is vulnerable to shifts in price and changes in perceptions about qualities such as safety and academic standards. Climate and proximity to Asia constitute a firmer comparative advantage. But these factors are of second-order importance if foreign students believe the better product is elsewhere.

In sum, though the Australian export industry has been brilliantly successful in economic terms, its outstanding growth has been exhibited along relatively narrow lines and has yet to be consolidated in a distinctive comparative advantage based on product. Australia has specialized in high-volume medium-quality standard cost degrees, in generic Anglo-American applied vocational programmes rather than in foundational knowledge. The UK has also adopted a commercial approach to the foreign education but its public/private development is more balanced. Compared to Australia the UK seems to be less stymied by trade-offs between research capacity and commercial development and between quantity- and quality-driven globalization. Compared to Australia, American universities sustain stronger basic disciplines. Doctoral programmes in the USA and the UK are more generous and more attractive.

If national identity and material resources are central to the global reputation of individual institutions then it is unsurprising that government policy and funding play a direct part in shaping global potential. Australia’s policy settings have constrained the potential position-taking strategies. Research-intensive universities like Melbourne, Sydney, New South Wales and Queensland have been forced to exhibit a Jekyll-and-Hyde personality in the global environment. At home they are selective and focused on research and they engage in global benchmarking and cross-border research collaborations. But they also have another international agenda, identical to that of the 32 lesser Australia universities, which is to build a massive fee-paying enrolment to fill the revenue gap. Compared to academic activities, business methods provide a more limited set of position-taking options. Unfortunately it has been difficult to synergize the academic capacities of Australian universities with their business strengths. There is limited scope to bring research insights and cultures to bear on improving standardized high-volume coursework programmes for middle-level students. ANU is the strongest research university but a minor player in fee-based markets. Several universities with very large foreign enrolments have little research infrastructure. Most Australian research collaborations are in North America, UK and Europe; while the fee-paying students come mostly from Asia. Australia is weak in international doctoral education where the potential nexus between global research and teaching is maximized. There are few interfaces between scholars of Asian languages and area studies; and the teachers who handle large cross-cultural classes.

What are the implications of Australian position-taking for the shaping of the global field of higher education? Australia provides a regional alternative for Asian students wanting to enter Anglo-American programmes; and to the extent that supply fosters demand has fed cost-border movement out of Asia. Further, along with

the UK it has normed a business model of cross-border education driven by revenues and market share. This is a truly momentous development with pros and cons that will not be exhausted here. Briefly, commercial programmes have a remarkable capacity to identify and respond to demand and can generate organizational innovations. For example, Australian and UK universities are active in “program and institutional mobility” (OECD 2004, pp. 215–220) in the form of campuses, partnerships and distance education in importer nations. This enables a closer engagement in local systems that can expand capacity and participation rates in the importing nations and may lead to bilingual and hybrid curricula and other initiatives. Further, in the commercial model, quality assurance should be able to protect students against bad provision, though it has yet to be applied consistently to off-shore programmes. On the other hand when education is produced as a commodity, autonomous professional input is reduced; there is less scope for adapting programmes to different sites; harder contents are emptied out (Naidoo and Jamieson 2005); and competition generates costly functions decoupled from product improvement. Commercial provision also stratifies educational opportunities in importing nations (OECD 2004, pp. 241–246). The Australian educators and policy makers that have developed the nation’s international education industry show no concern about its social effects offshore.

Universities are rarely credited for good teaching on a comparative basis. In building a global reputation it is research outcomes that count. For Australia the worst-case scenario is that it becomes locked into the role of global polytechnic by its fiscal settings and business culture, its position-taking strategy spirals down, its strong quantity position in the cross-border market become eroded and the material resource base of Australian higher education is further eroded with it. The way out is public reinvestment at scale and especially a prolonged period of rebuilding in research infrastructure, plus a stellar programme of international doctoral scholarships.

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Part V
Neighbouring Cases

Chapter 21

India Amidst a Global Competition for Its Talent: A Critical Perspective on Policy for Higher and University Education

Binod Khadria

Indian Migration to the USA Prior to 9/11

Since the 1960s there has been significant migration of highly skilled human capital, including both workers and students, from India to the United States. The national costs of this exodus of highly educated Indians consists of the “investment loss” of financial subsidies for education and the “skill loss” of trained personnel (Khadria 1990). However, perceptions of these costs have changed significantly in India over time, with shifts in the paradigm of high-skill migration. Notions have shifted from “brain drain” in the 1960s and 1970s to “brain bank” in the 1980s and 1990s, and subsequently to “brain gain” in the twenty-first century. This turnaround is reflected in India’s present pro-active stance towards its population overseas, which incorporates a substantial scientific diaspora (Khadria 2001a).

From a Trickle of Human Capital to the Formation of a Knowledge Diaspora

In the 1970s the USA overtook the UK and Canada as the prime country of destination for Indian migrants. Indian immigration to the USA was less than 1% of total

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immigration from all countries during the 1950s and 1960s, reached a peak of 3.8% in the 1970s, tapered off in the 1980s and began to rise again in 1992, reaching almost 5% in 1996 and 7.4% in 2004 (Khadria 1999; US Department of Homeland Security (DHS) 2004).

The increase in the 1970s is generally attributed to the US Immigration and Nationality Act Amendments of 1965, which were fully brought into force in 1968.¹ This became the principal determinant of Indian diaspora in the USA from 1968–1992. Within the overall kinship-emphasis in the family-reunification clause of the amendments, the new legislation gave priority to highly trained and educated professionals. This launched the modern phase of Indian immigration to the United States that was distinctly different from the earlier phase, mainly consisting of unskilled workers and labourers. Urban, educated, and ironically “English-speaking” Indians became distinctly visible in the USA while causing a “brain drain” from India. As Jenson (1988, p. 280) recorded: “Almost a hundred thousand engineers, physicians, scientists, professors, teachers, and their dependents had entered the USA by 1975.”² From the mid 1970s till 1982, the annual number of Indians entering the USA levelled down to an average annual figure of 20,000 as a result of the per country quota limit established by US immigration law. Thereafter, it was those exempt from this limit that added to the total, the “immediate relatives” of the increasing number of Indian-born naturalized US citizens. Total migration of highly qualified Indians to the USA did not fall, though India’s brain drain to the USA became less “visible” rather than really declining after the mid 1970s.

The H1-B Route in the 1990s

Indian knowledge workers have entered the USA not only through the “occupational preference” visas issued to “numerically limited” categories of immigrants, but also through the limited “family preference” visas, and unlimited “exempted” categories: those of “immediate relatives” of India-born naturalized US citizens, “non-immigrant” students (the F categories), and “temporary workers and trainees”(under the H1-B category), but with the potential to become permanent residents holding green cards.

The 1990 Amendments in the USA, brought into effect in 1992, explicitly favoured building that nation’s human capital capabilities. There were some restrictive clauses, including an annual cap of 65,000 for entry of highly skilled temporary

¹ Under these Amendments, immigrants subject to a “numerical limitation” of 270,000 worldwide and 20,000 per country per year were allocated to a six-category “preference” regime within the US visa system—two under the “occupational labour force needs” of the US economy and four under the “family-reunification objective” of the US population policy.

² “Ironically” because in 1917 the US Congress, against the opposition of two unsuccessful vetoes from President Woodrow Wilson, had introduced a “literacy test” in English, effectively to stop Indian immigrants from entering the territory of the United States (Baker 1937).

workers via the non-immigrant H1-B visa category. Nevertheless, the US Senate had to expand these visas to 337,500 for the 3-year period from 1999 to 2001 because the USA faced a decline in key undergraduate science degrees and an acute shortage of staff in high technology industries like software development. After 2001—as American immigration came to be determined more by post-9/11 security concerns and the recession that followed rather than actual labour market needs—the US government came under pressure from American industry and business to increase the H1-B visa limit once again.

Profile of the Indian Diaspora in the United States

Thus human capital content has been crucial to the formation of the Indian knowledge diaspora in the USA and its primary economic role in the world's leading economy. The geo-economic space enjoyed by the Indian diaspora in the USA has radically transformed its image and identity. Its role is indicated by variables such as the size of the diaspora, the average length of stay in the United States, age profile, educational profile, language proficiency, the labour force participation rate, occupational profile, income profile, and also the relatively low incidence of poverty. In the data that follow, taken from the US Population Census 2000, the position of the Indian diaspora is compared to that of other Asian nations.

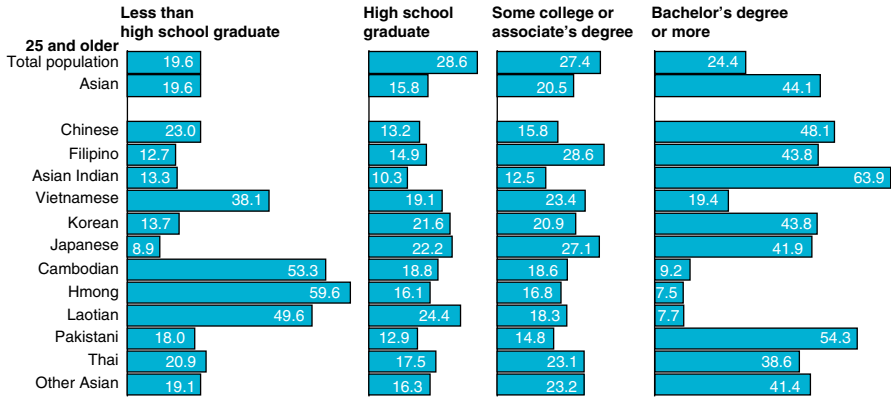
In 2000, Chinese people constituted 23.8% of all Asian-born in the USA, followed by Filipinos at 18.3%, Indians at 16.2%, Vietnamese 10.9%, Koreans 10.5% and Japanese 7.8%. All other Asian nations were less than 2%. The Indian population in the USA in 2000 comprised 25% native-born, 30% naturalized US citizens, and the rest 45% “permanent residents”, the latter two proportions being, respectively, lower than and higher than most other nationalities, reflecting the comparatively strong ties of the diaspora with India.

In 2000, the Indian diaspora in the United States was relatively newly arrived. Whereas 42.4% of the Asian-born had entered the USA in the previous decade, and 30.4% prior to 1980, of the Indian diaspora 54.0% had been less than a decade in the USA and only 18.2% had entered prior to 1980. In 2000, the India born in the USA had a median age of 30 years, 5 years younger than the American national median of 35 years. All else being equal, the younger the diaspora, the more it is capable of rigorous, sustainable and lengthy participation in the global labour market, incorporating the home as well as the host economy (US Census Bureau 2004).

In 2000, the Indian-born had a considerably higher level of educational qualifications than the American population as a whole, or the Asian-born as a whole. No less than 63.9% of the Indian-born possessed a Bachelor's degree or higher qualification compared to 24.4% of the population and 44.1% of the Asian-born (Fig. 21.1). This was the highest proportion of degree qualified people among all Asian populations. A slightly lower proportion of degree holding among the Chinese population was compensated by the larger absolute size of the Chinese diaspora in the USA (US Census Bureau 2004).

Educational Attainment : 2000

(Percent distribution of population 25 and older. Data based on sample. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see www.census.gov/prod/cen2000/doc/sf4.pdf)



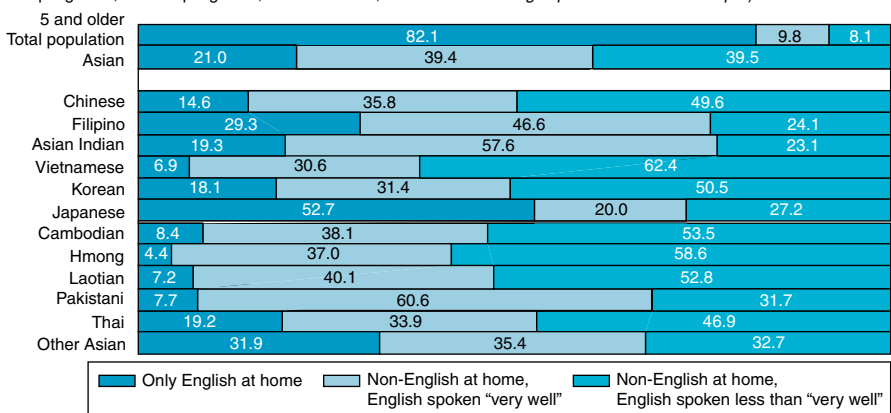
Source: U.S. Census Bureau, Census 2000 special tabulation.

Fig. 21.1 Educational attainment of the Asian-born in the USA, 2000. (Source: US Census Bureau 2004)

Among the Asian diasporas the populations with the highest proportion with strong English skills were the Indians and Filipinos (Fig. 21.2). Of these two groups the Indians had the higher proportion with good command of both a native language and English, facilitating mobility and networking between host and home country, and thereby facilitating bilateral and multilateral relations. Labour force participation rate is another important indicator of diaspora empowerment and capability. In 2000 in the USA, India's male participation rate of 79.1% was

Language Spoken at Home and English-Speaking Ability: 2000

(Percent distribution of population 5 and older. Data based on sample. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see WWW.census.gov/prod/cen2000/doc/sf4.pdf)



Source: U.S. Census Bureau, Census 2000 special tabulation.

Fig. 21.2 Language proficiency of the Asian-born in the USA, 2000. (Source: US Census Bureau 2004)

well above the Asian average of 71.0% and the ratio of 70.7% in the population as a whole. Pakistanis (76.6%), Filipinos (71.0%) and Thais (70.2%) also exceeded the overall population average. However, the labour force participation of Indian women at 54.0% were below the Asian average of 56.4% and population average of 57.5%, and well below the participation for women from the Philippines, Thailand, China and Vietnam, while well above women from Pakistan and Japan (US Census Bureau 2004).

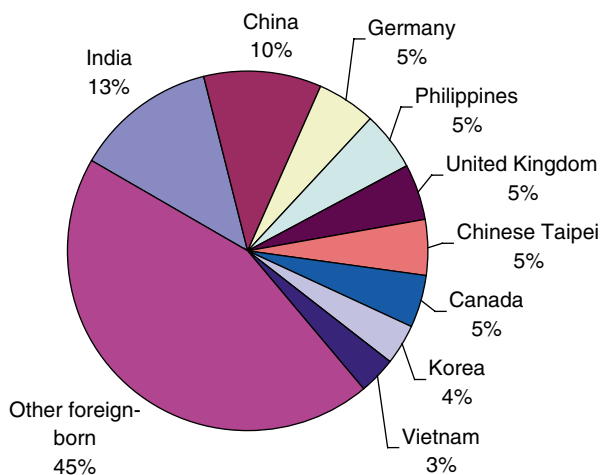
The highest proportion of people employed in high-end jobs like management, professional and related occupations was at 59.9% for Indians. Only 11.7% of Indians were in production, transportation, construction, extraction, material moving and farming jobs. This compared with 33.6% of all workers and 44.6% of the Asian-born working in managerial and professional occupations; and 24.7% of all persons and 17.3% of the Asian-born working in the jobs requiring physical, outdoor and factory-based labour (US Census Bureau 2004).

Earnings and income are important indicators of purchasing power and the capacities of individuals and families to invest. Full-time Asian men and women had higher median earnings than all men and women in the USA in 1999. Indian, Japanese, and Chinese men had higher median earnings than Asian men and all men. Indian men had the highest year-round, full-time median earnings (\$ 51,900), followed by Japanese, with earnings of \$ 50,900. This compared with the level of \$ 37,057 for all male workers and \$ 40,650 for all Asian male workers. Indian women (\$ 35,173) earned higher median earnings than all Asian women (\$ 31,049), though slightly below the level for Filipino and Japanese women. The average for all women in the USA was \$ 27,154. The median annual income of Indian families (\$ 70,708), was more than \$ 10,000 higher than that of all Asian families (\$ 59,324) and higher again than the overall average for all families (\$ 50,046). The level for Japanese-born families was just above that for Indians. In 1999, the poverty threshold for a family of four in the United States was \$ 17,029: More than 90% of the members of the Indian diaspora were above this mark (US Census Bureau 2004).

This socio-economic profile of the skilled Indian diaspora in the USA indicates the empowerment of the Indian migrant workers in the labour market of the largest developed country. Within the European Union (EU) two-thirds of the Indian migrant community resides in the UK; and there also the Indian community is one of the highest-earning and best-educated groups in the British labour market. It is relatively strongly represented in business, information technology, the health sector, media, cuisine, and the entertainment industries. In Canada the average income of Indian immigrants is nearly 20% above the national average. As in the USA educational levels are also higher than average. The entry of Indian professional immigrants to Australia and New Zealand has also increased.

Of the skilled Indian workers in the USA the majority had acquired their higher education qualifications in India, particularly in the engineering and IT sectors. In 1999 there were 165,000 India-born US residents with science, social science, and engineering (S&E) degrees, 13% of all foreign-born residents with S&E degrees (Fig. 21.3), the highest share for any single diaspora group in the United States.

Fig. 21.3 India-born US residents holding science and engineering degrees relative to other foreign-born, 1999. (Source: National Science Foundation, US, 1999, 2000.)



The 30,000 Indian professionals in the USA with doctoral degrees in science and engineering accounted for 16% of all foreign-born American residents with S&E doctorates, second in size only to the Chinese diaspora (20%) (NSF 1999).

Many Indian immigrants who fuelled the Silicon Valley boom were educated in the USA at the post-graduate level after completing a first engineering degree of B.Tech at one of the Indian Institutes of Technology. Similarly, many doctors who earned laurels in their respective fields in the USA had emigrated with the first MBBS degree from the All India Institute of Medical Sciences (Table 21.1). These were the pioneers who created the roadmap for the migration of talent from India to the world. Engineers from the Regional Engineering Colleges, Banaras Hindu University and others followed suit. Similarly, scientists with M.Sc/M.Tech degrees from universities like the Jawaharlal Nehru University, or the University of Delhi; and engineer-managers with a degree in engineering followed by a Post-Graduate

Table 21.1 Twentieth-century brain drain of graduates of top educational institutions in India. (Source: Author, using various institution-based surveys sponsored by the Department of Science and Technology, Government of India, cited in Khadria 1999)

Indicators	Indian Institute of Technology Bombay, Mumbai	Indian Institute of Technology Madras, Chennai	Indian Institute of Technology Delhi, New Delhi	All India Institute of Medical Sciences, New Delhi
Batches of graduates	1973–1977	1964–1987	1980–1990	1956–1980
Year contacted for survey	1987	1989	1992	1997
Magnitude of brain drain	31%	27%	23%	56%

Diploma in Business Management from the Indian Institutes of Management (IIMs) emigrated to pursue higher studies abroad and then enter global labour markets.

Three Paradigm Shifts in the Twenty-First Century

At first sight the twenty-first century has seen a strengthening of the trend whereby talent migrates on a large scale from India to the USA. The total number of immigrants from India to the USA jumped from 30,237 in 1999 to 71,105 in 2002, fell back to 50,372 in 2003 and rose again to 70,116 in 2004. Indian immigration as a proportion of all global immigration rose from 5.7% in 1999 to 7.4% in 2004. The proportion of migrants from India with occupations increased from 26.5% in 1999 to 54.8% in 2004. Indian immigrants' share of executive, managerial and professional immigration into the USA also rose during this period (US Office of Immigration Statistics(OIS) and DHS, various years). But there are also signs of important new developments, the first of which may have been influenced by 9/11.

One trend is growth in the relative importance of temporary worker migration, as distinct from permanent settlement, reinforcing the volatile two-way character of mobility. A second is growth in the relative importance of student migration. A third is the financial flows, in which growing remittances back to India via the earnings of skilled labour are being neutralized by the increase in tuition fees paid by Indian students to educational institutions in the USA and the other developed nations.

The Primacy of Temporary-Worker Migration

In the first half of the 2000s, though rates of permanent settler admissions in the developed countries grew slowly, temporary worker entrants grew more rapidly (OECD 2004). There is a new emphasis on return migration as part of "effective migration management" policies in the receiving countries, particularly in Europe (IOM 2004). In the case of legal migration, especially that involving highly educated and qualified migrants, the British work permit, the German "green card", and the American H-1B visa are all examples of policies to encourage temporary migration of high-skill professionals rather than their permanent settlement. India and the other developing countries in South Asia—Pakistan, Bangladesh and Sri Lanka—have all been affected by this change. Temporary migration is different to permanent migration in some respects. It is likely that in the majority of cases only the primary worker emigrates. The spouse and the children stay in the country of origin due to the need to maintain continuity in spouse employment and children's schooling. This curtails talent migration in the form of the other family members. The increasing trend of business process outsourcing (BPO) to India has also encouraged an increase in temporary emigration and return migration.

In 2001 there were 104,543 non-immigrant workers from India on the basis of H-1B visas, almost one-third of the total from all nationalities. This number fell to 75,964 in 2003 (US Office of Immigration Statistics, various years).

The Primacy of Student Migration

The highly skilled from India migrate not only through the “employment gate” but also the “academic gate” as students.³ Figures collated by the US Institute of International Education’s *Open Doors 2007* survey reveal that in 2006–2007 India retained its number one position in the US university enrolments for the sixth year in a row, followed by China, Korea, Japan, Canada, and Taiwan.⁴ Indians accounted for 14.4% of the foreign students in the USA (IIE 2007). To serve the purposes of augmenting higher education, meeting short-term labour shortages, and creating a cohort of long-term brand ambassadors for them, both the UK and the USA have adopted policies to allow foreign students to stay on and work rather than return to their countries on completion of their degrees. Growing competition among the USA, UK, Australia, Canada, New Zealand, Ireland, and Singapore and also non-English-speaking France, Germany, the Netherlands and Japan has brought even the Ivy League institutions to India to look for the cream of students.⁵ Indian students can choose between India, England, Australia, USA, China and Europe because of free availability of foreign exchange as well as availability of loan on easy terms. Foreign marketing is assisted by education consultants and franchisees in India.

The USA has been the most favoured destination country for Indian students. The OECD data show that 47,000 students moved from India to the USA in 2001, 78% of all Indian students in OECD countries (OECD Education Database, various years). The Open Doors data show an increase from 54,664 in 2000–2001 to 83,833 in 2006–2007 (IIE 2007, see Table 21.2). These data suggest that the movement of Indian students was little affected by post 9/11 restrictions on immigration, though mobility from the Middle East and parts of Southeast Asia fell.

In 2006–2007, 71% of Indian students in the USA pursued Masters and PhD studies as the vast majority of Indian students have over the years, but graduate student enrolment grew only 6% from 56,397 in 2005–2006 to 59,521 in 2006–2007. There was a nearly 48% growth in the “other student” category, from 7,380 in 2005–2006 to 10,898 in 2006–2007. This includes non-degree programmes.

³ See Table 21.1 in relation to brain drain from the IITs/AIIMS.

⁴ India has been the leading place of origin for international students in the USA with 83,833 in 2006–2007 (an increase of 10% from the previous year), followed by China (67,723 up 8%), Korea (62,392, up 6%), Japan (35,282, down 9%), Taiwan (29,094, up 4%), Canada (28,280, up less than 1%), Mexico (13,826, down 1%) and Turkey (11,506, down 1%) (IIE 2007).

⁵ *Economic Times*, 24 November 2004. Japan has instituted high-valued scholarships to match US fellowships like, the Fulbright Scholarships to attract talent from India—*The Straits Times*, Singapore, 15 March 2006.

Table 21.2 Flow of Indian students into higher education in the USA (1996–2007). (Source: IIE 2007)

Year	Students from India	Proportion of all foreign students in the USA (%)
2006/2007	83,833	14.4
2005/2006	76,503	13.5
2004/2005	80,466	14.2
2003/2004	79,736	13.9
2002/2003	74,603	12.7
2001/2002	66,836	11.5
2000/2001	54,664	9.9
1999/2000	42,337	8.2
1998/1999	37,482	7.6
1997/1998	33,818	7.0
1996/1997	30,641	6.7
1995/1996	31,743	7.0

The Backwash of Remittances

The new century registered a change in major source of remittances to India, from unskilled workers in West Asia to the western developed countries, mainly the United States due to large-scale temporary migration of workers moving without families, and larger number of students staying on after graduation while continuing to support families back home in India. These visible increases in remittances from temporary workers mainly on H-1B visas in the USA were partly neutralized by a silent backwash of student fees paid overseas by the Indian students. According to World Bank data, India is at the top of the list of countries receiving remittances from its migrants abroad, close to 10% of the worldwide remittances sent home by 191 million people.⁶ In 2004 workers sent US \$21.7 billion home to India compared to China US \$21.3 billion, Mexico US \$18.1 billion, France US \$12.7 billion and the Philippines US \$11.6 billion (World Bank 2005).

According to the Reserve Bank of India (RBI), 44% of remittances originate in North America, 24% in the Gulf States region, and 13% in Europe. While not disputing the shift, other experts caution that the sources of remittances are more diversified than RBI figures recognize. Central banks like RBI tend to attribute money transfers from intermediary banks to the countries where those banks are headquartered. As a result, it is possible to overestimate transfers from the United States. In 2005–2006, remittances represented just 3.08% of India's GDP. But compared with some important economic and fiscal indicators, their relative importance is significant. For example, in 2005–2006 remittances to India were higher than the US \$23.6 billion in revenues from India's software exports which increased 33% from the previous year. Also, in 2004–2005, as per India's Ministry of Finance data, put together, the state and federal governments in India spent less money on education (US \$18.97 billion) than India received in remittances (US \$20.25 billion) (Chishti 2007).

⁶ *Population Headlines*, No. 310, March–April 2006, ESCAP, Bangkok.

According to the *Open Doors* estimates, for two-thirds of the over half a million international students in the USA, the primary funding for education in the USA comes from the students' "personal and family" sources,⁷ with US-based sources supporting only about 25% of students (IIE 2007). The American economy reaps a handsome US \$13–15 billion annually from the more than 500,000 students⁸ who come to the USA to study.⁹ Parallel estimates for the UK and other countries in the EU, Canada, Australia and New Zealand would substantiate the propositions that the developed immigration countries are capitalizing on trade in educational services, and student fees constitute a backwash flow of remittances out of the home countries of the migrants. In part, home countries' policies—or lack of policies—are also responsible. For example, in 2001 the Indian government, faced with huge foreign exchange reserves, close to US \$200 billion in 2006, allowed a US \$25,000 transfer of funds per annum by any single Indian citizen to anywhere in the world. This level has since been doubled to US \$50,000 per year.

India's Human Capital Stocks and Flows

In 1981 India had seven million workers in "professional, technical and related" fields that could be classified as HRST (Human Resources in Science and Technology) professionals.¹⁰ This rose to 10.2 million a decade later, and has been estimated at 26.8 million in 2004. The category rose from 3.1% of the total workforce in 1981 to 3.6% in 1991 and to 7.3% in 2004. The number in HRSTO (meaning HRST Occupations) rose by 3.7% annually between 1981 and 1991 and by 7.7% between 1991 and 2004.

⁷ During a visit to the UN meeting in New York, the Indian Prime Minister Dr. Manmohan Singh appealed to developed countries like the UK to reduce their overseas student fees which are a multiple of home student fees—*Hindustan Times*, 25 September 2004.

⁸ International students brought \$ 13.3 billion dollars to the US economy in 2004–2005 in money spent on tuition, living expenses, and related costs, according to the NAFSA: Association of International Educators. *Open Doors 2004–2005* data from campuses indicate that nearly 72% of all international students reported their primary sources of funding were personal and family sources or other sources outside of the United States. The proportion of students relying primarily on personal and family funding increased by 1.5%, to 67% of all international students in 2004–2005, with an even higher percentage at the undergraduate level (81%). Rising tuition costs and weak economies in some countries abroad place a substantial economic burden on students and their families, making less expensive study opportunities at home and elsewhere a more attractive option, especially at the undergraduate level. Nevertheless, Department of Commerce data continue to rank US higher education as among the five largest service sector exports.

⁹ *Economic Times*, 29 November 2004.

¹⁰ The *Canberra Manual* defines HRST as people who fulfil one or the other of the following conditions: they have successfully completed education at the tertiary level in a Science, Engineering or Technology (S&E or S&T) field of study; or they are not formally qualified as above, but are employed in an S&T occupation where the above qualifications are normally required. See also Auriol and Sexton 2001. For debates around these issues in the Indian context, see Khadria 2001b, 2002, 2003, 2004a.

Table 21.3 Indian's graduate pool in 2003–2004. (Source: Institute of Applied Manpower Research 2006; Ministry of Human Resources Development 2006)

	Engineering degrees (Millions)	Engineering diplomas (Millions)	Arts degrees (Millions)	Science degrees (Millions)	Commerce degrees (Millions)	All graduates (Millions)
Stock of graduates in 2003	1.200	1.750	11.500	4.985	5.933	21.986
Out-turn in 2004 (estimate)	0.155	0.130	1.150	0.540	0.480	2.460

However, while numbers and proportions of HRSTO and HRSTE (meaning HRST qualified people) have risen steadily, in 2004 only a third (35.2%) of the total HRSTE was pursuing an occupation that could be considered core-HRST. Almost two-thirds of HRSTE were misemployed or underemployed; while only about 35% of those holding HRST jobs were educationally qualified for those jobs. The rest had only end-of-secondary-school education or less. These ratios have worsened over time. In 1981 around 43% of those who were HRSTE were employed in HRST professions (Khadria 2004b).

India's work force without either a diploma or a degree—the non HRSTE workforce—was estimated at around 327 million in 2004: about 89% of the country's work force had a highest educational qualification of high school or below. However, the growth rate of this part of the work force has been declining. At the same time, the proportion of the non-HRSTE work force employed in what could be called science and technology professions (scientists, engineers, nurses, architects, teachers, and chartered accountants, among others) rose from 2% in 1991 to nearly 4% in 2004, mostly due to the fact that growth in this employment segment rose relatively quickly in the 1990s.

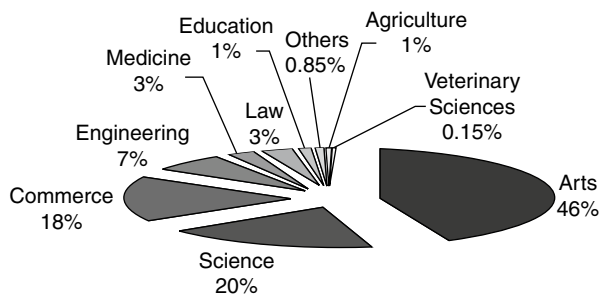
Composition of the Graduate Pool

In 2003–2004 the total stock of graduates in India was an estimated 22 million (Table 21.3). Total enrolment in higher education was 10.4 million and the out-turn each year was 2.5 million. The enrolment share of students pursuing degrees in arts was 46%, science 20%, and commerce 18%. The remaining 17% students were enrolled in professional courses (Fig. 21.4).

Roles of Public and Private Sectors in Professional Education

Higher education in India has developed mainly in the public domain. Early expansion was mainly in the general undergraduate lines of arts, science and commerce. The 1990s brought a rapid growth of private professional higher education and a

Fig. 21.4 Enrolments by subject 2004–2005. (Source: University Grants Commission, courtesy Agarwal (2005))



proliferation of professional institutions in engineering, medicine, management and law. Almost four-fifth of all institutions and enrolments in professional education have developed in the private sector (Table 21.4). Recent years have seen the emergence of training institutes for entirely new career options like in airlines, travel, clinical research and 3D animation.

In the late twentieth century, a large number of private initiatives in the field of education received degree granting status either as “deemed to be universities” or as full-fledged private universities through the state legislatures.¹¹ To meet unmet demand in certain professional fields such as business management or hotel management etc., small foreign operators have collaborated with private Indian entities,

Table 21.4 Growth of professional higher education institutions. (Source: Related professional courses and their websites, cited in Agarwal 2005)

Programme area	Number of institutions (1999–2000)	Number of institutions (2003–2004)	Increase 1999–2000 to 2003–2004 (%)	Private sector share of institutions (2003–2004) (%)	Public sector share of institutions (2003–2004) (%)
Engineering	669	1,265	89	85	15
Pharmacy	204	445	118	91	9
Hotel Management	41	49	22	85	15
Architecture	78	107	37	63	37
Teacher Education	1,050	1,541	46	68	32
MCA	780	1,012	29	62	38
MBA	682	1,254	85	64	36
Medicine (Allopathic)	174	229	32	46	54
Physiotherapy	52	205	294	92	8
<i>Total</i>	<i>3,730</i>	<i>6,107</i>	–	–	–

Note: Many institutions (particularly for MBA, MCA and B.Ed. Programmes) have more than one of the above programmes. These have been counted more than once

¹¹ A few institutions like IIPM, ISB, Amity International, Rai University, Welingkars, and Wigan and Leigh are using image-building elements to differentiate themselves from the rest.

Table 21.5 Higher education institutions and student enrolments by sector. (Source: University Grants Commission (India), cited in Agarwal 2005)

Sector	Number of universities		Number of colleges		All higher education		Student enrolment	
	2000–2001	2005–2006	2000–2001	2005–2006	2000–2001	2005–2006	2000–2001 thousands	2005–2006 thousands
Government	245	268	4,097	4,225	4,342	4,493	3,443	3,752
Private aided	0	10	5,507	5,750	5,507	5,760	3,134	3,510
Private unaided	21	70	3,202	7,650	3,223	7,720	1,822	3,219
<i>Total</i>	<i>266</i>	<i>348</i>	<i>12,806</i>	<i>17,625</i>	<i>13,072</i>	<i>17,973</i>	<i>8,399</i>	<i>10,481</i>

Note: Break-up by sector (that is, by type of institutional management) for 2005–2006 is based on projections based on available trends in few states—see Agarwal 2005

primarily operating on a profit-making principle. In contrast, there has been no significant presence of foreign education providers in science and engineering fields or for HRSTE in India. A bill to facilitate the entry of foreign educational institutions has since been pending in the India Parliament, now to be discussed in the winter session of 2011 (Khadria 2011). Table 21.5 presents the number of higher education institutions and enrolment as in 2000–2001 and 2005–2006, by sector of institutions.

PhD Enrolments

Most doctoral programmes in India are provided by universities in the public sector. These universities have played a crucial role in granting PhD degrees in science and engineering. Table 21.6 shows that there has been a quantum jump in doctorates in these fields in India.

Though all universities are expected to be comprehensive in relation to both teaching and research, data on doctorates in science, engineering and medicine suggest that only a few institutions have a real research focus: 85% of science and engineering doctorates come out of 20 universities. There are serious and growing concerns about the quality of PhDs. The mandatory requirement for holding a PhD for appointment

Table 21.6 PhD degrees awarded in India. (Source: University Grants Commission, Agarwal 2005)

	1982–1983	2001–2002	2002–2003	2003–2004
Science	2,893	3,734	4,976	5,408
Engineering	511	739	833	908

and promotion as faculty member has had undesirable consequences for quality. The highest number of PhDs are not awarded by the most reputed universities, suggesting widely varying standards. In some universities, a student is awarded a PhD degree within 18 months; in others students take 3 to 5 years, sometimes longer. There have also been cases of plagiarism. Quality is a major issue in social science research as well. Doctoral theses in social sciences often apply a descriptive approach to specific and limited topics, rather than an analytical or comparative approach, and without relating the work to a wider socio-political and economic context.

Demand for Higher and University Education

India's demographic structure is very different to those in the developed countries in the West, Japan and China. India has a young population with 62% in the working age group. This promises a favourable dependency ratio in the next three decades, and creates massive potential demand for education in the next decade. However, a huge shortfall in trained manpower is expected in India. One reason is the non-suitability of a large proportion of the graduates for the jobs available.¹² India faces the paradox of a high rate of graduate unemployment co-existing with huge skill shortages. In the last two decades, policy has attempted to increase the vocational utility of university and college education. However, at 17.2%, the graduate unemployment is significantly higher than overall unemployment. Nearly 40% of graduates are not productively employed. Of the total unemployed population of 44.5 million, unemployed graduates are 4.8 million (Government of India 2001). The last number has since risen to an estimated 5.3 million. The students' demand for a higher education is normally based on their aspirations and societal and parental expectations, not necessarily based on signals from the job markets. Demand is driven by the education market, not the job market. The top emerging job opportunities are by and large in the non-HRST fields,¹³ in areas in which the formal tertiary education streams hardly provides any preparation.

There has been an absolute increase in the number of students studying but a decline in the science share of enrolments. Between 1971 and 1997 this fell from 33.2 to 21.7% at undergraduate stage and 26.1 to 22.2% at the postgraduate stage. This was affected by enhanced opportunities in commerce or law. In today's market-driven social order, in most countries, good students are rarely interested in basic science as their career. This is a more serious problem in India because of the many of those talented students who do take science and engineering, or those who drift to such courses in the absence of their preferred professional subjects, many end up going abroad (Lakhota 2005). Further, many students who focus on disciplines such as commerce

¹² NASSCOM (2005a, 2005b). See, also Khadria and Leclerc (2006).

¹³ *India Today*, 7 March 2005.

do so because of the potential for finance and management careers abroad or work for international companies in India.

Partial, Uneven and Incomplete Policy

The Eleventh Five-Year Plan (2007–2012) has recognized the need to take a big step forward in developing India's higher education system to face the global challenge. The plan acknowledges the need for an international dimension, including linkages with other countries, and international research programmes. It aims to reform regulatory bodies in higher education to enable changing roles in the context of globalization. It sets out to make higher education curricula more relevant to both domestic and global needs: "Quality improvement in higher education will be brought about through restructuring academic programmes to ensure their relevance to modern market demands; domestic and global linkages with employers and external advisory resource support groups and tracer studies..." it states. The Eleventh Plan also recognized the fact that existing universities did not meet the global standards and hence proposed new institutions. "It is proposed to establish 14 new Central Universities (CUs) aiming at world class standards. The setting up of WCU will take time, especially for them to come up to full strength. But locations and initiation of work should get top priority during the Eleventh Plan so as to enable India to become the global knowledge hub and set benchmark for Central and other universities." The plan also focuses on "promoting strong linkages with other countries in the area of S&T, including participation in mega international science initiatives". The science and technology institutions are to be opened up for international faculty, visits and exchange (Government of India 2007).

The trends in employment and GDP growth show that services (tertiary) sector is growing in importance while agriculture has declined. Within the services sector, other business services, which includes information technology and related fields, have seen phenomenal growth in recent years, a significant proportion from exports. According to the World Bank (2005), India has a strong revealed comparative advantage (RCA) in services, particularly software services, as compared to goods. The country has leveraged its rich pool of human capital with quality educational institutions and large English-speaking population (NASSCOM 2005a). The projected age-structural-transition leading to a demographic dividend in India's young population, along with the emerging global occupational structure offers an opportunity for India to increasingly provide the workforce for the global knowledge economy in the twenty-first century.¹⁴

¹⁴ Personal services, such as teaching and nursing care would continue to expand on a global scale. India can become a magnet economy attracting high-skilled and high-waged investment capital from multinational companies, and offer high value-added services to the rest of the world. This would require that India adopts an outward looking approach to reach out to the global markets and focus on sectors where it has resource advantage.

India already accounts for 65% of the global industry in offshore IT and 46% of the BPO industry.¹⁵ Offshore industries have been the engine of economic growth for India for the last 4 years, accounting for 6% of the increase in GDP between 2000 and 2004, employing 700,000 people and providing indirect employment to nearly 2.5 million more. It was expected that by 2010, India's BPO industries would account for 17% of GDP growth. This would sustain 8.8 million jobs, 2.3 million direct and 6.5 million indirect and induced. (NASSCOM 2005b). As noted, the emigration of Indian IT professionals is now seen as the opposite of "brain drain". It is "brain gain" via the globalization of Indian talent and skills. Non-Resident Indians (NRIs) and Persons of Indian Origin (PIOs) can generate not only economic benefits but political profile for India in their countries of abode. The Indian government has opened the doors to long-term relations with its scientific diaspora.¹⁶ Yet as noted, graduate unemployment is serious (NASSCOM 2005a, 2005b), and many classified as HRSTE are not working in jobs where their skills are being utilized.

The 2005 NASSCOM (2005a) Strategic Review and the NASSCOM-McKinsey Report (NASSCOM 2005b), released by India's National Association of Software and Services Companies (NASSCOM), anticipated huge shortages in both the IT-related and BPO-related skills in India. The reports said that only about 25% of the technical graduates were suitable for employment in the offshore IT sector, and as little as 10 to 15% of general college students are suitable for the BPO industries. The reports estimated that by 2010 the two industries would have to employ an additional one million workers near the five Tier-I cities in India: New Delhi, Bangalore, Hyderabad, Chennai and Mumbai. About 600,000 more workers would be required across other towns in India.¹⁷ The reports said India would need a 2.3 million strong IT and BPO workforce by 2010 to maintain its global market share, let alone increase it further.¹⁸ The potential shortfall of qualified employees would be nearly half a million—more than one-fifth of the 2.3 million vacancies would remain unfilled—with nearly 70% of the shortages concentrated in the BPO industry. As noted, there has also been a serious and growing concern about the quality of the highest academic degree, the PhD. The shortcomings within the Indian higher education system have opened up India as a "supermarket", as the Indian media calls it, for foreign educational institutions who shop in India for "semi-finished human capital"¹⁹ to import. In this manner India loses many of its "best and the brightest" students.²⁰ Many students from the large and growing middle-class prefer to get

¹⁵ BPO generally refers to Business Process Outsourcing, the practice of running business processes sent by companies to either their own units or to other providers in offshore locations.

¹⁶ A High-Level Committee on Indian Diaspora submitted a Report to the Government of India in 1999 (ICWA 2001). An independent Ministry of Overseas Indian Affairs (MOIA) has been established since 2004 and national celebration of an Overseas Indians Day (*Pravasi Bhartiya Divas*), has been instituted.

¹⁷ *Economic Times*, 17 December 2005.

¹⁸ *Hindustan Times*, 22 September, 2008.

¹⁹ The term "semi-finished human capital" was first used by Majumdar (1994).

²⁰ *The Hindu*, 26 November 2000. See also Khadria (2009a, 2009b).

educated abroad, knowing that this can open up better job opportunities in India on their return (Khadria 2007).

Three older near certainties about higher education are dissolving—that it is supplied on a national basis to local students; that it is government regulated; and that competition and profit are unknown concepts. But India lacks a well-informed reform agenda for higher education. National policy across education, training, labour market development and research is partial and uneven in its grasp of the problems and solutions. Higher education participation is highly unequal between states and national policy coordination is incomplete in key areas that need a national approach, such as PhDs. Reforms have yet to be fully rooted in the new global realities of competition and the increased national and global mobility of students and workforce, and the emerging occupational fields. The mismatch between the demand for and supply of skills continues. India as yet is unable to secure full value as a national economy from the leading role played by Indian skilled labour in the global knowledge economy.

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Chapter 22

National and Global Challenges to Higher Education in Saudi Arabia: Current Development and Future Strategies

Abdullah A. S. Al-Mubarak

Introduction

The globally led knowledge-based economy is becoming dominant. Globalization is much more than trade and the worldwide mobility of products. It is based on information and innovation which are highly knowledge intensive (Carnoy 2005). The massive movements of capital in today's economy, and the mobility of goods and services, depend on information, communication and knowledge in global markets. Because knowledge is highly portable, it lends itself easily to globalization. On the other hand, globalization has a substantial impact on the transmission of knowledge (Carnoy 2005, p. 3). A global economy is not like a world economy. A global economy "is one where strategic, core activities, including innovation, finance and corporate management, function on a planetary scale on real time" (p. 2). Thus globalization brings not only profound economic changes, but also political, social, cultural, environmental and geographical implications. The juxtaposition of economic and cultural change is one feature distinguishing globalization from previous world systems, for example as manifest in the revolution of communication and information technology. Marginson and van der Wende (2007) argued that "globalization...rests on the first world-wide systems of communications, information, knowledge and culture, tending towards a single world community...spanning cities and nations with varied cultures and levels of economic development and enabling the complex data transfers essential to knowledge-intensive production" (p. 7).

Knowledge embodies the sole materialization of the mutual relationship between globalization and higher education. Universities have become the sustaining power of globalization. Marginson and van der Wende (2007) argued that: "In global knowledge economies, higher education institutions are more important than ever as mediums for a wide range of cross-border relationships and continuous global flows of people, information, knowledge, technologies, products and financial capital" (p. 4). Universities, especially, contribute to the globalization of culture, com-

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munication, knowledge and most importantly the globalization of research. This interdependence of globalization and knowledge puts immense pressure on education in general and higher education in particular to meet the vast and growing demands for better quality of education to service the highly competitive information-based global market. In the preface of *Reinventing the Research University* Weber and Duderstadt (2004) acknowledged that the driving forces of evolution in higher education have shifted from being mainly derived from the social forces in surrounding societies, to a more powerful global knowledge-dependent economy. Higher education operates as both a medium and disseminator of knowledge in the globalized knowledge-based environment. Higher education has become a much “sought-after commodity” that national governments depend on as a stimulant for economic growth and competitive capacity in a knowledge-based global market. This is a change from two decades ago when national development focused more on basic education to deliver the required skills for growth (Bridges 2004). For example, in response to globalization Singapore’s universities have been given a prominent role in that country’s “knowledge-based strategy for growth” through “industrially relevant research, technology commercialization, high-tech spin-offs, attraction of foreign talent, and injecting an entrepreneurial mindset” in graduates (Wong et al. 2007, p. 941)

Though globalization has transformed higher education systems and policies on both national and international levels these changes are more visible in the industrialized world. Developing countries are lagging behind because they are still dependent on the developed world, especially the West, not only for higher education, but also for knowledge and the technological means that enable universities to produce and disseminate information. In much literature on the impact of globalization on developing countries, disadvantages are more omnipresent than benefits. The main reason for this inequality is the lack of economic strength in the developing countries and their resulting inability to be integrated in the global system. Most states in the developing world struggle to furnish the capital and knowledge needed to survive in a highly competitive world economy, perpetuating a widening gap between the few rich industrialized countries and most developing countries (Yusuf 2001). Regardless, globalization is here and it is a reality. The former Prime Minister of Malaysia Mahathir bin Mohamad (2002) noted that developing countries have found it extremely difficult to steer through the turbulent waters of globalization. However, referring to recent Malaysian experience, he argued that governments in developing countries should make their own policies, review the impact of globalization and decide those aspects suitable for their national economy and society in future.

Although higher education institutions in the developing world still lag behind their counterparts in the industrialized countries, they are gradually becoming aware of the role of higher education as an essential factor in the transformation to a knowledge-based economy, and “a vital instrument of both international cooperation and national competitiveness” (Marginson 2007) in securing the nation’s place on the global level. This understanding is entering into government policies and strategic planning. Developing countries are becoming more reliant on academic in-

stitutions in national development, especially in the production of information and technology-based (ICT-based) education and research for the local market (Altbach 2001). Most states in the developing world exercise a major influence and control in university funding and policy. Moreover, as globalization spawns unprecedented competition among higher education institutions for overseas students, and increases the global mobility of academic institutions whether for profits or in cooperation, not just industrialized countries but some developing countries are taking advantage of these global trends.

This chapter will explain how the current development and future strategies of higher education in Saudi Arabia are being largely shaped by, and in response to, the challenges and opportunities generated by, on the one hand, global trends in higher education and, on the other hand, increasing demands for a highly qualified national workforce. Increased global openness and the unrestricted cross-border mobility of international higher education institutions are contributing to reform. The desire to move Saudi universities up the global rankings is impelling national policies and strategies to reform the existing higher education institutions and establish new ones, embodying a Saudi model for knowledge-based socio-economic growth.

The first part of the chapter reviews the socio-economic development of Saudi Arabia in the past 35 years, the investment in human resources and the key development issues in higher education. The second part examines demographic, social and economic challenges that require higher education to expand its absorptive capacities and to reform its institutions for better quality and competitive performance. The third part presents one example of how Saudi Arabia is responding to global and national challenges: the new world-class, future-model universities designed to become globally competitive. The fourth part discusses the Saudi government's long-term strategic plans for dealing with the challenges facing the national economy in general and higher education in particular.

The Socio-Economic Development of Saudi Arabia

The Kingdom of Saudi Arabia has experienced unprecedented economic and social changes and modernization over the past 35 years, mostly due to oil-derived income and state-led economic planning and development. Since the early 1970s, Saudi Arabia has utilized increased oil revenue to build its economy and society. Throughout the past seven development plans (1970–2005) the Saudi government invested heavily in national physical infrastructure, improved social and health standards and the human resources crucial to the national economy.

The Saudi planning model emphasizes long-term, sustainable growth in both the social and economic sectors. The strategic goal and driving force of national development planning since its inception has been to “reduce dependence on oil through the diversification of the economy”. Thus the approach to socio-economic development has two aspects. The first is to build national oil and petrochemical-based

industry which provides the condition for realizing the national strategic goal.¹ The second aspects is priority-based planning and allocation policy in relation to resources, taking into consideration existing economic conditions and future forecasts of both national and international changes. Both aspects are rationalized by three major national constraints: limited natural resources, oil as the only source of income, and shortage of the necessary national labour force.

In the first phase of economic development in the Kingdom, the first three development plans (1970–1984), GDP grew at a high annual average of 23.2%. In the second phase, the Fourth to the Seventh Development Plans (1985–2004) GDP grew at a lower annual average of 4.1%. Nonetheless, growth averaged 11.9% during the seven development plans overall, which is good by all general domestic and international standards. The value of exports rose from SAR 9.7 billion in 1970 to SAR 678.5 billion in 2005. The value of non-oil commodity exports rose from SAR 28 million in 1970 to SAR 71.3 billion in 2005 (Ministry of Economy and Planning 2000).

As shown in Table 22.1 basic infrastructure has received the lion share of sectoral investment, especially during the first three development plans (1970–1985). Since the fourth development plan (1985–1990), however, a growing share of government

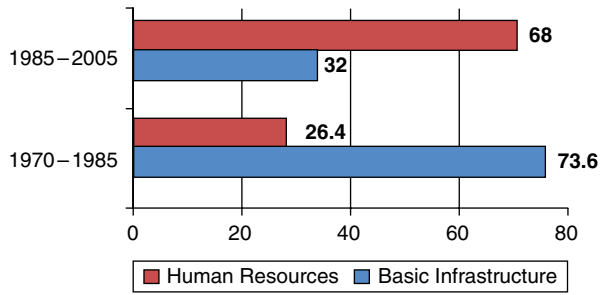
Table 22.1 Investment by sector during the eight development plans, Saudi Arabia, 1970–2010. (Source: Ministry of Economy and Planning (2005, 2006a))

National Development Plan	Total investment (%) (SAR billion)	Infrastructure (%)	Economic resources (%)	Human resources (%)	Social and health (%)	Total (%)
First 1970–1974	75.5	41.4	27.7	20.6	10.3	100.0
Second 1975–1979	347.2	49.3	28.0	14.7	8.0	100.0
Third 1980–1984	625.2	41.1	30.7	18.4	9.8	100.0
Fourth 1985–1989	348.9	28.9	20.4	33.0	17.7	100.0
Fifth 1990–1994	340.9	22.0	10.0	48.0	20.0	100.0
Sixth 1995–1999	420.4	16.2	11.5	51.5	20.8	100.0
Seventh 2000–2004	488.2	15.2	8.5	5.0	19.6	100.0
Eighth 2005–2009*	614.6	12.9	11.6	56.6	18.9	100.0
<i>Total</i>	<i>2646.3</i>	<i>29.1</i>	<i>19</i>	<i>36.3</i>	<i>15.6</i>	<i>100.0</i>

*Planned; SAR Saudi Riyals, 1.00 SAR = 0.267 USD (20 January 2010)

¹ This development strategy was preferred against other choices at the inception of national development planning, namely to rely solely on oil exports as the source for national income and development and to industrialize through foreign direct investment (Masood 1989).

Fig. 22.1 Distribution between spending on basic infrastructure and spending on human resources during the eight National Development Plans, Saudi Arabia, 1970–2005. (Source: Ministry of Economy and Planning (2005, 2006a))



expenditures has been allocated for human resources development. The percentage share of total investments in human resources increased from an average of 26% in the end of the fourth plan to 68% by the end of the seventh plan (Fig. 22.1). In the present eighth plan (2005–2010), human resources development continues to receive most government expenditure, with 57% of the planned budget.

Growth of Education and Literacy

As a result of government-led development in human resources Saudi Arabia has witnessed exceptional growth in both the quantity and the quality of education. The number of male and female students in all general and higher education stages multiplied by ten times, from about 547,000 in 1970 to over 5.37 million in 2005. In that time the number of public schools rose from 3,283 (1970) to 26,247 (2005): boys’ schools increased from 2,772 to 12,424, while girls’ schools grew from 511 to 13,489 over the same period. The number of male and female graduates from secondary education increased from 2,806 in 1970 to 239,379 in 2004. The average annual growth of graduates was 13.5% in the period 1970–2004.

As a result by 2002 there was 77.9% literacy among all persons of 15 years and over and 93.5% literacy among those aged 15 to 24 years. This compares with a literacy rate of 64.3% in 1974. In 2002 the ratio of literate females to literate males was 96:100 (Ministry of Economy and Planning 2006a).

Provision of Higher Education

Due to the emphasis on human resources within the socio-economic development strategy, the number of students in higher education (male and female) increased from just 7,000 in 1970 to 604,000 in 2005, multiplying by 86 times. In 2005, 58% of enrolled students were female; male students were 42%. Females enrolled at bachelor level constituted 327,500 (64.7%) of undergraduates, and 52.5% of new

Table 22.2 Students and graduates, higher education, Saudi Arabia, 2004/2005. (Source: Ministry of Higher Education 2006a; Saudi Arabian Monetary Agency 2006, 2007)

Level	Enroled students (2005)	New students (2005)	Graduates (2004)
<i>PhD</i>			
Male	1,139	292	63
Female	893	281	97
All students	2,032	573	160
<i>Masters</i>			
Male	5,562	1,690	540
Female	3,579	1,169	309
All students	9,141	2,859	849
<i>Higher diploma</i>			
Male	1,351	901	782
Female	319	203	111
All students	1,670	1,104	893
<i>Bachelors</i>			
Male	178,450	56,648	21,519
Female	327,482	95,350	40,213
All students	505,932	151,998	61,732
<i>Intermediate diploma</i>			
Male	67,049	35,685	15,844
Female	17,943	8,314	3,525
All students	84,992	43,999	19,369
<i>Total</i>			
Male	253,551	95,216	38,748
Female	350,216	105,317	44,255
All students	603,767	200,533	83,003

students at Bachelor level (Ministry of Economy and Planning 2006a; Saudi Arabian Monetary Agency 2006, 2007). See Table 22.2.

Saudi Arabia includes both public and private institutions of higher education. Public universities are under the supervision of the Ministry of Higher Education. Until 2002 there were just eight universities, serving almost 18 million people. That year the Saudi government instigated an ambitious expansion and reform program, driven by both global strategy and a rapid growth in secondary school graduates. The *Human Development Report* published by the Ministry of Economy and Planning in 2003 noted that expanded secondary graduates represented “a major challenge with far reaching economic and social implications”. It stated that “effective policies and measures should be developed to absorb these graduates in higher education and/or productive employment. It is therefore necessary to continue to expand absorptive capacity and improve internal efficiency of higher education institutions” (p. 10). Since 2004 the higher education budget has nearly tripled, to SAR 15 billion. Much of this has been spent on more than 100 new colleges and universities (Krieger 2007). By the end of 2006 there were 21 public universities. A further three new universities have been created: King

Abdullah University of Science and Technology, Alfaisal University and Prince Mohammad Bin Fahd University. These universities, which embody world-class ambitions and the future model for higher education in Saudi Arabia, are discussed below.

The Ministry of Education also supervises 18 teachers colleges. Other institutions of higher education categorized below the level of the bachelor's degree include 45 colleges for health-related professions,² 20 women's junior colleges, 12 technical and vocational colleges, and two industrial colleges. There are also specialized institutes and colleges for military and security education, (Mosa 2000). With the growing number of school graduates seeking tertiary places the number of private universities in Saudi Arabia also increased from one to four universities by the end of 2006. Though the private education sector already accounted for over 10% of general education (Ministry of Economy and Planning 2000), the number of private colleges also rose, from 4 to 17.

Because higher education policy and planning are situated in the framework of national socio-economic development strategy, universities are regionally distributed across almost all of the Kingdom's 13 administrative provinces, both to achieve a regional balance in national growth and to reduce pressure on the main urban centres of Riyadh, Makkah and the Eastern province where 64.5% of the Saudi population is concentrated (Saudi Arabian Monetary Agency 2007). Higher education is provided to students for free with no tuition fees. As an added incentive each student receives a monthly allowance approximately equalling US \$ 300. In addition, government- and university-provided scholarships for study abroad have played an important role since the early 1970s.

Study abroad policy has undergone three progressively interlinked phases of development. The first phase was mainly in response to a shortage of university staff. The second phase was focused on expanding the absorptive capacity of higher education, consolidating technology transfer and indigenization, and strengthening scientific and cultural relations with economically developed countries. The third and current phase reflects the need to continuously upgrade educational standards but is also selective, using specialty-oriented scholarships in targeted areas such as medicine, engineering, computer sciences, and other fields of study needed to meet the future workforce requirements of national and international firms. In 2006 a new and ambitious program of scholarships was launched, the King Abdullah Sponsorship Program. Almost half Saudi students go to the USA, UK and Canada; but recently Saudi Arabia has targeted a wide range of study destinations including Australia, China, Japan, Malaysia, South Korea, Singapore and India. Saudi Arabia is looking East as well as West, foreseeing multiple collaborations with a broad range of countries and universities worldwide (AMEinfo.com 2006b).

² In 2008, the 45 health colleges and five health institutes which used to be administered by the Ministry of Health were placed under the supervision of the Ministry of Higher Education.

Demographic, Economic and Social Challenges for Higher Education

The need for highly qualified graduates for the labour market and for future socio-economic development is central to the role of higher education in any society. The *Report of Taskforce on Globalization of Higher Education* (2003) stated that

It is impossible to ignore the vital contribution of higher education and research to the economic development of societies. Today, as technology and science advance at a breathtaking pace and jobs require an increasingly higher level of training and skills, expanding access to higher education takes on even greater importance. (p. 6)

According to the *Eighth Development Plan* (2005–2009) Saudi higher education has a “pivotal role...in the development of the scientific and technical base, in enhancement of cultural and intellectual activity, and in the provision of leadership cadres in all areas of economic, social, cultural and political activity. (Ministry of Economy and Planning 2005, p. 441) At the same time the national system “faces several challenges as a result of demographic, social and economic developments that have led to increasing demand for higher education”, placing pressure on both its absorptive capacity and its internal and external efficiency.

Demography

In 1975 the Saudi population was estimated at 7.3 million, of whom 6.2 million were Saudi citizens (89%). By 1992 total population had reached 16.9 million, with 12.3 million citizens (73%) and 4.6 million expatriates (27%). (Ministry of Economy and Planning 2006b). Population more than doubled in 17 years because of a high rate of natural growth together with an influx of foreign workers recruited to meet the needs of economic and social development. From 1992 to 2004 the Saudi population grew by 2.3% per year. The Central Department of Statistics and Information has estimated that total population was 23.1 million at the end of 2005, 16.8 million Saudi and 6.3 million non-Saudi. It is expected the total Saudi population will exceed 30 million in 2015. Saudi society is “among the fastest growing societies of the world and at the top of young societies worldwide”. More than half the inhabitants are categorized as “young” (Saudi Arabian Monetary Agency 2007; AMEinfo.com 2006a). See Table 22.3.

Coupled with the rise in the rate and number of secondary-level graduates plus the fact basic education is longer suitable to meet labour market demands for higher-skilled employment, this rapid rate of population growth constitutes a major challenge for higher education in Saudi Arabia. The other factors affecting current and future expectations of education include rising social demand for higher education as a source of knowledge and qualifications that bring social status.

Table 22.3 Comparative demographic trends. (Source: Saudi Arabian Monetary Agency 2007)

Category	Years	Saudi Arabia*	Arab countries	Developing countries	OECD	World
Total population (millions)	1975	7.3	144.6	2,967.1	925.7	4,073.4
	2003	22.0	303.9	5,022.4	1,157.3	6,313.8
	2015 est.	30.8	386.0	5,885.6	1,233.6	7,219.4
Annual average growth rate of population (%)	1975–2003	4.0	2.7	1.9	0.8	1.6
	2003–2015 est.	2.3	2.0	1.3	0.5	1.1
Proportion of population that is urban (%)	1975	58.3	41.7	26.4	67.2	37.2
	2003	87.6	54.7	42.0	75.9	48.3
	2015 est.	91.1	59.1	48.6	78.9	53.5
Proportion of population aged below 15 years (%)	2003	38.2	36.3	31.6	19.8	28.9
	2015 est.	32.5	32.5	28.0	17.8	25.9
Proportion of population aged above 65 years (%)	2003	2.1	3.1	4.3	11.6	6.0
	2015 est.	3.5	4.4	6.5	16.1	8.4
Fertility rate (births per 1,000 population)	1970–1975	7.3	6.7	5.5	2.6	4.5
	2000–2005	4.1	3.7	2.9	1.8	2.6
Mortality rate for children below 5 years (per 1,000)	1970	185	197	167	53	147
	2003	26	61	88	13	80
Life expectancy (years)	1970–1975	53.9	52.1	55.6	70.3	59.9
	2000–2005	71.6	66.9	64.9	77.6	67.0
Proportion living to 65 years (2000–2005) (%)	Male	73.4	66.3	62.3	79.6	64.5
	female	81.2	73.3	69.6	88.4	73.1
GDP per capita (in USD PPP)	2001	8,723	5,038	3,850	23,363	7,376
	2002	8,774	5,069	4,054	24,904	7,804
	2003	9,745	5,685	4,359	25,915	8,229

Est. = estimated, *PPP* = purchasing power parity

The Economy

In recent years economic factors have greatly influenced the development of higher education policies. There are two crucial challenges here. The first challenge is a growing emphasis on the gap between educational attainment and available job opportunities. According to the Ministry of Economy and Planning, "...about two-thirds of all higher education students graduate in humanities and in fields that do not match labour market needs. The problem is particularly pressing in the case of female graduates". The suggested solution was that the "Kingdom is therefore keen to take further steps—such as review of curricula and development of special training programs designed in cooperation with the private sector—in order to ensure better employment prospects for Saudi graduates. Efforts in this regard should conform to the needs of the economy, which is increasingly driven by scientific and technical knowledge" (Ministry of Economy and Planning 2003, p. 11). The second challenge is the growing need for a knowledge-based economy.

Together the demographic, social and economic challenges create the ongoing need to nationalize the work force, a process referred to as "Saudization", which began in the Fourth Development Plan (1985–1989). "Saudization indicates the substitution of foreign workers by Saudi nationals, with the aim of increasing the reliance on a local or domestic labour force in the long run" (Mahdi 2000, p. 19). Initially, Saudization meant the replacement of expatriates due to the growth of national job seekers. In its second phase Saudization was achieved by reserving specific occupations for Saudis only. In 1995, the Saudi government adopted a Resolution "whereby private enterprises employing more than 20 people are required to increase their Saudi workforce by 5 per cent annually" (International Labor Organization (ILO) 2004, p. 19). By 2000, Saudization in the public sector achieved 88% employment (Diwan and Girgis 2002) and according to the Saudi Human Development Report (Ministry of Economy and Planning 2003) was approaching saturation point. However, the foreign work force has been concentrated mostly in the private sector (nearly 5.6 million) which was only 12.8% Saudi in 2006 (Saudi Arabian Monetary Agency 2007). Public sector workers enjoy higher level of wages, opportunities for promotion and training, and suitable office hours, unavailable in the private sector (Mahdi 2000). Most Saudis also had an aversion to technical and vocational jobs, forcing private firms to bring in non-Saudis to compensate for local labour shortages. Although the attitude towards vocational employment has changed in recent years, the Saudi private sector still lacks adequate skilled and professional labour power. The government has recently implemented policies to strengthen the Saudi labour force including a Human Resources Development Fund, privatization of some public services and tighter entry restrictions affecting expatriate labour.

A major concern is rising unemployment, especially among university graduates. According to the Central Department of Statistics and Information of the Ministry of Economy and Planning, the Saudi labour force was 12.02% unemployed in 2006. The large number of expatriate workers (currently 6.41 million, 27.1% of the popula-

tion) has undoubtedly contributed but studies by the Central Department of Statistics and Information of the Ministry of Economy and Planning (2003, pp. 69–80) find that “unemployment in Saudi society is not attributable to deficiency in aggregate effective demand as it is the case with deflationary unemployment”. Rather unemployment “is of the structural type” which results when “job seekers’ qualifications and training levels do not match the requirements of the jobs on offer,” particularly “in the private sector”. This creates a serious challenge for higher education. The Eighth Development Plan (2005–2009) noted this problem, emphasized the need to raise the internal efficiency of higher education and warned that the recent expansion of absorptive capacity should not be at the expense of competence and performance. The Plan also called for improvement of teaching competency, continuing monitoring and evaluation and organization of a national and international system of accreditation.

Quality Concerns

In 2006, the concerns about relevance and efficiency were reinforced by the results of the webometrics ranking of world universities. This put Saudi Arabia’s leading universities at the bottom of the list. Although this ranking was mainly dependent on web-related publication, it sparked real concern among both academia and government officials. Though most world-ranking systems are criticized on the basis of “arbitrary weightings” criteria, “reputation” and “holistic rankings of institutions” (Marginson 2006), low ratings of universities in Saudi Arabia have awakened nation-wide calls for reform of higher education and triggered changes. A National Qualifications Framework for Higher Education in the Kingdom of Saudi Arabia has been established to

...provide appropriate points of comparison in academic standards for institutions in their planning and self review processes, for external reviewers involved in program accreditation processes and institutional reviews, and for employers, in understanding the skills and capabilities of graduates they may employ. (The Saudi National Commission for Academic Accreditation and Assessment 2006, p. 1)

In 2007, the first national conference on quality in higher education was organized by the National Commission for Academic Accreditation and Assessment in collaboration with Alyamamah College in Riyadh, and was addressed by international experts on quality assurance and accreditation. This encouraged the emergence of a quality assurance culture in Saudi institutions.

New Higher Education Models

The above mentioned national and international challenges that are progressively shaping Saudi higher education and its future planning and development have led to the emergence of ambitious new future-model universities in Saudi Arabia.

The King Abdullah University of Science and Technology (KAUST) and Alfaisal University are new leading institutions focused primarily on science and technology. Both universities aim to be among the world leaders in knowledge-based education and research, to contribute to the transformation of the Saudi economy and to pioneer the future approach of higher education in Saudi Arabia. *The King Abdullah University of Science and Technology* has been founded by King Abdullah who also supplied \$ 10 billion as an “endowment” to finance the project. In his opening ceremony King Abdullah said “It is my desire that this new university become one of the world’s great institutions of research; that it educate and train future generations of scientists, engineers and technologists; and that it foster, on the basis of merit and excellence, collaboration and cooperation with other great research universities and the private sector”. (KAUST 2008b) KAUST is an international graduate-level research university dedicated to inspiring a new age of scientific achievement in the Kingdom of Saudi Arabia. It aims to be a global leader in technological innovation and research and to transform the basis of the Saudi economy from natural resources to knowledge. It is also considered the first co-educational institution in the country. KAUST is organized in four interdisciplinary centres, not single-discipline departments as in most universities. They are biosciences and engineering, materials science and engineering, energy and the environment, and applied mathematics and computational science. KAUST is “supported by a multi-billion dollar endowment, governed by an independent self-perpetuating board of trustees and merit-based and open to men and women from around the world” (KAUST 2008a; Al-Naimi 2008).

The University was reported to be the world’s sixth richest institution even before the scheduled opening in September 2009 (Chang Da et al. 2008). It has secured agreements with world-renowned institutions including Harvard University, Stanford University, the University of California at Berkeley and University of Texas in the USA; the University of Cambridge, Oxford and the Imperial College of London in the UK; and also the Indian Institute of Technology, Institut Francais Du Petrole, American University in Cairo and the National University of Singapore. In its initial phase KAUST is focusing on selective clusters of research which reflect “importance to the existing industries in the Kingdom; the development of future, knowledge-based industries; the Kingdom’s social and economic needs; and the potential regional and international impact” (KAUST 2008a).

Alfaisal University is a non-profit private university developed by the King Faisal Foundation. Other founders and partners include the multinational companies British Aerospace, Boeing, United Technologies and Thales. Like KAUST, Alfaisal University has international affiliations with similar institutions especially in the West. As stated by Prince Khalid Alfaisal its aim “is to provide the student with the educational level he seeks abroad, to be an example of voluntary work which the private sector can contribute to the development of our homeland, and, at the same time, to employ its abilities and research centres to serve society, and to build bridges to the most advanced international sites in educational techniques and tools” (Alfaisal University 2008). According to Acting President Alan Goodridge the vision of Alfaisal University is to be “a world-class research university”. Its mission is that of a “a student-centred university” which creates, disseminates and applies

knowledge in the highly needed fields of business, engineering, life sciences and medicine, and in research and services which benefit the Kingdom of Saudi Arabia, the region and the world. The University is affiliated with Harvard Medical International, a non-profit consulting group affiliated with Harvard Medical School, to facilitate design of the curriculum, hiring policies, and other administrative procedures for its medical school. Senior faculty members at the Massachusetts Institute of Technology and the University of Cambridge are advising the College of Engineering. The engineering curriculum will focus on developing problem-solving and critical-thinking skills, which Alfaisal administrators say are severely lacking in the kingdom. "We don't want mobile textbooks," says the dean of Alfaisal's medical college, referring to rote learning. "We need students applying what they learn" (Alfaisal University 2008).

Another ambitious model is *Prince Mohammad Bin Fahd University* (PMU). PMU is a private university located in the Eastern Province of Saudi Arabia. Like KAUST and Alfaisal University, PMU hopes to contribute to "ensuring that the Kingdom has the necessary manpower with the appropriate competencies, technical knowledge and foresight to rise to the challenges ahead". PMU is based on an American model of academic programs and administrative organization. Under the auspices of Prince Mohammad Bin Fahd Bin Abdulaziz Al Saud, a coalition of 32 American universities under the umbrella of the Texas International Education Consortium are helping to set up and run the new university in its first two years. Future plans include branches of the university in other parts of the country and partnerships with international universities (Education and Human Resources News Stories 2006). PMU's vision is "to be unique and distinguished institution of higher education". The vision is to be realized through its role in preparing leaders in knowledge-oriented fields of education, enriching and developing intelligence, and methodological and technological innovations. It aims to develop the use of educational technologies and link academic programs, research and training to local community work environments (PMU 2008). PMU plans to accommodate 5,500 male and female students in its first five years (2008–2013). The main focuses of the university's programs are mechanical, electrical and civil engineering; nano-technology, information technology and business administration (Al-Wehameed 2008).³

Because they aim to be globally competitive and among the world's leading institutions in knowledge-based research, the above three new-model universities are associated with western higher education institutions and research centres and all use English as the medium for learning. Similarly, the Ministry of Higher Education may invite foreign universities to build campuses on the country's soil. All of these moves have the potential to both contribute to meeting the increasing demands for higher education and reducing the need for offshore overseas study, thereby directing investment in higher education into national capacity building.

³ www.saudigazette.com.sa, 2008.

In addition to these globally oriented developments, other initiatives are being taken. In an update on global higher education in 2008 the national higher education research institute of Malaysia IPPTN indicated that

The Kingdom of Saudi Arabia is at an interesting junction undergoing rapid transformation in higher education. In October 2007, King Abdullah consented to the establishment of 17 new colleges, among which are colleges designed specifically for the women. These new colleges will venture into areas such as naturopathy, nursing, pharmacology, applied sciences, administrative and human sciences, languages as well as having common disciplines like medicine, dentistry, engineering and computer sciences (Chang Da, et al. 2008).

According to the Saudi Ministry of Higher Education the number of colleges in engineering and computer science has risen from 16 to 57, medicine from 18 to 50, university hospitals from 3 to 12 and community colleges from 4 to 30.

Forward-looking Strategies

The future development and planning of higher education in Saudi Arabia is located within two national long-term strategies: the Long-Term Strategy 2025 (LTS 2025) and the Future Plan for Higher Education in Saudi Arabia.

LTS 2025: The LTS 2025 was a product of a National Symposium organized by the Ministry of Economy and Planning on the “Future vision of the Saudi economy” held in Riyadh in 2002. That Symposium evaluated the past performance of the Saudi economy, and developed strategic options for dealing with current and future national economic challenges, as the foundation for a long-term strategy to achieve the future vision of the economy:

By the will of Allah, the Saudi economy in 2025 will be a more diversified, prosperous, private-sector driven economy, providing rewarding job opportunities, quality education, excellent health care and necessary skills to ensure the well-being of all citizens while safeguarding Islamic values and the Kingdom’s cultural heritage (Ministry of Economy and Planning 2004).

Higher education is expected to play a crucial role in supplying highly skilled and well-qualified labour at the required rate, as specified by the 2005–2024 strategy for economic development. In the LTS 2005 projection it is expected that the number of secondary-level graduates in the labour market will increase from a little over one million in 2004 to 5.2 million in 2024, growing at average annual rate of 8.4. This will inflict continuous pressure on both the quantity and quality of higher education institutions in Saudi Arabia, and in the LTS it is planned that the number of university graduates will increase from just over 800,000 in 2004 to almost four million in 2024 at an average annual growth of 8.2%.

A Future Higher Education Plan: To achieve academic excellence, raise the absorptive capacities of universities to meet growing public demands for higher education due to the high population growth rate, meet the global pressure on educational standards, address the growing demands for financial support, and provide

the highly qualified graduates needed in the labour markets, the Ministry of Higher Education in Saudi Arabia is working on a 25-year strategic plan to reform university education. The overall objective is “to fulfil the challenges of a sustainable first-class academic development process”. The plan is of critical importance in developing the Saudi higher education system: in improving its fundamentals, its effectiveness and its social contributions; and in promoting its outcomes. The plan is designed to synthesize the contributions of the society’s social, educational and economic sectors. The Ministry of Higher Education designated the Research Institute at King Fahd University of Petroleum and Minerals (KFUPM) to conduct the detailed studies and obtain the data required to resource the 25-year plan. It is also developing pivotal criteria for producing progressive 5-year plans. In collaboration with the Ministry of Higher Education, KFUPM has set the guidelines needed to coordinate and manage the project, named “Aafaq” which roughly translates into English as “horizons” (KFUPM 2008).

The main goals of the Aafaq project are to improve utilization of both human and financial resources, and to support and encourage universities to allocate more resources for research and development (R&D) and community services, (Sheikh 2007). The project is committed to producing detailed studies of the major issues and problems facing higher education in Saudi Arabia, identifying practical solutions to each problem, preparing the long-term strategic plan, preparing a detailed implementation plan covering the first 5 years, and proposing to higher education institutions themselves mechanisms for continuous strategic planning and implementation of strategic and operational plans (Fig. 22.2).

To encourage the widest possible scale of involvement of government, private organization and establishments, and the community, in carrying out the plan, KFUPM held workshops, seminars and training sessions throughout the Kingdom.

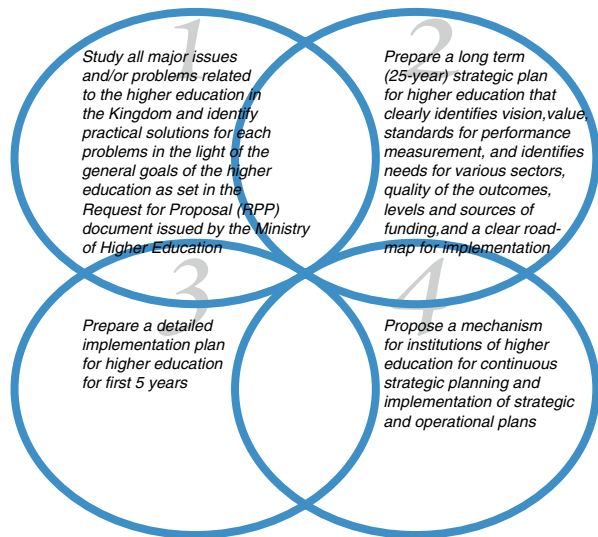


Fig. 22.2 The four main goals of the Aafaq Project. (Source: <http://aafaq.kfupm.edu.sa/project/goals.asp>)

Conclusions

In response to national and global demands for improved quality higher education, Saudi Arabia has embarked on considerable efforts to reform its higher education system. This reform has been the product of a wider process of national political and economic reform which began early in the 2000s, aimed at encouraging political participation, promoting economic growth, increasing foreign-direct investments and expanding employment opportunities. Higher education institutions are necessary means in facilitating the nation's transition to a global, knowledge-based economy. Saudi Arabia has adopted a range of policies to deal with the demographic, economic and social challenges facing its national education system. These challenges include the general increase in the population and particularly the youth population, which constitutes more than half the country. The Saudi government has adopted two main policy measures to expand the absorptive capacity of higher education. The first policy is the expansion of old universities from eight in 2004 to 21 in 2008, and the creation of new universities. The second policy is a vast expansion of scholarship programs which sent more than 40,000 students to universities all over the world in less than 4 years.

However, the demands for a high-skilled national workforce and the pressures of global competition generate more crucial challenges that go beyond the mere expansion of higher education institutions. At issue are the internal efficiency of higher education and the competence of its graduates. The Saudi government has implemented three policy measures designed to assure the quality of the outputs of higher education. The first policy is embedded in scholarship programs. In contrast with the previous study-abroad policy, scholarship programs, especially the King Abdullah Program, are selectively focusing on specific study majors of top priority to the development of the Saudi national economy and society, such as engineering, medicine, information technology and science. The second policy approach stresses the improvement of internal efficiency of universities through preparation and support programs that assure the implementation of quality education and research. A National Authority for Academic Evaluation and Accreditation has been established to evaluate academic programs and curricula against both national and international criteria. The third policy approach is the creation of new world-class research-oriented universities: KAUST, Alfaisal University and KMFU. In addition, the Ministry of Higher Education has prepared a 25-year long-term strategic plan for the reform and development of the Saudi higher education system.

The development of Saudi policies and the planned reforms in higher education are an unfolding process. Nevertheless, initial indications are promising. For example, the planned expansion of absorptive capacity is being achieved so far. In addition to the more than 40,000 students who benefit from King Abdullah Sponsorship Program, the Ministry of Higher Education has noted that more than 88% of high school graduates were accepted in tertiary education in 2008.

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Part VI
Concluding Reflections

Chapter 23

Regional Dynamism and Inequality

Simon Marginson, Sarjit Kaur and Erlenawati Sawir

Introduction: Regional Development and Inequality

Higher education and research are forging ahead in some Asia-Pacific countries but not all. In the Confucian systems of East Asia and Singapore, R&D investment and participation in tertiary education are at or approaching Western European levels, as Chap. 3 discussed. Growth brings difficulties of its own. The quality of human resources is a constant issue, and there are tensions over organizational cultures and priorities and the values underpinning state intervention: Chapter 13 discussed this in relation to Singapore, and Chap. 7 in relation to Tsinghua University in China. In the most mature Confucian system, Japan, the previous era of rapid development of higher education has given way to a holding operation (Chaps. 17–18). The last is also true of the British heritage systems in the Western Pacific, Australia and New Zealand—and these nations have also become overly confined to a narrow commercial orientation in their regional relations (see Chap. 20).

But these are better problems to have than the under-development that constrains Asia-Pacific higher education systems elsewhere, as well as the neighbouring countries of South Asia, which are yet to achieve the Confucian take-off. Across the region, capacity and performance in Asia-Pacific higher education are highly uneven. Modernization is much further advanced in some societies and higher education systems than others. Levels of global connectedness and activity vary sharply. In the light of the data in Table 1.2 and the country chapters in Part III of *Higher Education in the Asia-Pacific*, we conclude that the higher education systems of the Asia-Pacific fall into four main groupings, which will now be described.

Note here that nearly all the Confucian-influenced Asian systems are in the top groups 1 and 2. The exceptions are isolated North Korea, in a world of its own, and Vietnam (Chaps. 3 and 15 and the further discussion about higher education in Vietnam below). Southeast Asian systems are spread across groups 2, 3 and 4.

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Group 1: Highly Developed Knowledge Economies

In group 1 the East has “risen”: Japan, South Korea, Hong Kong China, Taiwan China, Macau China, Singapore, Australia and New Zealand (see Chaps. 3, 10, 13, 17–18 and 20). All of these systems are in localities with per capita incomes of \$ 25,000 a year or more; and all except Korea and New Zealand exceed \$ 30,000 per person, levels of national economic capacity that are typical of those countries in Western Europe that sustain high-quality higher education systems.

Internet use and tertiary education enrolment, both of which peak in South Korea, reach half of the total population, or soon will. All of these systems have stable education policies. All except Macau, which is too small—and perhaps too dependent on the gambling industry—to sustain a fully fledged higher education system, maintain a layer of research universities that have become global players.

Group 2: Middle Emerging Knowledge Economies

In the emerging systems, “the East is Rising”: China, Thailand and Malaysia. These countries have been a principal focus of *Higher Education in the Asia-Pacific* (see Chaps. 3, 7, 9, 11–12, 14, 16). Unlike the systems in group 1, in these nations there are marked internal variations in levels of economic and social development and tertiary participation. Cities with Western European style CBDs sit within peasant hinterlands. Research is still emerging—though it has rocketed up in China which is becoming the world’s number two R&D power after the USA.

According to the World Bank data for 2008 China still has a relatively low per capita income of \$ 6,020 per capita but in higher education and research it is heading for group 1. Participation is trending upwards rapidly, the nation already has 22 research universities in the world top 500 and the strategies described at Tsinghua University (Chap. 7) are those of a leading global research university. In China the evolution of higher education and research is led by a competent and focused state machine able to mobilize the necessary resources—though arguably, there is a strong instrumental bias and the proportion of research funding allocated to industry and away from higher education is too high (Chap. 3). In Thailand higher education is lower on official agendas. In recent times the state has been plagued by political instability. But published research is growing rapidly (see Table 3.2), indicating deep scholarly capacity in a university system that is yet to undergo full modernization, as Chap. 14 pointed out.

Malaysia spends more on higher education than does Thailand. The top end of the private sector is impressive and the nation is a significant exporter of tertiary education. But a professional and potentially effective state machine is retarded by hyper-politicization and by the racialized character of the polity, which undermines the merit principle in higher education. Government is more effective at the level of policy rhetoric than policy implementation, in contrast to China. Significant na-

tional resources are allocated to scholarships and loans for students from *bumiputra* families who would participate without the subsidies. Despite much talk about research, spending is inadequate and published science is only just beginning to move ahead of the systems in group 3. As Chaps. 9 and 11 show the nation's stronger universities such as University Sains Malaysia are striving for higher performance using global benchmarks. But salaries are low, academic capacity needs to lift, and research policy still seems overly instrumental and focused on applied and commercializable research, as is the case in many systems in the region. Domestic PhD training capacity is still insufficiently developed.

Group 3: Less Developed Emerging Economies

In these systems the “rising” of the East is slow and uncertain. This group includes Vietnam, which might be heading for group 2, Philippines, Indonesia, Lao PDR, Brunei and Fiji. Brunei is a special case: an oil-rich enclave where local development of higher education has not been a high priority. Fiji has an established university but suffers from isolation and internal political division and instability. Lao PDR is the poorest of the group in per capita terms (\$ 2,040) but policy is planned and focused and the national university is developing well.¹

The Philippines, Indonesia and Lao PDR have modernized zones in the cities and universities with some global connections. But funding for tertiary education is too low—in Indonesia in 2007 public investment in tertiary education was just 0.3% of GDP (OECD 2010, p. 220). The inevitable result is low participation rates and tiny research outputs. Except in the Philippines, tertiary participation is poor and also very uneven by region. If mass and growing tertiary education is one hallmark of the emerging modern nation (Altbach et al. 2009, p. 7; Varghese 2009), here modernization is lagging. In the Philippines the large-scale educational infrastructure put in place in the post-war boom period was never fully resourced, and the subsequent resort to a self-funded private sector as the primary mode of growth has been a disaster for quality. In all of these systems, there is research infrastructure only in small pockets, and little journal access, for example, in Indonesia (Chap. 10). Vietnam created 283 research papers in 2007, Indonesia 198, the Philippines 195 (NSB 2010). In Malaysia there were 808 papers: Table 23.5). Research output in Indonesia and the Philippines has been almost unchanged for the last decade, in sharp contrast with the group 1 and 2 systems.

Though the problems are tough, under the right circumstances each of these systems could reach group 2. But national factors vary, including economic growth, and organizational cultures in higher education. Trajectories will probably diverge. One common factor in group 3 is that with the possible exception of Lao PDR, government is not up to the task. National higher education policy tends to be short

¹ Research case study by Co-Editor Simon Marginson of the National University of Laos, in the context of global linkages and national policy on higher education, October 2010.

term and incoherent, under-supported by key economic ministries and fragmented by regional and political factors. Vietnam has a strong education culture in society and at its best the state is capable of concentrated effort and effective civic and public coordination, but these factors have not been translated into the higher education and research system. Tertiary education has been a relatively low priority since independence and has been stymied by ill-conceived privatization schemes and state/university tensions. Another common factor in these systems is that professionals in government and public universities cannot live on their salaries alone. Typically they resort to second jobs or corruption, which inhibits both the quality of teaching and the time required for scholarship and research. This problem also hampers the group 2 systems to some degree.

Group 4: Economies with a High Incidence of Pre-modern Undevelopment

This group includes Myanmar, Cambodia and some of the island Pacific. Here “the East” is not “rising”. Illiteracy is a serious retarding factor. Research and global connectedness are minor. In one way and another, nation-states are dysfunctional in higher education. The attention of government and foreign donors is focused on basic not tertiary education. Cambodia published 26 science papers in 2007 (NSB 2010) and the national university needs reform (see Chap. 8). Good work is done by some academic leaders but corruption in both the state and the university is a dominant influence rather than a marginal problem.² In Myanmar rule by force and lack of civic and intellectual freedoms retards the potential of higher education. A growing layer of high-calibre educated people constitutes danger for the regime, rather than being seen as a necessary tool of national modernization.

Comparison with South Asia

It is instructive to compare the above Asia-Pacific systems with those of neighbouring South Asia. The comparison with South Asia is all the more useful given that in Western commentary “China ‘n India” are often mentioned in the same breath, as rising powers at world level—a cliché that acknowledges the economic size and demographic weight that India shares with China but obscures the differences between China and India, and effaces the rest of East Asia.

Table 23.1 summarizes selected demographic, economic, connectedness, education and research indicators for the South Asian nations.

² In addition to Chap. 8, research case study by Co-Editor Simon Marginson of the Royal University of Phnom Penh, in the context on global linkages and national policy on higher education, October 2010.

Table 23.1 South Asia: Selected demographic, economic, communicative, education and research indicators. (Sources: Data bases of World Bank 2010; Asian Development Bank 2009; UNESCO Institute for Statistics 2010; National Science Board of the United States 2010)

Nation	Population 2008	GDP PPP 2008	GNI per head PPP 2008	Internet users per 100 persons 2007	Adult lit- eracy (male & female, 15 years & over) 2007	Public education spending propor- tion of GDP 2008	Gross Enrolment Ratio tertiary education 2007	Scientific papers 2007
	millions	US \$ bill.	US \$		%	%	%	
<i>SOUTH ASIA</i>								
India	1140.0	3388.5	2,960	7	66.0	3.0	13	18,194
Pakistan	166.0	439.0	2,700	** 11	54.9	...	5	741
Bangladesh	160.0	213.5	1,440	** 0	53.5	1.9	7	235
Sri Lanka	20.2	91.9	4,460	** 6	91.5	2.3	...	124
Nepal	28.6	31.8	1,120	1	56.5	3.3	...	72
Bhutan	0.7	3.3	4,880	** 6	55.6	* 5.8	5	3
Maldives	0.3	1.7	5,280	23	97.0	9.5	...	2

... = Data not available; PPP=purchasing power parity, designed to represent dollar amounts in each country as equivalent in terms of local purchasing power; GNI=Gross National Income; * data for 2007 ** data for 2008

Of the larger higher education systems of South Asia, India sits at the bottom of group 2. It shares some characteristics of group 3 such as the highly fragmented and ineffective character of national policy on universities, but its research output (while disappointing given India's size and the wealth in parts of the country) is stronger than that of the group 3 systems. Tertiary participation rates are trending upwards, though less rapidly than in East Asia, and at a lower level—still only 13% in 2007. Sri Lanka and Pakistan belong to group 3 with the first the stronger of the two. Pakistan exhibits a dramatic contrast between cities and countryside, in education, literacy and global connectedness. Bangladesh and Nepal are in group 4. Globally connected institutions in Bangladesh have few resources and the tasks of government in higher education are overshadowed by the vast pre-modern rural heartland. Each of Bangladesh and Pakistan have larger populations than all but three other Asian nations, underlining the challenge they face. Overall capacity and performance in higher education and research is significantly weaker in South Asia than it is in the Asia-Pacific region. The two regions share the same pronounced unevenness between systems, but South Asia lacks the element of Confucian dynamism at the top.

On 3 January 2010 Prime Minister Dr. Manmohan Singh (2010) opened the 97th Indian Science Conference with the words: “If India is to re-emerge as a knowledge power in the 21st century, then it can only be through developing a strong capability in science and technology”. But like Malaysia, India has the k-economy rhetoric and potential without the performance. There are some strong institutions. The Indian Institutes of Technology (IITs) benefit from a highly selective student intake. But the higher education system enrolls about 12% of the eligible students, as noted there are large regional imbalances, there are wide disparities among socio-economic groups and a gender imbalance that subordinates women. Most public universities, which are largely run at state (provincial) level, are long overdue for modernization reforms. Many are too small in size and scope. Average institutional size is only 600, resulting in diseconomies of scale and narrow staff complements (Agarwal 2009). The many small private sector institutions cannot fill the gaps, especially in research. There are endemic quality problems, creating a distraction—much policy energy is focused on the design of quality assurance mechanisms, diverting energy into wrangles over governance and away from reforms to lift real quality.

After a long stagnation research outputs in India have begun to grow more quickly. The US National Science Bureau notes that “according to the UNESCO statistics, India performed \$ 15 billion of R&D in 2004” in PPP terms (NSB 2010, p. 4.35). R&D spending in India for 2006 has been estimated at 1.03% of GDP (Agarwal 2009, pp. 252), which is two-thirds the rate of funding of China (see Table 3.2). Almost 80% of all R&D investment in India is in the public sector but most goes to government research agencies with a minor share to universities. Just 17.8% is classified as basic research (Agarwal 2009, p. 253): India shares the low priority given to basic research characteristic of most Asia-Pacific systems, but is not as active in applied research as are the Confucian systems. A key problem is lack of capacity. In the early 2000s Japan had 5287 researchers per million people, Korea 3187, China 708 and India just 119. In India only about 8,500 doctoral de-

gresses in science and technology are awarded each year (pp. 257–258). As noted by Binod Khadria in Chap. 21, doctoral numbers are concentrated in a small group of institutions—while at the same time Indian PhD students in the United States make a major contribution to that nation’s knowledge economy.

In 1995 the output of science papers in China was at the same level as India. In 2007 China’s output was three times the size of India’s, while research outputs in South Korea, with just one-thirtieth of India’s population, had moved past those of India as early as 2001 (NSB 2010). Table 23.2 summarizes the trend lines.

The fact that some states in India do better than others in education tends to obscure the overall picture. Official national data on higher education are poor and there are few policy papers. India’s recent national discussion of the regulation of foreign private providers again indicates the tendency of policy and public debate to become distracted by side issues rich in symbolic politics, rather than focusing on the central matter—which is how to achieve and support a nationally driven and coordinated investment in, and modernization of, higher education and research. The contrast with China, Taiwan China and Singapore could not be greater.

Why the Variation Between Systems?

In the introduction to this book we stated that the capacity and performance of higher education systems, and also the individual institutions within those systems, is shaped by a combination of objective and subjective factors. We talked of the interaction between “structure” and “agency”, and similarly, using Pierre Bourdieu’s (1993) theorization, the interaction between “position” and “positioning” (see also the discussion of Australia’s global strategy in Chap. 20). It is partly a matter of elements that are given and cannot be controlled, and partly a matter of conscious intelligence and effort. To repeat Karl Marx’s much quoted 1852 summation in the *Eighteenth Brumaire of Louis Bonaparte*, nations and universities make their own global fate, but they do so under circumstances that they inherit from the past.

Table 23.2 Annual output of scientific papers in China, India and South Korea, 1995 to 2007. (Source: NSB 2010)

	1995	1996	1997	1998	1999	2000	2001
China	9,061	10,526	12,172	13,781	15,715	18,479	21,134
India	9,370	9,753	9,617	9,945	10,190	10,276	10,801
Korea	3,803	4,771	5,802	7,057	8,478	9,579	11,007
	2002	2003	2004	2005	2006	2007	
China	23,269	28,768	34,855	41,604	49,575	56,806	
India	11,665	12,461	13,369	14,635	16,741	18,194	
Korea	11,735	13,401	15,255	16,396	17,910	18,467	

Korea = South Korea

A useful metaphor here is that of a game of cards. What universities and systems can achieve in the global, national and local settings is a function of two factors—the hand of cards that they have been dealt, and how well that they play those cards. They cannot control the hand of cards they have been dealt. This includes their history, geography, cultures and their language of use; their economy and its resources and rate of growth; the accumulated skills of their populations; and the history and capacity of the higher education and research systems they have inherited. They *can* control the way they play those cards. That is a matter of vision, strategy, focus and coherence, energy and work. To bend the metaphor a little, nations and institutions also have some scope to improve their cards by investing in future capacity—though it takes time for the benefits to show.

In *Higher Education in the Asia-Pacific* we have emphasized the scope for imagination, strategy and initiative. This is true of both institutions and systems. It is especially true for individual institutions when they operate in the global setting, where the hold of national regulation is incomplete and there is scope for initiative even by universities with modest means (see the discussions of globalization in Chap. 1 and of the visions and strategies of university presidents in Chap. 2; and the accounts of the individual universities in Part II). And there is no doubt that some universities in the region have displayed an unusual capacity for imaginative strategy and bold initiative which has lifted them in the world. The National University of Singapore (Chap. 13) is a standout. On the other hand others may underperform relative to the resources, the “cards” at their disposal, as suggested by the account of internationalization policy in Japan in Chap. 18.

However, in relation to both higher education systems and institutions it is important to emphasize also that resource limitations constitute a solid barrier. All the strategic imagining in the world cannot wish away the need for real buildings, adequate equipment and trained people. In Papua New Guinea (see Chap. 19) the nation is very poor and it is inconceivable that it could establish a Confucian style system even if the cultural conditions were right. And in Vietnam, where the cultural conditions for a Confucian system *are* in place, national wealth is as yet insufficient to establish a layer of world-class research universities. Of the top 500 universities in the Shanghai Jiao Tong University ranking in 2006, just 21 (4.2%) were in nations where per capita GDP was below the 2005 global average of \$ 9420 (World Bank 2010). Two-thirds were located in China, excluding Hong Kong and Taiwan. All but one of the top 100 universities were located in nations with per capita incomes of over \$ 19,500 in 2005.³ This excludes all of the Asia-Pacific except Japan, Australia, New Zealand, Korea, Singapore, Hong Kong China and Taiwan China.

However, there are a range of intermediate cases in groups 2 and 3. Here outcomes are not necessarily converging—nations with similar macro-resource positions can follow different pathways in higher education. It is partly a matter of what priority is given to higher education within the economy, and partly a question of how well the resources are used. Some trajectories (for example, China in

³ The exception was Moscow State University.

group 2, perhaps also Lao PDR in group 3) look more promising at present than others (for example, Malaysia and Thailand in group 2, Philippines and Indonesia in group 3). China has a much lower per capita income than Thailand, and a lower level of government investment in the economy, including education funding as a proportion of GDP, than Malaysia. But China's higher education policy is clearly more successful than those of the other two countries. This is not simply a function of size—though size helps! Nor is China's success driven only by its tolerance of rich/poor divides within the nation, which frees up resources for the accelerated development of world-class regions and sectors, while other zones tend to languish. Clearly, China is meeting several policy goals simultaneously. Growing higher education is a complex process and more than raw resources are at work. Resources must be used intelligently to build the right capacity and connections.

Mediating Factors

What then mediates the relationship between structure and agency, position and positioning, objective and subjective factors? We suggest that there are three primary factors. The first is the state of the macro-economy and the connections between higher education and economic development. It is notoriously difficult to identify clear linkages between higher education and the economy but it is clear that economic modernization (which is not the same thing as economic growth, though growth is often used to drive modernization) provides the best conditions for the expansion and modernization of higher education and research. An open, evolving economy makes superior use of the additional capacity in trained labour and of the new social and cultural resources that higher education creates. The second factor is the human resources and organizational cultures of systems and institutions. Much depends on breadth and depth; responsiveness and flexibility; plurality and creativity; and the structuring of hierarchy, regularity and incentive. Parts of the book, including Chaps. 7 and 12, have touched on these aspects. The third—and most important—factor is the role and character of government.

All of the Confucian systems discussed in Chap. 3 moved forward in a generation or less from disadvantaged positions, through their own ideas and effort. Above all their evolution was fostered and fed by state policies. Consider the respective cases of China and Singapore. They were dealt totally different hands of cards: 1,325 million people versus five million people, a long cultural history versus little history at all, differing levels of poverty and varied resource configurations. Both have played their cards with considerable skill, decisively lifting their long-term global position by rapidly expanding and improving their systems of higher education and research. Along with the Confucian educational values that are embedded in the population (the cultural conditions), it is the calibre of the machinery of state (the political conditions) that distinguishes China and the group 1 systems in East Asia from the rest of the Asia-Pacific.

In higher education and research in the Asia-Pacific region, in this more global era, the central role of nation-state leadership, administration and investment is a continuing fact of life. This was repeatedly made clear in the chapters in Part III, which turn largely on national policy issues, and in the cross-regional overviews of transnational education and education export in Chaps. 5–6. Here one vital part of the role of government lies in its relationship with institutions, and the scope for agency among executive leaders and globally connected researchers within the national regulatory framework—in other words, whether national government works with, or against, building global capacity and initiative at university level.

The Role of Government

The role of government shows itself in three different ways in the chapters in this book. First, there is government as a direct presence in the economy and higher education system: the impact of its own spending and productive activities in publicly owned institutions. Second, government as central coordinator of higher education policies on a national basis. Third, government as the driver of systemic and institutional reforms in higher education and research—for example, the creation of market competition within national systems (though this is not always helpful); and the corporatization of institutions to bring them closer to business models. Most of the chapters in Parts II–IV touch on this last aspect of the role of government.

Modernization and the Economy

The evolution of higher education is part of the larger process of modernization. This includes a growing openness to global economic and cultural flows, growth of manufacturing and services relative to agriculture, a shift of people from the country to the cities, the spread of middle-class consumption and global communications, and more sophisticated governmental forms and techniques.

Modernized firms, markets, governments, institutions, the communications sector and public life all need graduates. The trend to mass tertiary education is underpinned by the spread of graduate employment from its origins in the public sector to the different parts of the private sector. Government, services and the export-oriented private sector also need at least some people who can work across national borders. This again highlights the need for university graduates, who have the agency and cultural resources to more readily adapt to global work. Increasingly, government, business and industry also draw on scientific, social and market research. Higher education produces research, and trains others that do it.

Beyond policy the primary drivers of the expansion of higher education are, on one hand, growth in the economic requirements for skilled labour and, on the other hand, popular pressure for the expansion of social opportunities. All Asia-Pacific governments want to secure a closer fit between higher education, work and social

opportunity (Agarwal 2009, pp. 168–246). It must be added that a precise fit is impossible to find; and there are persistent reports of graduate unemployment in most countries. In India the rate of unemployment is higher among people with more than 12 years of education than any other group (Agarwal 2009, p. 194), though this is an extreme case. The lack of fit is not simply a function of the fact that social demand for university places can exceed labour market demand for skills. Arguably, the lack of exact fit is endemic to the way labour markets work.

Many employers, and many graduates, treat university degrees as generic rather than occupationally specific, regardless of the field of study. In all countries a high proportion of graduates work in fields other than those they were trained for; while many professional jobs are filled by people not specifically trained in the particular professional field. Further, regardless of the closeness of the fit, a nation is better served by having a pool of unemployed graduates than having a pool of persons undereducated and unemployed. Graduates more quickly respond to new opportunities, are flexible, and generate higher productivity over the course of their lifetimes—once they are in work. Higher education can also broaden the participation of women in the workforce by equalizing professional training opportunities, though this alone is insufficient to overcome gender segmentation. Many vocational programs are provided in second sectors with lesser status than universities. Regardless of how practical are the programs, second sector graduates can run up against status barriers in the labour markets. A few Asian economies such as Singapore have healthy vocationally oriented sectors. Lifting those sectors can be a major challenge for policy makers elsewhere.

The fit between the growing social use of higher education and the demand for graduates in the labour market is stronger in the Confucian systems than elsewhere. In East Asia there are continuing debates about whether graduates have been appropriately prepared for the workforce, for example in Japan. But in the Confucian systems, student enrolments seem to have grown more or less lock-step with modernization, the transition from agriculture to manufacturing to services, and the people movement from country to city. Much of the momentum of modernization derives from above average rates of economic growth.

Table 23.3 summarizes regional economic growth data for the 2001–2009 period. The relatively high growth rates over the period for China (especially) and Korea, creating additional public and private resources, help to explain the expansion of tertiary education and research in those countries (Chaps. 3 and 16 discussed the trajectory of China). Likewise the stagnation of economic growth in Japan helps to explain the fiscal pressures that have weighed heavily on higher education institutions (Chap. 17). High growth rates off a very low base as in Myanmar and Timor-Leste do not necessarily signal a growing capacity to support tertiary education. But the decade of solid growth in Vietnam and Indonesia, group 3 countries, suggests they are now under performing in higher education and research. In Vietnam, Lao PDR and China growth was robust in 2009—unlike half of the nations in the table where global recession triggered a fall in real GDP.

Government Spending

Table 23.4 shows that the size of the public sector varies across the Asia-Pacific, from a low of 13.2% of GDP in Taiwan to more than 30% in the small island nations. It is noticeable that the strong market economies of Taiwan, Hong Kong China (14.5%) and Singapore (14.7%) have small public sectors designed to make room for the private sector. Even in socialist China the public sector is only 19.3% of the measured economy. More surprising is the fact that in some relatively poor economies such as Cambodia (14.3%) the public sector is again very small. The aggregate share of government as a proportion of GDP is a crude proxy for the economic weight of government but the data in Table 23.4 helps explain why activities conducted in the public sector in Europe are often found in the private sector in Asia; for example in health, transport and communications. One such sector is higher education. The private sector plays a much larger role in first degrees in most of East and Southeast Asia than in OECD nations outside Asia. This is true of both some Confucian and some non-Confucian countries. In Japan (Chaps. 17–18) Korea, Indonesia and the Philippines most higher education institutions and students are in the private sector. In Malaysia the private colleges have been the main site of recent enrolment growth and enrol almost as many students as the public institutions. The private sector is an important second-level player in Singapore and is growing in China. However, in all national systems the principal research-intensive universities are found in the public sector, supported by government funding and subject to the government shaping of priorities.

The clear message of Table 23.4 is that the size of government spending in itself does not determine whether a country is economically strong, and whether its higher education and research are travelling well. Nor does it determine the level of government influence. Government has a pronounced shaping influence in universities in Taiwan, Singapore, Hong Kong China and Japan despite its modest spending in the economy as a whole. But if government is a small spender, high investment in higher education and research has to be part privately financed. In practice this means students. Governments are consistently disappointed with the levels of industry funding for education, but industry mostly takes the view that it should not be expected to fund institution that serve the whole economy, and whose graduates are just as likely to end up working for competitors.

Parallel to the relatively advanced role of the private sector, coupled with the relatively small size of government, the private share of educational costs is also relatively high in East Asia and parts of Southeast Asia. Where total state outlays fall below 20–25% government cannot support the full costs of higher education. Some private funding is inevitable. In addition, in the Confucian systems, including Vietnam, household funding of extra tutoring outside formal institutions plays a major role in the education economy. Public subsidies remain dominant in Malaysia, where students in private colleges can access subsidized student loans. In Chap. 4 Lijing Yang discussed the relation between public/private financing and the growth of enrolments in Asia-Pacific. The region is unique at world level in that there is

Table 23.3 Annual growth in real GDP in Asia-Pacific countries, 2000–2009. (Source: Asian Development Bank 2009)

	2000 (%)	2001 (%)	2002 (%)	2003 (%)	2004 (%)	2005 (%)	2006 (%)	2007 (%)	2008 (%)	2009 (%)
<i>East Asia</i>										
China	8.4	8.3	9.1	10.0	10.1	11.3	12.7	14.2	9.6	9.1
Hong Kong China	8.0	0.5	1.8	3.0	8.5	7.1	7.0	6.4	2.2	-2.8
Taiwan China	5.8	-1.7	5.3	3.7	6.2	4.7	5.4	6.0	4.7	-1.9
South Korea	8.8	4.0	7.2	2.8	4.6	4.0	5.2	5.1	2.3	0.2
Japan	2.9	0.2	0.3	1.4	2.7	1.9	2.0	2.4	-1.2	-5.2
<i>Southeast Asia</i>										
Vietnam	6.8	6.9	7.1	7.3	7.8	8.4	8.2	8.5	6.3	5.3
Lao PDR	6.3	4.6	6.9	6.2	7.0	6.8	8.6	7.8	7.8	7.6
Cambodia	8.4	7.7	7.0	8.5	10.3	13.3	10.8	10.2	6.7	-2.0
Thailand	4.8	2.2	5.3	7.1	6.3	4.6	5.1	4.9	2.5	-2.3
Myanmar	13.7	11.3	12.0	13.8	13.6	13.6	13.1	12.0	10.2	10.4
Philippines	4.4	1.8	4.4	4.9	6.4	5.0	5.3	7.1	3.7	1.1
Malaysia	8.9	0.5	5.4	5.8	6.8	5.3	5.8	6.5	4.7	-1.7
Singapore	9.1	-1.2	4.2	4.6	9.2	7.4	8.6	8.5	1.8	-1.3
Brunei	2.8	2.7	3.9	2.9	0.5	0.4	4.4	0.2	-1.9	-0.5
Indonesia	4.9	3.6	4.5	4.8	5.0	5.7	5.5	6.3	6.0	4.5
Timor-Leste	13.7	16.5	2.4	0.1	4.2	6.2	-5.8	8.4	12.8	7.5
<i>Pacific</i>										
Australia	4.0	2.0	3.8	3.2	4.1	2.8	3.1	3.8	3.7	1.1
New Zealand	2.4	3.5	4.9	4.3	3.7	3.1	0.8	2.9	-1.5	-0.4
Papua New Guinea	-2.5	-0.0	2.0	4.4	0.6	3.9	2.3	7.2	6.7	4.5
Fiji	-1.7	1.9	3.2	0.8	5.4	-1.3	1.9	-0.5	-0.1	...
Solomons	-14.2	-8.0	-2.8	6.5	8.0	5.0	5.1	11.8	7.3	-2.2

... = Data not available

Table 23.4 Government expenditure* as a proportion of GDP, Asia-Pacific nations, 2007. (Source: ADB 2009)

Below 20% of GDP		20–30% of GDP		Above 30% of GDP	
	%		%		%
Taiwan	13.2	South Korea	20.8	Brunei	30.3
Cambodia	14.3	Australia	24.9	New Zealand	33.4
Hong Kong	14.5	Malaysia	25.0	Papua New Guinea	35.0
China				Solomons	36.4
Singapore	14.7	Fiji	28.6	Timor-Leste	39.1
Japan	14.8	Bhutan	29.4		
Philippines	17.1	Vietnam	29.9		
Laos	18.5				
Thailand	18.9			Myanmar	n.a.
Indonesia	19.1				
China	19.3				

* Refers to central government only in most countries; refers to all government in Bangladesh, China and Pakistan

no statistically significant relationship between the public financing of secondary education, and tertiary enrolment growth. The explosion of enrolments in the last two decades owes itself as much to household as government financing. This is true in some majority public sector countries. As noted in Chap. 3, between 1978 and 2005 in China the share of higher education costs met by government fell from 96 to 45%. Households paid 35% in 2005 (Zha 2009, p. 46; Rong 2009).

This does not mean that in every Asia-Pacific nation expansion has been funded primarily by private tuition. Self-investment is much stronger in the Confucian zone than elsewhere. Even there, government plays a principal role in the expansion by funding infrastructure, scholarships and in some systems, the participation of marginal groups. Nor is private financing free of social costs. The danger is that opportunity then becomes correlated to the private capacity to pay. In Australia high tuition works only because of income-contingent loans for tuition, which sustain social equity at the point of entry. Student from poor backgrounds know they will not have to repay the costs of tuition until their graduate incomes trigger the repayment process. As Lijing Yang remarked in Chap. 4, policy measures to sustain equity are essential if equality of opportunity is to be sustained. Maintaining social balances in participation remains an essential role of government in all countries, regardless of the size of total public spending or the extent of reliance on competitive market mechanisms in higher education.

Steering and Coordination

In small nations such as Singapore with no hinterland, national coordination presents little difficulty. In larger countries higher education has inherited a local and

provincial tradition. Some countries split responsibilities within a federal system. The provincial level is important in various ways in China, Indonesia, the Philippines, Malaysia and Australia. These factors, plus global comparisons and competition—and above all the need for a coherent goal-driven program of reform in higher education—bring the question of national steering onto the agenda.

A feature of the Confucian nations is their central shaping of higher education and research. China combines provincial governance and part funding of most higher education institutions with a strategic national intervention via the 211 Project and 985 Program to layer world-competitive universities above the provincial institutions. Central government also determines the overall political economy of higher education, including the extent of tuition, and the mode of university governance. The Chinese system of dual-university leadership, consisting of an academic university president alongside the party secretary, defines the research-intensive universities as on one hand global-local, on the other hand synchronized with the national political apparatus. In Hong Kong China, Singapore, Taiwan China, Korea, Japan, Australia, New Zealand and Malaysia systems of central steering from a distance have been developed, on the basis of self-regulating corporate-style universities working to official templates.

In the Pacific Australia and New Zealand, which have sustained developed higher education systems in the British tradition since the 1960s, in the last two decades the hand of the state has been if anything too determining. Its agenda has been narrow, focused on saving money rather than building capacity. Government assists institutions in their global work primarily in relation to the regulation of education export with less concern about global research. These nations have areas of research strength and strong teaching traditions but they may fall behind East Asia in future. Government control can only be justified when it is also enabling and it leaves institutions with scope to imagine and take initiatives.

Outside the advanced systems state steering is less effective and there is a lacuna in coordination. State policy is less committed to building higher education and research, or less coherent in implementation, or has more limited objectives, or no objectives separate from the interests of the beneficiaries. The examples of Thailand and Malaysia have been discussed. In Vietnam government has yet to devise an effective synergy with semi-autonomous institutions in which both can secure their objectives. In Indonesia and the Philippines national government has fragmented authority. The state in the Philippines has been characterized as a “predatory regime” in which corruption, the corrosion of public institutions and “the systematic plunder of government resources” are supported by authoritarian controls (Quimpo 2009). Government in Indonesia and the Philippines seems indifferent to the need to become more effective in the global dimension of the knowledge economy, though the leading universities are not (Chap. 10 discusses Indonesia). In many countries not just higher education but government itself is in dire need of modernization so as to lift skill levels, establish consistent systems and eliminate corruption. As noted, salaries too low to support the cost of living are an invitation to corrupt public functions. In some countries faculty and students also face human rights violations

in the course of their normal activities, for example, in the Philippines (UNESCO 2010, pp. 221 and 227) and Myanmar.

Reform Policies

Most Asia-Pacific governments have implemented neo-liberal market reforms that create “corporatized” institutions. Universities are modelled as businesses in quasi-economic competition (Mok 2009); and nested in new control systems that enable nation-states to shape their work more effectively (Marginson and Considine 2000). Reform packages increase the roles of private funding and student tuition, install performance targets linked to accountability and audit, extend quality assurance mechanisms, and may enhance the role of private institutions—though as Vincent-Lancrin (2009a) notes in a survey of changes in higher education in the OECD, neo-liberal and New Public Management (NPM) reforms more often enhance private funding than enhance private institutions.

Corporatized universities are a break from the old model of institutions as departments of the public service. The reformed institutions are granted partial autonomy in budgetary matters, and are led by entrepreneurial executive presidents that hire their own staff (Oba 2007). Inside the institutions, competitive, business-like and output-focused systems are deployed in internal resource allocation and human resource management (for the example of Peking University, see Yang 2009). Neo-liberal and NPM reforms are often seen as responses to globalization. It is true they are encouraged by global convergence. Market reform and the NPM are common processes facilitated by cross-border policy borrowing, albeit nuanced for local histories and politics (King 2009; Rizvi and Lingard 2009; Marginson 2010a, 2010b, 2010c). Parallel changes have occurred in higher education systems all over the world (Douglass 2009). But reform in Asia-Pacific takes distinctive Chinese, Malaysian Japanese, Singaporean, Australian, etc. forms (Huang 2006; Takeuchi 2006, pp. 36–37). Ironically, the NPM market model only seems to work well when state investment in higher education and research are increasing. While corporatization makes institutions more responsive and performance focused, markets per se do not enhance capacity. States do. But close nation-state involvement is also a two-sided coin.

East Asian states see themselves as “market-accelerationist states” (Mok 2009) that want to be globally competitive as soon as possible. Here quasi-markets and corporatization are linked to forms of central state intervention and steering stronger than those in Europe or Australia, and much more so than in North America. It is Margaret Thatcher’s coupling of “free market and strong state”, with both market competition and state control enhanced. Private institutions, and parent and student funding, play a larger part than in Europe (especially) and the English-speaking world. The discourse of private responsibility is more nested in Confucian notions of the developmental character of education than in neo-liberal ideas of consumer sovereignty and value-for-money services in the marketplace. Confucian educational values are crucial because they provide a larger rationale for universities and for

personal formation through institutional education. Here privately funded Confucian investment plays a role parallel to, though not identical to, the publicly funded purposes of universities—the ‘public good’ functions (Tilak 2008; Marginson 2007; Pusser 2006)—in Europe and the United States. It is not so much that public or traditional purposes substitute for economic self-interest. Rather, the family and self are nested in a wider framework of common meaning.

But there is a potential tension here. In the standard neoliberal policy framework, which originates from outside the Confucian zone, older Asian traditions of “social harmony, mutual respect and emphasis on collective interests” (Mok 2009) are downplayed. Nor is the old tradition of scholarship always free to evolve in the logical modern direction—that of a communicative public space.

Unlike the regulatory state in America that evolved against a liberal market economy context, the regulatory state in Asia has emerged from a context of a combined strong state and a free market economy, by which the state ideologically commits to an “authoritarian mode of liberalism” (Mok 2009).

Authoritarian liberalism is sustained by a circular logic grounded in social harmony and patriotism. In Japan academic autonomy has long been part of the operating conditions of universities. Nevertheless, state controls—despite the liberal rhetoric of corporatization—are largely unquestioned, for government is the fountain of national identity in an American-dominated world. This role of the state, larger than in higher education in North America and Europe, is long standing and well entrenched. Where authoritarian liberalism might come unstuck is when market liberalism undermines tradition (which helps to sustain the state–people compact); and also where direct state control inhibits the fuller realization of the market model as devolution. One example of the latter problem is the question of the scope for executive action in universities. In the Confucian systems, with the partial exception of Singapore and Hong Kong, the university president is less autonomous and decisive than in the English-speaking countries from which the neoliberal model is derived. Nor is the idea of market regulation as fair arbiter as appealing in East Asia as it is in the UK and USA. East Asian notions of equity often turn more on inclusion than on fairness. Critics of neo-liberal and NPM reform question the notion of the market as “the arbiter of social destiny” (Mok 2009). There is also unease about the pervasive instrumentalism in government policies and the displacement of scholarship and learning as ends in themselves. This suggests that from time to time Confucian nation-states will need to replenish tradition, within the modernizing higher education systems, to retain consent.

Investing in Basic Research

As noted in Chap. 1, research is *the* crucial ingredient for effective long-term participation in the global knowledge economy. Research capacity is essential if higher education systems are to not just respond but contribute effectively in the global setting. It is outward global intervention, whereby the nation and its institutions add their strand to the larger human story, which will ultimately enable the survival and

flourishing of a nation's distinctive traditions. By building China's research universities, Beijing has assured for the nation a major influence in the content of the future world society. Likewise the creation of Confucius Institutes around the world shows that China will contribute globally not just through English language science but through national language and cultural forms.

Without an advanced capacity in research and scholarship, nations and universities are dependent on knowledge inflow from abroad and unable to project their own contributions to global science and culture. They are more determined than determining. The example of the Philippines is instructive. That country has a high participation framework relative to GDP per head, the legacy of American colonial models, and a large teaching force at all levels of education. But it has failed to create more than a miniscule indigenous research sector. As a result not just science and industry but also the school and university curricula are reliant on imported ideas and imported materials, largely from the USA. Lack of a reflexive research capacity keeps the Philippines in neo-colonial global dependence.

So far, most Asia-Pacific nations are yet to achieve the level of capacity that enables them to participate proactively on the global scale. Or they have done so only in small and locally isolated pockets of their university systems. For governments in emerging systems, research is a challenge. It is expensive and there is a long time lag before the benefits show—and even then, they are largely indirect. There are no shortcuts. There is no substitute for basic research and doctoral training on home soil. And basic research has to be largely government funded, as it is all over the world. It is a delusion to expect industry to fund national capacity building in research at scale, given that this fails to add to the industry bottom line. Making research adopt a primarily applied orientation does not attract enough industry money to secure a viable national system of research, and it cuts off the potential for autonomous intellectual life and curiosity-driven inquiry, not to mention broad-based PhD training. A solely applied research system does not hold the best people in the country, or attract much talent from abroad. The applied research mission only works effectively when it is underpinned by capacity in fundamental research. The best research universities are strong in both domains, which feed into each other.

As Table 23.5 shows, several Asia-Pacific countries outside East Asia have significantly increased annual publications in recent years. These increases are a sign, not just of the growth of knowledge flows but also the widely felt ambition of nations and universities to become research powerful in the terms of research rankings and citation and publication metrics. However, research and doctoral training infrastructures in these nations still fall short of the Confucian systems.

It takes decades to build global research weight. As noted, it partly depends on the economic conditions. Targets should drive improvement but in realistic terms. Here the widespread use of global rankings as policy benchmarks—a feature of governmental and public discourse in Asia-Pacific countries outside as well as inside the Confucian group—can be questioned. Essentially, research rankings assign the order of primacy within the world of the high-cost science university, which is almost exclusively located in Anglo-America, Western Europe and a minority of Asian nations. How meaningful is it to apply the same criteria and measures to

Table 23.5 Science and engineering papers in all fields,* smaller Asia-Pacific producers, 1995 and 2007. (Source: NSB 2010)

	1995	2007	Change 1995–2007 1995=100
Malaysia	366	808	220.8
Pakistan	313	741	236.7
Vietnam	104	283	272.1
Bangladesh	162	235	145.1
Indonesia	130	198	152.3
Philippines	145	195	134.5
Nepal	32	72	225.0
Cambodia	4	26	650.0
Brunei	10	16	160.0
Myanmar	16	13	81.3
Laos	2	12	600.0

* Includes social sciences

research universities in nations with a Gross National Income (GNI) per head of \$ 30,000 USD and, nations with a GNI per head of under \$ 5,000 per year, as in 16 of the Asia-Pacific nations listed in Table 1.2?

Consider Vietnam. In 2008 its per capita GNI was \$ 2,700 compared to over \$ 46,970 in the USA (World Bank 2010). Vietnam is still recovering from the “American war” that it won in 1975. Tertiary education has been a low priority in the last three decades. Nevertheless, global university rankings have energized policy makers in Vietnam as elsewhere. On 27 July 2008 the Prime Minister signed a government decision on the Vietnam Higher Education System Planning Period for 2006–2020. This included the projection that by 2020, at least one university from Vietnam would be listed in the world’s top 200 universities. The government of Vietnam did not specify which top 200 listing would be used as the template. But if the goal is defined in terms of a reputable top 200 list such as that issued annually by Shanghai Jiao Tong University, the goal is far from realization in Vietnam. It cannot be achieved in the time frame proposed.⁴ Research capacity is closely dependent on the level of investment in research infrastructure. No other input–output relation-

⁴ Many top 200 universities are associated with at least one Nobel Prize winner (30% of the Jiao Tong index) but there have been very few winners of the science and economic prizes trained in universities in the developing world. All but two of the top 200 Jiao Tong research universities have HiCi researchers (20% of the index). Most have several such researchers. To attract and/or hold a critical mass of HiCi researchers in Vietnam would require infrastructure support, including personnel and equipment, competitive in world terms. Vietnam has had at least one article in *Nature* (along with *Science*, 20% of the index) but with only 283 scientific papers in 2007 its universities cannot compete on the basis of publication and citations (20% of the index). The experience of China and Korea indicates that to achieve a critical mass of HiCi researchers, which involves the return of many national scholars working abroad, requires 15–20 years of investment in research capacity. The decision to seek a university in the top 200 may signify plans for such an investment in Vietnam but if so the plans have not been stated. The achievement of such plans would require a long period of high rates of economic growth.

ship in education is so consistent. It is best to “hasten slowly” by using medium-term goals—correlated to the planned level of investment—that strengthen English language knowledge production and global research collaboration over time, and build sustainable basic research infrastructure and activity piece by piece. Goals related to global rankings can be inserted into the policy frame once the conditions for their achievement are established.

An Asia-Pacific Higher Education Region?

Finally, we turn to the potential for formal and informal regionalization in Asia-Pacific higher education and research. The Confucian Model is a game-changer with global implications. If an Asia-Pacific Higher Education Area emerged, with a similar momentum to that of the European Higher Education Area, that would be another game changer. In the last two decades, across the Asia-Pacific region, there has been a continuous growth in the volume and intensity of student exchanges, research collaborations, networks and consortia (see Chap. 1). Each nation has stand-out institutions, such as Tsinghua in China, the National University of Singapore and Waseda University in Japan which by August 2007 had signed 473 agreements with 539 institutions in 75 countries (Sonoda 2009).

Regional formation offers national systems and individual institutions the prospect that they secure greater value from the hand of cards they have been dealt by sharing with each other. By pooling their cards, they can play more effectively in the largest game, which is the global knowledge economy. But the fact that none of the contributors to this book discussed regionalization at length suggests that it is not an immediate or early possibility. What then are the potentials for regionalization in higher education and research in the Asia-Pacific?

There is much at stake. The European experience shows that a para-national identity—if such an identity could be devised in Asia—not only cuts a larger figure in the world; it has more scope to remake the world according to its own idea. Without it, modernization and higher education in each nation in the region are more likely to take shape along externally fashioned lines. As Ka Ho Mok remarks:

Not only European but also Asian states should be aware of the differences between policy learning and policy copying. If we copy policy practices without proper adaptation and careful contextualization, we might easily encounter problems, including in Asia a process of re-colonization or neo-imperialism, resulting in reproducing learning experiences which do not fit the specific cultural and political environments in the East. (Mok 2009)

Regionalization offers a crucial line of strategic evolution. There are two obstacles. One is the absence of a state-to-state regional project based on a compelling desire to transcend old differences, as has driven negotiations between France and Germany. The other is that in Asia and the West Pacific there are plural ways of seeing the world. Exactly what constitutes “the specific cultural and political environments in the East”? Whose East? Which national and cultural tradition(s)? At a 2008 conference in Tokyo on “Formulating an international higher education framework

for regional cooperation and integration in Asia”, Morshidi Sirat remarked that unlike Europe and North America which benefit from the “binding force” of a single Greco-Roman and Judeo-Christian heritage, in Asia “we don’t have one civilization as such”. There are distinctive national traditions and political economies. There are also Confucianism, Hinduism, Buddhism and Islam (Sirat in Kuroda 2009b, p. 193; see also Sirat 2009). And all of these strands, and each national polity, intersect with modernism and industrial capitalism in varying ways.

Conditions for Regionalization

There are four necessary conditions for successful regionalization in higher education and research (and in other spheres) in the global setting. The first is a sufficient level of economic and social development of each of the parties. If one party is largely pre-modern or highly impoverished, not only is it unlikely to attract potential regional partners but any resulting collaboration would be skewed. The second condition is geographical proximity. The third condition is a measure of cultural commonality or coherence between the partners. The fourth and most important condition is the sustained political will to establish regional forms.

In the Asia-Pacific the potential for regionalization lies in three possible forms: Southeast Asia, and East Asia, and a combined Greater East Asian region.

ASEAN and Southeast Asia

Despite linguistic and cultural diversity there is a surprising commonality across Southeast Asia, even in language—consider the overlap between the national languages of the Philippines, Indonesia and Malaysia. These factors underpin the only formal Asian regional grouping. ASEAN was established as an anti-communist alliance in 1967, partly to contain China, and has both a security brief and an economic brief. On paper the ten member nations of ASEAN are a formidable block. They have a combined population of 574 million. The joint PPP GDP is almost \$ 3,000 billion, not far from India and two-thirds that of Japan.

ASEAN consists of Indonesia, Malaysia, Singapore, Brunei, the Philippines, Vietnam, Cambodia, Laos, Thailand and Myanmar. An ASEAN Free Trade Agreement was signed in 1992 and became fully operational in 2003. The member nations have adopted a common tariff regime within the ASEAN region of 0–5%, and focused also on lowering non-tariff barriers, harmonization of customs nomenclature, and the development of common product certification standards. Unlike the European Union, ASEAN does not impose a common tariff regime in relation to the rest of the world. However, it has slowly built momentum as an inter-governmental

negotiating forum and trading zone; and in 2008 the ASEAN nations signed a free trade agreement with Australia and New Zealand.

ASEAN runs a set of cooperative programs in higher education and research. These include student and staff mobility, presidents meetings, benchmarking and research collaboration. Nevertheless, these programs are largely marginal to the domestic policy agenda in each member nation, and have relatively minor effects in higher education provision. ASEAN in higher education and research is an identifiable region but one little compelled to integrate further. There has been no drive towards a common architecture a la Bologna. There are two constraints. First, with the exception of Singapore, higher education and especially research in Southeast Asia are not as developed as in Europe or in East Asia. This forces the practical emphasis back onto lifting national and local capacity. Second, no one ASEAN nation is able to lead the regional project effectively. Indonesia might seem the obvious candidate but its higher education is too weak. Malaysia has internal questions about identity. In Thailand, which is often the venue for regional meetings, there is political instability. Singapore is too small, too far ahead of the pack, and is more interested in carving out a global role than a regional role.

East Asia

On the face of it the most promising potential for regionalization is in the Confucian zone. All national systems except Vietnam—if Vietnam is considered part of East Asia—are advanced or part-advanced economies. East Asia is geographically contiguous (though Singapore is an outlier) and shares a common Confucian heritage, Buddhism, intermingled with localized religions, and a common scholarly tradition, though Chinese writing is no longer used in Vietnam and Korea. On the face of it East Asian regionalization looks like a good idea (Liping 2007, p. 35). Higher education could play a key role as an integrating force in the long term, shaping a regional identity among young people as it is doing in Europe. Flora Tien notes in relation to Taiwan China that “the more education one receives, the more likely one identifies herself or himself as both Taiwanese and Chinese” (Tien 2009, p. 4). An East Asian regional identity would be another layer on top of Taiwanese and Chinese identities.

The potential for regionalization is further suggested by student mobility patterns, which are underpinned by the linguistic and cultural commonality between Confucian nations closest to Chinese script: China, Taiwan, Korea and Japan. In each country a major source of international students are other parts of East Asia, constituting “a certain de facto integration” (Kuroda, 2009a). In Japan in 2009, of 133,000 international students, 60% were from China, 15% from South Korea and 4% from Taiwan (JASSO, 2010). Japan plans to more than double the international student intake to 300,000 per year. Taiwan will accept international students from mainland China (Tien 2009). Of the smaller number of internationals in Korea most are from China (Sugimura 2009, p. 13). Likewise the largest source countries for China are South Korea and Japan (Verbik and Lasanowski 2007). China plans to more than double international students to about 500,000 (Sharam 2010). About

500 universities and colleges admit internationals. Tuition charges and housing costs are significantly lower than in the English-speaking nations and Western Europe and student housing is often available on campus (Schrock 2010). International applications are managed through a single Internet portal, China's University and College Admission System (CUCAS 2010). As the global power of Chinese national language Putonghua increases, so will the attractiveness of study in China. Japan, China and Korea are discussing the potential for streamlined arrangements for mutual recognition and accreditation (Daily Yomiuri Online 2010). This hints at the potential for an East Asian Erasmus style scheme.

However, the constraint on East Asian regionalization is the absence of nation-state political will. The legacies of the 1930s and 1940s have not been overcome.⁵ There is a formidable lack of trust between Japan and China and endemic rivalry over primacy in Northeast Asia (Wesley 2007). Neither country wants to discuss regionalization on an equal footing in neutral forums. The 2005 conflict over Japan's war record, which saw heated anti-Japanese demonstrations in China, disquiet also in Korea and sharp political exchanges, underlined the fact that failure to agree on the verdict of history blocks mutual understanding. There is little agreement even on the reasons for disagreement:

Nationwide opinion polls conducted in both countries in September 2002 found that 80 per cent of Chinese respondents chose "historical perceptions" as the principal problem for the two nations, while 40 per cent of Japanese respondents cited "the lack of mutual understanding" and "differences in political systems". (Knight 2007, p. 54)

The differences play out in the conflicting regionalization projects of the two nations. After the revolution in 1949 China was isolated from regional exchange while Japan pursued a "developmental regionalism" which focused on mutual stability and economic development. This evolved into aid packages for Southeast Asia, including educational aid. In the 1990s China turned towards multilateralism and focused on Southeast Asia, triggering direct competition with Japan. Japan's aid packages were (and are) more generous, but rapid economic growth in China and visions of future Chinese hegemony, handed China an advantage in its dealings with other Asian nations. Japan now "appears to have discarded developmental regionalism in favour of ... 'regulatory regionalism'". This moves away from a statist mode

⁵ China-Japan antagonism has longer roots. Through most of history China's stance towards the rest of East Asia was to assume primacy and demand submission. Japan, which refused to submit, and for a long time had no diplomatic relations with China, developed its own brilliant civilization behind the border. Under the Tokugawa/Edo regime between the seventeenth and nineteenth centuries Japan formally isolated itself from the world. The Meiji restoration of 1867 embraced military and technological catchup with the West as the central national strategy. This also embodied a vision of the East as inherently backward, feeding on isolationist notions of Japanese exceptionalism and superiority; attitudes manifest in the invasions of Taiwan, Korea, mainland China and Southeast Asia between the 1890s and the 1940s. The Meiji reflex survives (Marginson 2010c). Research by Kobayashi among 216 Japanese students of English as a Second Language finds that when outside Japan in the English language countries, the students evidence solidarity with other Asian students. But "once they return to their less multicultural home country, their intact yearning for the Imagined West is rekindled" and the Asian solidarity is weakened (Kobayashi 2010, p. 323). Bounded Japan remains a stumbling block to regional relations.

of intervention to “an arms-length, rule-based, incentives shaping conception of governance”. The focus is on bringing standards and practices of governance to a common level, minimizing mutual risk within an interdependent world order (Wesley 2007, pp. 208–219). This approach is consistent with regulatory neo-liberalism at the national level, and not unlike the premises of intra-European cooperation. Beijing offers an alternative state-driven model of development. This seems to offer more space for asserting national identity within development. A problem for Japan’s “regulatory regionalism” is that it includes no strategy in response to Western dominance in Asia.

The difficulties created by Sino-Japanese tensions, and to a lesser extent the problems of Taiwan China and the two Koreas, stymie not just Northeast Asian relations but all regionalization potentials in Eastern Asia-Western Pacific. South Korea, which on the face of it might broker a solution between China and Japan, seems too small, and has its own unresolved Korea-Japan (and Korea-China) issues. South Korea is also close to the USA, as is Japan. The USA has a strategic interest in maintaining the China–Japan and Korea–China tensions. “With the North Asian great powers at loggerheads, ASEAN will continue to drive the process of East Asian regionalism. This will add to the halting progress of East Asian regionalism, given that body’s own internal malaise” (Wesley 2007, p. 219).

It is hard to see how a viable and cohesive Asian regional bloc can form without a profound and enduring reconciliation between China and Japan. A regional body that excludes either China or Japan will lack weight and credibility; it is also unlikely that many other Asian states will want to join an association that excludes one of the two North Asian great powers. While Sino-Japanese antagonism continues to drive competitive regionalism, any impetus towards regional association will continue to be dissipated. (Wesley 2007, p. 218)

If governments are unable to advance regionalization in higher education and research, leading research universities can move regionalization forward via personnel mobility and joint research programs. This tests the scope for executive action and intellectual freedom in the Confucian systems. Currently, the presidents of the four titular national universities in East Asia—Tokyo, Seoul National, Peking, and Vietnam National University in Hanoi—meet on a regular basis. The official environment is more favourable than unfavourable to cooperation. The Second East Asia Summit agreed in principle on educational cooperation. Prior to the Fourth East Asian Summit an ASEAN plus three meeting on higher education was also cautiously positive. However, neither ASEAN plus three nor the East Asian Summit include a charter on cooperation in higher education (Kuroda 2009a, p. 3).

Research Collaboration

In addition to an Asian Erasmus Plan another potential avenue for regionalization is the creation of an East Asian Research Area or Asian Research Area, with a common grants program favouring cross-country collaborative teams. An East Asian Research Area would offer more than a framework for pooling basic science and

technology. It could itself become a means of constructing regional convergence. At a regional meeting in Beijing in March 2009 (where, symptomatically, Japanese representative were absent) China's then Vice-Minister of Education Zhang Xinquan (2009) talked of the need for a "regional knowledge society". He noted that this would involve not just economics and science but a distinctive approach to values and ethics, as Confucian tradition suggests. Further, "ethics" would encompass not just the ethics of individual conduct as in the West, but the ethics of social and international relations, in a vision of the sustainable society and good global society. This suggests that regional identity could be grounded at a deeper level than that of inter-governmental machinery—but that something deeper would need to take contemporary form as modernization.

There is already much Asia-Pacific research collaboration from below, as in Europe. Knowledge flows freely across borders. In 2008 two-thirds of all citations were international citations (NSB 2010, p. 5.40). "Academic research has become more internationalized in many respects over the past two decades.... International academic mobility, international collaboration, international influence of science, and funding from abroad have all increased" (Vincent-Lancrin 2009b, p. 160). International rankings show also that research has become more globally competitive. Collaboration and competition advance together.

International collaborations are not random but follow certain pathways and patterns of preference. In Table 23.6, the index of international collaboration is country A's rate of collaboration (co-authorship of papers) with country B, divided by country B's overall rate of international collaboration. A value greater than 1.00 indicates a higher than average/expected rate of collaboration. For example, scholars in the USA have a higher than expected tendency to share authorship in Taiwan China and South Korea, and their co-authorship in China is just below the level expected given China's rate of international collaboration.

The collaboration data in Table 23.6 reveal intensive linkages between certain partners within the Asia-Pacific region. It is apparent that researcher-scholars in China have a strong orientation to collaboration in East and Southeast Asian nations in the region: Singapore (especially), Taiwan China, Japan and South Korea. China has above expected collaboration also with Australia. India is well connected into East and Southeast Asia, except China. Japan regional relations are not as strong and are above expected levels only in China, Korea and Taiwan China. Like Japan with Korea, Korea is very strong only in relation to Japan. Researchers in Taiwan China have a strong orientation to India, China, Singapore, Japan and South Korea. Those in Singapore have a strong orientation to China (especially), Taiwan China, Australia, India and New Zealand. Those in South Korea connect frequently to India (especially), Japan, Taiwan China and China.

Researchers in India have intensive collaboration with researchers in South Korea and Taiwan (especially) and also in Singapore and Japan. Australians have extensive collaboration in Singapore and above average collaboration in China (NSB 2010). These data suggest a broad potential for regionalization in research. It is certainly the most fruitful and least unacceptable avenue for regionalization within Asia-Pacific itself. It also offers a relatively trouble free way of reaching

Table 23.6 Index of international collaboration * (co-authorship) in science papers, Asia-Pacific, 2008. (Source: NSB 2010, Appendix Table 5.41)

Co-authorship of science papers	Index * 2008	Co-authorship of science papers	Index * 2008	Co-authorship of science papers	Index * 2008
<i>China</i>		<i>China Taiwan</i>		<i>South Korea</i>	
China-USA	0.97	China	1.23	South	1.23
		Taiwan-USA		Korea-USA	
China-UK	0.52	China	1.73	South Korea-Singapore	0.80
		Taiwan-Singapore			
China-Germany	0.44	China	1.39	South	1.90
		Taiwan-South Korea		Korea-Japan	
China-France	0.38	China	1.66	South	2.19
		Taiwan-Japan		Korea-India	
China-Taiwan	1.76	China	1.86	South	1.11
China		Taiwan-India		Korea-Russia	
China-Singapore	2.94	China	0.67	South Korea-Australia	0.50
		Taiwan-Australia			
China-Japan	1.38	<i>Singapore</i>		<i>Japan</i>	
China-South Korea	1.17	Singapore-USA	0.70	Japan-USA	0.89
China-India	0.64	Singapore-India	1.22	Japan-India	1.12
China-Australia	1.14	Singapore-Australia	1.70	Japan-Russia	0.90
China-New Zealand	0.46	Singapore-New Zealand	1.11	Japan-Australia	0.64

* The index of international collaboration is country A's rate of collaboration (co-authorship of papers) with country B, divided by country B's overall rate of international collaboration. A value greater than 1.00 indicates a higher than expected rate of collaboration and signifies a preferred orientation within the overall set of linkages.

further afield, to South Asia and Australia/New Zealand. The formation of an Asian Research Area, or Asia-Pacific Research Area, to parallel the European Research Area, would be a major step forward for regional higher education.

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