FROM UNIVERSITY EXPORTS TO THE MULTINATIONAL UNIVERSITY:
The internationalisation of higher education in Australia and the United States

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The internationalisation of higher education has been one of Australia’s best success stories in the past two decades. In recent years, higher education exports (Australian institutions “exporting” the service of educating students from other countries) have been Australia’s third largest export industry after only iron ore and coal—valued at a high of $18 billion in 2009. But that success story is today under threat in at least three ways.

The first threat is lateral, from universities in other countries aggressively trying to take market share from Australia, led by cash strapped American public universities with big global brands like Berkeley, UCLA and Washington. These new entrants only threaten to exacerbate the post global financial crisis “perfect storm”—generated by the high Australian dollar, bad foreign press about the education experience in Australia, and tighter visa restrictions—that has cut into Australian higher education exports since 2009.

The second threat is from above, in the form of ambitious American private universities like Duke and New York University (NYU) that hope to leap over the export phase of internationalisation to become what we will call “multinational universities” (MNUs). These universities want to execute their research and teaching all around the globe, leveraging new sources of academic talent, new sources of financial support, and new student markets much as multinational corporations (MNCs) do with respect to global supply and distribution chains.

The final threat is from below, with the prospect of high quality but low cost (even free) higher education delivered online not only by new for-profit entrants into the higher education market, such as Coursera, Udemy and Udacity, but also by some of the world’s leading universities such as Harvard and Massachusetts Institute of Technology (MIT). The first wave of online higher education dissipated with the bursting of the dot com bubble in 2001. But there is every indication that the second wave will be more robust and long-lasting, even in today’s troubled global economy.

These three challenges, of course, are not unique to Australia, or indeed even to universities. In fact, these challenges—new entrants into existing markets, multinational firms slicing up the global value chain, and online cost cutters at massive scale—are common to most industries in today’s truly global, technology turbocharged, and ultra competitive world economy.
In this report, we focus on the first two international challenges to Australian higher education, new export competition and the spectre of MNUs. We’ll leave the online challenge to our next report—with some early thoughts on “MOOCs”, massive open online courses, sketched in Appendix 2.

Our report proceeds in four sections. Section 1 develops a simple conceptual model of the internationalisation of higher education from traditional universities with a purely national focus through the export model of the past two decades to today’s emergent MNUs. Section 2 elaborates on the Australian export model and analyses the challenges it is now facing from high quality American public universities. Section 3 describes the new idea of an MNU and discusses four prototypes from Duke, MIT, NYU and Yale. Section 4 then assesses how Australia might respond to these challenges at the level of both public policy and university strategy.

1. The internationalisation of higher education

For most of the 20th century, the principal ways in which universities internationalised themselves was through the recruitment of academics and PhD students from abroad and the incorporation of international subjects into on-campus curriculums, with short-term study abroad to give students international experiences becoming more prominent after World War II.

International scholarship programs such as the Rhodes Scholarship, Fulbright Program and the Colombo Plan provided some of the first opportunities for students to gain experiences abroad. Beginning at about the end of the Cold War, however, universities around the world began to move to more ambitious internationalisation strategies based on the recruitment of full-fee paying foreign students at the undergraduate and coursework masters levels. Most of these students were initially recruited onto the home campuses of universities in developed countries. Some institutions subsequently chose to follow up by opening branch campuses in other countries, mostly in developing countries where demand was high and costs were low.

Today, higher education is on the cusp of a more radical phase of internationalisation. Offshore activities and international partnerships are poised to play a leading role as universities increasingly resemble higher education analogues of multinational corporations.
We represent this evolution towards the birth of MNUs schematically in Figure 1. The traditional “national” model of a university first developed in 19th century Germany was defined by the interlinking of teaching and research organised in disciplines. In this model, students were drawn almost exclusively from the local area or at most the rest of the home country. The only exception was the international recruitment of PhD students and academic staff. The main source of funding for the traditional national university remains public in most countries, with a combination of fees and philanthropy used by the relatively small number of major private universities found predominantly in the US (with notable hybrids in Cambridge and Oxford).

Figure 1. The Evolution of International Higher Education

With governments and institutions such as the Ford Foundation broadening their educational horizons after World War II, universities began to dip their toes into international waters through short-term “study-abroad” programs for domestic students. In economic terms, this amounted to importing higher education services from another country to teach home students for short periods. But in most instances, these imports were balanced with “exports” of students from the host international university to the domestic university—that is, the reciprocity/exchange model that today still characterises most study-abroad programs. The recently signed Memorandum of Understanding between the elite universities in Australia’s Group of Eight (Go8) and China’s C9 is an example of the continued importance of student exchange programs.
The primary impetus for study abroad was not financial, and hence it did not amount to a fundamental change to the business model of the traditional national university. The point of study abroad remains to give domestic students international experiences by studying and living in another country, comprising a relatively small portion of what remains essentially an at-home degree for a small subset of the total student population. Getting credit at the home institution for study at the host institution, and hence not increasing time to degree, continues to be a significant challenge to scaling study abroad. In the US during 2008–2009, for example, only 260,000 Americans studied abroad—around 1.5% of the total tertiary student population.

The second wave of internationalisation that began in about 1990—when national universities began educating large numbers of foreign students—was far more dramatic. In this “export” model, universities in developed countries not only opened their doors to foreign students, mostly from developing countries, but actively recruited them. Part of the motivation was to create an international experience for all students on the domestic campus. Part also concerned the social imperative to develop human capital in the developing world. And part of the impetus for bringing in large numbers of foreign students was to develop talent from the developing world and to deploy it in the developed world, known as the “brain drain”.

But the fundamental motivation for the export model was financial. Governments, implicitly compensating public universities for at best flat funding for local students and research costs, allowed universities to use government funded and often government owned physical plant to educate as many foreign students as they liked, charging whatever prices the market would bear. At the same time, some US private universities with big aspirations but small endowments began using the large scale recruitment of foreign students as a way to generate the revenues needed to compete with their richer peers.

In 2009, more than 2.5 million students were enrolled in study outside their home country; with UNESCO projecting this will rise to 7 million by 2020. In Australia, international students today represent more than 20% of total student numbers in higher education, with the figures in other Anglo-American democracies catching up rapidly, and with continental Europe also trying to jump on the gravy train. Appendix 1 details international higher education demand and reports that by 2020 the world’s four largest countries in terms of population—India, China, the US and Indonesia—will account for more than half the world’s university-aged population.
With foreign students typically paying three or more times the tuition (or per capita government support) of domestic students, the revenue implications of the export model were profound. Indeed, in Australia fees from international students today come close to matching the money universities receive from the government to teach Australian students—despite the fact that there are nearly four times as many Australian as international students.

Some universities in developed countries have augmented the export model by establishing “branch campuses” in developing countries—that is, bringing the provision of higher education to international students rather than asking international students to come to the home campus. Students receive degrees from the home university, often using its at-home curriculum with a smaller range of course offerings, but invariably deploying more local academic staff to teach and administer courses, and many with lower quality infrastructure.

The principal benefit of branch campuses is lower cost, both for students and for universities. The principal challenge for branch campuses is quality control, with potentially significant adverse reputational consequences, because admissions criteria and teaching standards are invariably lower. In some cases student demand has not met expectations, presumably because many would-be international students want to leave their home countries to gain higher education in an English speaking country even if this is much more costly than getting a degree at a branch campus.

Nonetheless, there are now more than 200 degree-awarding international branch campuses around the world. After unsuccessful attempts by more than two dozen American universities to establish branch campuses in Japan in the 1980s (crashing with the Japanese economy at the end of the decade), branch campuses have proliferated in the past 15 years. This is especially the case in China, because of its scale and rapid development, and also in Singapore because of aggressive government policy. In Singapore, significant branch campuses have been established by such institutions as INSEAD (business), Chicago Booth School of Business, NYU’s Tisch School of the Arts, the German Institute of Sci and Tech, Johns Hopkins (medicine), Georgia Institute of Technology (engineering), Stanford, Waseda, Shanghai Jiao Tong University (SJTU), Cornell and Duke (medical), as well as several Australian universities.

Monash University has been the most ambitious Australian branch campus player, pioneered by Monash Malaysia (established in 1998 and with 5,000 students today) and Monash South Africa (2001, with more than 2,500 students today).
Monash Malaysia, for example, offers degrees from seven Monash faculties through six schools at the branch campus. Monash also has a campus focused on research training in India, the IITB-Monash Research Academy, which awards a joint PhD from Monash and the Indian Institute of Technology, Bombay.

In their 2008 Pacific Economic Cooperation Council report and subsequent book, Christopher Findlay of Adelaide University and William Tierney of the University of Southern California described the “new wave of globalisation” where whole institutions have moved into overseas markets, primarily driven by commercial motives, i.e. franchised branch campuses.

However, some universities are now thinking about transforming the branch campus model into fully fledged MNUs. Rather than seeking to teach large numbers of international students at competitive prices, these MNUs are designing education and research at home, using cheap but high quality labour and infrastructure abroad for their production, selling directly into the markets of their offshore operations, and reinvesting the returns in even more innovative products or cross-subsidising their research programs. While these new operations must be commercially self-sustaining, this is not their raison d’être.

In April 2012, Monash announced it will soon open its fourth overseas campus in China. Monash China will be a graduate school and research institute in partnership with Southeast University in Suzhou outside Shanghai. It will focus on building research capacity, developing industry connections, and teaching graduate science and engineering to 1,500 Chinese students each year.

Monash China has many MNU-like features (as does Monash Malaysia) and thus is shaping up to be Australia’s first foray into this new wave of higher education globalisation as Monash students can move seamlessly across its branch campuses. But it is important to emphasise that the move from being a university with a network of foreign branch campuses to a fully integrated MNU promises to be more than a mere evolution of the export model. It will be much more akin to a higher education revolution at the global quality frontier and led by some of America’s best known and financially strongest private universities. These proto MNUs of course will maintain their historic headquarters in the US and will fiercely defend the value proposition behind home campus education. Most of their highest value-added work, including governance and strategy, will continue to be done at HQ, and most global revenues will be returned there and be controlled there.
But the goal of MNUs is to “slice up the value chain” around the world through complex systems of supply, production and distribution of higher education and research. This may mean using a developing country to do research, because it is cheaper to build better infrastructure and hire researchers at similar quality to those at home. Or it might mean designing degrees in-country that are tailored to precisely what the market demands, in contrast with the largely ‘one size fits all’ of the branch campus system. It might also mean developing whole new brands that leverage the home institution but that can develop independently of it.

Not surprisingly, China and Singapore again loom large. Singapore is attractive to MNUs for the same reason it is attractive as a branch campus host. China is attractive for several reasons: its world leading ability to quickly roll out first class infrastructure; its central, provincial and local governments are willing to make large financial commitments to MNU partnerships; Chinese research talent is high quality and relatively cheap; and Chinese demand for quality higher education will continue to mushroom as China transforms its economy from a low quality producer into the world’s biggest middle class consumer by far.

This is not to discount the significant efforts by many leading Asian universities to “Westernise” their education. The Korean Advanced Institute of Science and Technology now delivers all its courses in English. Peking and Tsinghua Universities in China are likewise ramping up their English curriculums.

And Hong Kong University of Science and Technology (HKUST) is arguably the most “Americanised” of all. A quarter of the faculty is American and the majority of academics hold American PhDs. HKUST also uses a US-style tenure system for academics and is moving to an American model four-year undergraduate degree with a liberal arts component. Students will be required to take more general education and interdisciplinary units and be encouraged to study abroad—a significant shift away from the traditional specialist approach of Asian universities.

Having laid out this simple model of the internationalisation of higher education, let us now focus on the Australian-led export model that American universities are now trying to emulate and then move to the American-led MNU that Australian universities will have to study closely.
2. The export model

Dramatic changes to government regulations in the late 1980s and early 1990s revolutionised Australian higher education. First, universities were given the ability to charge international students the market price for their Australian educations; admit as many fee paying international students as they wished; and keep the revenues generated.

Second, the “Dawkins reforms” converted all colleges of advanced education (CAEs) into universities (much as the UK had previously done with its technical and further education colleges). These new ambitious institutions aggressively sought new revenue sources to fund research (as they were less competitive than established universities for dedicated research funding) and to move upmarket in reputational terms as quickly as possible.

With these preconditions in place, the final ingredient in Australia’s internationalisation revolution was the rise of “Emerging Asia”. The critical element was mushrooming demand in China and elsewhere for higher education, with a preference among the Chinese elite for international experiences, particularly in the English speaking world.

It soon became abundantly clear to university leaders that the pent-up demand in China-led Emerging Asia for Australian university degrees was enormous and very lucrative. All universities, starting with the former CAEs and quickly followed by the established comprehensive universities (led by the Go8 “sandstones”), began to adopt this new business model. The incentives to do so were turned into imperatives by the substantial slow down and then decrease in public funding for universities (on a per student basis at least) that began in the second half of the 1990s.
Between 2002 and 2008 alone, the number of international student enrolments in Australian higher education grew at an average of 12.2% per year, with growth peaking in the last two years before the global financial crisis at 18.5% in 2007 and 20.2% in 2008. If Emerging Asian annual economic growth in the 2000s boom was close to an astonishing double digits, growth in Australian “exports” of higher education was jaw dropping—growing twice as fast as the Chinese economy.

Figure 2 tells the story graphically with respect to full-fee paying international undergraduates. In 1988, fewer than one in 20 undergraduate students on Australian campuses were from overseas. Two decades later, the ratio had shot up to one in four, the highest figure for any developed country in the world.

Figure 3 shows that this trend toward internationalisation was even more apparent at the postgraduate (non-research) level—where fully 40% of students were foreign nationals in 2010.

Source: Department of Education, Employment and Workplace Relations (DEEWR) Higher Education Statistics
Australia has been a world leader not only in the pure export model of international higher education, but also with respect to international branch campuses. According to the Observatory on Borderless Higher Education in the UK (OBHE), US universities continue to provide the greatest number of degree-granting international branch campuses (IBCs) at 78, with an average of 371 students at each.

Australia, in contrast, has only 12 IBCs. But Australia educates more students on international branch campuses than any other country (27,545 in 2011), nearly as many as the next two countries combined (the UK with 17,733 and the US with 13,340). Eight of Australia’s branch campuses are in the global top 15 in terms of student numbers, including the two largest anywhere in the world: RMIT in Vietnam and Monash in Malaysia (5,145 and 5,000 students respectively).

Curtin University in Perth has the most extensive domestic and international network with seven branch campuses across the Asia–Pacific region. All the courses offered at campuses in Sarawak, Singapore and Sydney have the same unit structure and study materials as courses at the home campus in Perth, meaning students can transfer between networked branch campuses to complete their Curtin degree—quite similar to the NYU version of the MNU.

**Figure 4.** Percentage of Australian non-Go8 Universities with an IBC

![Graph showing percentage of Australian non-Go8 Universities with an IBC from 1990 to 2010.](chart.png)

*Source: OBHE*
With the exception of Monash, IBCs have been the exclusive domain of non-Go8 Australian universities, because the sandstones have been wary of damaging their quality brands. The first Australian IBC opened in 1992. By 2008, fully 30% of non-Go8 universities (that is, 31 universities – see Figure 4) had branch campuses outside Australia.

Figures 2–4 tell a story of two decades of remarkable internationalisation in Australian higher education. It seems clear that, with big, new, high margin revenue streams, this internationalisation has also made possible a significant rise up the global league tables. Since 2003, Australia has boosted its representation in the Shanghai Jiao Tong University Academic Ranking of World Universities from 13 universities to 19 in the top 500, with five universities in the top 100. Australia is thus now home to roughly 4% of the world's best research universities despite having only a 1.2% share of global gross domestic product and a 0.3% share of global population. Over two decades of minimal competition for enormous Asian demand, Australian universities have built a reliance on these margins to cross-subsidise research programs.

But this very good news story comes with a disturbing negative coda in the past five years. Figures 2–4 betray a severe S-curve common to many economic disruptions where the prevalence of a new innovation (in our case international students) overwhelms business as usual (domestic students), but where there are soon rapidly diminishing marginal returns as the “new” becomes “normal”. Growth in international student numbers and international branch campuses slowed down and indeed began to decline in the period since the collapse of the Lehman Brothers financial services firm on 15 September 2008.

The stagnation in the S-curve could be a function of market saturation—that is, demand in Asia has peaked, and/or limits to Australian supply have been reached. Another reason could be that the Australian export/IBC business model is now outmoded, for example, because there are new higher quality university entrants from elsewhere in the world (including the MNUs but also “exporters” from Europe and North America) now targeting Asian students in such a way that Australian universities cannot easily compete. The rise of online higher education may also have begun to have an adverse impact on Australian exports.

There is probably some truth to all three explanations. But the conventional story about the problems facing the Australian export model in recent years focuses on three factors that have affected Australia uniquely and negatively:

- The doubling in the value of the Australian dollar over the past decade
- Tougher visa restrictions (both student and post-study work) on international students
- Bad press, particularly in India, on Australian treatment of international students
At the same time as Australian international higher education has been hit by these shocks, the market for international students has become increasingly competitive because more, and higher quality, universities from around the world have begun to aggressively enter the game—led by some of the biggest and best American public universities.

For years many American public universities did not have the ability to make up for significant losses in state government funding with the full-fee revenue from overseas students. Undergraduate places were largely reserved for “in-state” students. While “out of state” (interstate as well as foreign) students paid the market price for their educations, most of the money was kept by state governments rather than disbursed to the campuses educating the foreign students.

Unlike in Australia, American public universities have historically responded to decreases in government funding per student by passing the costs on to in-state students and admitting far more of them.

But the global financial crisis has proved such a radical shock to American public higher education—with dramatic cuts to all state, and therefore public university, budgets—that American public universities are quickly becoming very “Australian”. State public universities from New York and Illinois to Washington and California are pursuing the Australian-style export model. By enrolling international undergraduate students by the thousands, budget holes are being plugged and research programs are being cross-subsidised like never before.

*The New York Times* recently reported that one in five commencing undergraduates at the University of Washington now comes from outside the US (compared with just 2% only five years ago), paying about the same for their education as international students in Australia do. Berkeley, Illinois, Indiana, Iowa and UCLA all are now admitting more than 10% of undergraduates from overseas, more than doubling their pre-2008 numbers. By contrast, across Australia in 2011 the number of new students at universities dropped by 9%.

These positive rates of change in enrolments at American public universities should be of concern to Australia as they probably represent the beginning of a sharp S-curve rise akin to that experienced by Australian universities 15 years ago. At least as important, the best American public universities have quality, scale and reputation to take market share away from their Australian competitors even if global demand rebounds from its post-GFC lows.
In the last few years, the attraction of the United States as a destination for international students has increased markedly among Asian countries. According to the Open Doors report published by the Institute of International Education, in 2010–11 the number of international students at American colleges and universities increased by 5% in total and 6% at the undergraduate level. But there was a staggering 43% increase in the number of Chinese undergraduates on American campuses.

The total number of international students in higher education in the US in 2010–11 was 732,277 compared to 242,351 in higher education in Australia in 2011. Given that the US is almost 15 times as large as Australia in population terms, the potential massive upside to foreign students in the US is clear, and alarming from an Australian perspective.

Figure 5 shows that in 2012 the number of students from China—Australia’s most important international market—enrolling as undergraduates in higher education across the United States is forecast to surpass the number of Chinese undergraduate students enrolling in Australian higher education for the first time in a decade but with an ever steeper growth curve. Even at the higher quality end of the market, it is worth noting that 2012 is on track to be the first year ever to record a decline in Chinese undergraduate enrolment at Australian universities.

Source: Australian Education International (AEI) International Student Data; US Open Doors Data, International Institute of Education
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* The 2012 figures for Australia are projections based on a comparison of analogous figures for July 2012 YTD with July 2011 YTD, and for the United States the projection is based on the average growth rate of the previous three years.

The private University of Southern California has long been the leading American international educator, with 8,615 international students in 2010–11. But the University of Illinois at Urbana–Champaign is now second (7,991). Other public campuses in the top 10 include Purdue University (7,562), University of California–Los Angeles (6,249), Ohio State University (6,082), University of Michigan–Ann Arbor (5,995) and Michigan State University (5,748).

In 2011, there were 188 US campuses with more than 1,000 international students. Every Australian university probably has more foreign students. But Australia has fewer than 40 universities in total.

Figure 6. International Undergraduate Student Enrolments in Higher Education in University of California, Berkeley and UCLA 2000–2001, as a percentage of total undergraduate enrolments

http://www.ucop.edu/ucophome/uwnews/stat/
Berkeley and UCLA are clearly two major potential competitors for Australia in the Asian student market, because of their Californian location on the multicultural Pacific Rim and because of their status as two of the world’s best public universities—in a class above even Australia’s top universities such as the Australian National University, the University of Melbourne and the University of Sydney in most of the international rankings.

Figures 6 and 7 demonstrate that this challenge is essentially about undergraduates. Like most elite American research universities, Berkeley and UCLA have long had lots of foreign postgraduate students. But all the growth now is at the undergraduate level—with clear financial motivations and implications even as the universities stress the real educational value of internationalising their campuses.

The University of California “Commission on the Future” set up in response to the draconian state budget cuts resulting from the global financial crisis recommended a dramatic increase in the number of full-fee paying international students. The Commission set a limit on foreign students at 10% of enrolments over the whole UC system. Figure 6 indicates that total UC enrolment of international students is not yet halfway to this limit. The Commission also noted that this cap could be lifted should the Californian state budget position deteriorate further.

**Figure 7.** International Postgraduate Student Enrolments in Higher Education in University of California, Berkeley and UCLA 2000–2001, as a percentage of total postgraduate enrolments
Figures 8 and 9 display the same basic pattern at another major PacRim public university with a global brand at least as strong as Australia’s best, the University of Washington.

Asian students are attracted by what major US colleges offer. Despite tough academic entry hurdles, the reward is high. From outstanding education to safe residential communities, first class facilities, an extraordinary network of influential alumni and the prestige of holding a degree from a university with a global brand, the total package is probably often perceived as of higher quality than that offered by Australian universities. And Asian students are influenced in their education choices by the US-dominated world university league tables.

Figure 8. International Student Enrolments at the University of Washington 1998–2011, with undergraduate and graduate enrolments since 2007, as a percentage of total enrolled students

http://iss.washington.edu/statistics (Data for undergraduate and graduate students not available before 2007.)
Even the price of American public higher education compared to that in Australia is becoming more competitive as the long-term value of the greenback continues to decline versus a stronger, mining-fueled Australian dollar.

American competition is likely to come from second-tier universities and colleges, as well as these elite publics. Universities Australia reports that some US universities have set targets of 25% international students by 2015. In addition, leading four-year liberal arts colleges in the US such as College of the Atlantic, Macalester, Mount Holyoke, Principia and Westminster have set targets of 15% international students by mid decade.

The growth of international higher education at American universities is not without its own challenges. Increasing numbers of international students in already full public campuses is either at the expense of in-state student places or further eroding student/faculty ratios. Privates might choose to increase the intake of foreign students for strategic reasons, such as access to the best talent, but pushback is likely from alumni who resist the potential tradeoff of places to international students at the expense of domestic ones.

Figure 9. New International Undergraduate Student Enrolment Numbers at the University of Washington 2007–2011, by class
For Australia, while it remains one of the “big fish” in the international student scene, the challenges are likely to be substantial in accommodating more growth in the future in terms of infrastructure, staff and the like. Australia already has the highest level of international students per capita of comparable English-speaking countries (see Figure 10). There are 1.2 international students for every 100 Australians, roughly double the ratio in the UK as the second highest and more than five times the US and Canada. This should signal a serious warning to Australian providers and policy-makers that our main competitor host nation societies have relatively much more capacity to expand their international student recruitment. As one indicator of these capacity constraints, evidence abounds of international students living in scarce sub optimal accommodation in Australia’s major cities, particularly in Sydney and Melbourne.

**Figure 10.** International Students Per Capita Population

Based on 2009 data (see Figure 11), 21% of enrolments at Australian universities were students from overseas compared to 15% in the UK, 3% in the US and 8% in Canada.
The data in this section amply demonstrate all the challenges Australia faces from lateral competition, principally from high quality American public universities. There is, however, another challenge that Australian universities must consider—the rise of the MNU. Today MNUs are more nascent than real, but now is the time for Australian higher educators to anticipate a future they may soon have to contend with.

3. Emergent MNUs

Apple is an icon of contemporary globalisation as well as the technology revolution. Its i-devices are designed in California but assembled by a Taiwanese company in China from components made in Germany, Japan and South Korea as well as the United States. They are marketed and sold to customers all around the world, with the fastest growing markets now the new middle class in Emerging Asia. Apple’s iPhones and iPads are generating unprecedented profits for the company’s employees and shareholders in America.

Apple’s slicing up of the global value chain is a far cry from the Ricardian international economics world of products made in one country but sold in another. Until very recently, however, universities have been stuck in the Ricardian paradigm—the export model discussed in the last section.
It is important to note that the MNU model is neither a disaggregation of a university’s core research and education activities nor a direct revenue raising business model. For instance, Duke is not replacing its Durham medical school with one in Singapore to take advantage of lower labour costs. Duke-NUS Medical School, however, is a strategic add-on to the Durham operation with its separate but complementary program. Duke can experiment with new models of research and education in Singapore and the value taken back to Durham is measured by importing successful innovations rather than any direct financial benefit. Further, the connectivity between Durham and Singapore signifies that Duke is choosing to allocate research activity according to comparative advantage; research is being organised in a supply chain model.

There is, however, a fundamental problem with the “higher education as export” business model. If, as seems increasingly likely, there is an increase in supply of higher education from American public universities and also Asian institutions and online providers, this will lower the global market price for higher education. The big winners from supply outstripping demand will be consumers of higher education in developing countries. But the potential of this outcome poses a major financial and reputational threat to campus-based universities in developed countries shackled with high fixed costs for staff and infrastructure, as a recent British Council report makes clear (see Appendix 1).

MNUs are one response to this challenge, designed to move up the value chain rather than to compete on price, as pure exporters of higher education will inevitably have to do. Britain’s Liverpool and Nottingham Universities were first movers in establishing early versions of MNUs. Nottingham runs the oldest branch campus in China at Ningbo. Based on the commitment it had shown to China, it was invited to build a research-focused campus at Pudong in Shanghai with the aid of a wealthy Chinese philanthropist. This joins Nottingham’s comprehensive university in Malaysia, which offers courses in the arts, social sciences, engineering and sciences and pursues 13 research priorities.

Xi’an Jiaotong-Liverpool University (XJTLU) is a partnership between the universities of the same names and funded by Laureate International Universities, a for-profit provider. XJTLU was founded in 2006 and now enrols more than 5,000 students, with an aim of 10,000 by 2015. Located in Suzhou, XJTLU offers 23 dual degrees from the two parent universities with a strong focus on learning in English. Research priorities focus on many of the challenges facing China, such as sustainable urbanisation, energy futures, health technologies, and nanotechnology and new materials. The Laureate-XJTLU strategic alliance focuses on international collaboration and ongoing educational opportunities, indicating more private providers might be attracted to funding MNUs.
Monash China’s partnership with Southeast University in Suzhou promises to be yet a different experiment in new models of research. Located in the Suzhou Industrial Park, the aim is to put research students in close proximity to international research and development, says Tam Sridhar, academic vice-president for Monash University’s India and China initiatives. The industrial park has more than 100 Fortune-500 companies and is at the “centre of the R&D explosion in China”, according to Monash. The graduate school will feature postgraduate courses in a range of disciplines, including nanotechnology, biomedicine, environmental science, transportation, industrial design, economics, and software, thermal and mechanical engineering, with students graduating with degrees from both universities.

More recently, American institutions such as Duke, MIT, NYU and Yale are similarly seeking to leap over this trade phase of higher education internationalisation—and the diminishing marginal returns now biting among higher education exporters—by moving directly to the university analogue of an Apple-like MNC.

These nascent MNUs are headquartered on their historic American campuses and, like Apple, keep the highest value-added parts of their business, and most of the money generated, at home. They have long relied heavily on academic talent drawn from other countries, the equivalent of Apple components. In the university world this is normally considered the “brain drain” or “brain gain” depending on whether you are in a sending or receiving country.

But MNUs are increasingly experimenting with teaching and research collaborations with local partners in emerging markets that combine the American parent’s expertise and brand credibility with financing and infrastructure—as well as human capital—supplied by their local partners. Think Apple changing its China strategy from mere assembly in China to developing and selling products there too (as it is now doing with great success). The potential upside for MNUs is clear. Their products will improve, their brands will globalise, and their bottom lines will strengthen—all by leveraging the global value chain made possible by the broader forces of globalisation.

This MNU move could be of profound importance for Australian universities, potentially pushing them downmarket to compete mostly on price and to maintain by admitting more, inevitably lower quality, students. Might Australia avoid this dire scenario by adopting and adapting the best attributes of American MNUs? Our answer is a qualified “yes”. Converting some Australian universities to the MNU model would require rapid, radical and smart innovation. There is some reason for optimism, however, based largely on how quickly and thoroughly the export model becomes Australian standard practice.
THE MNU MODEL

In his letter to the faculty of Yale University in New Haven, Connecticut on the merits of the proposed new Yale-NUS liberal arts college in Singapore, President Richard Levin said “we do believe it is inevitable that the world’s leading universities by the middle of this century will have international campuses.” Levin didn’t mean “branch campuses” in the sense we discussed in the previous section. And he didn’t have to say that most of these campuses will be in Emerging Asia and in partnership with Asian institutions.

To be sure, government controlled oil and gas money has attracted many universities to the Gulf states of Qatar, United Arab Emirates and Saudi Arabia over the past decade. But these ventures remain almost completely dependent on host government financial support rather than local market opportunities and available talent. Emerging Asia is different, with the prospect of more than a billion new middle class consumers who are technically skilled and increasingly English literate offering the potential to revolutionise the world of higher education, just as it is already revolutionalising so many other consumer markets, from electronics to finance to automobiles.

In this section, we discuss four emergent MNUs:

- New York University is establishing a campus in Shanghai in partnership with East China Normal University as part of its global network university
- Duke University is partnering with Wuhan University west of Shanghai to establish the Duke-Kunshan University (DKU)
- Yale University is partnering with the National University of Singapore to establish what they are calling the liberal arts college for the 21st century
- MIT is a founding partner of the new Singapore University of Technology and Design (SUTD) with Zhejiang University from China

Duke University reports four main reasons for wanting to operate in Asia: expand the university’s presence and project its prestige into Emerging Asia; recruit international students and faculty; engage with Asian scholarship and industry; and facilitate exchanges between American and Asian students.

There is also much to gain in the credit claiming game for global leadership in higher education. Duke’s Kunshan initiative is driven by the motivation of being the only top American institution with a true joint venture in China. Yale is driven by the potential to influence the course of 21st century liberal arts education as profoundly as it influenced education in the 19th century. For MIT, SUTD is how MIT would be designed if it was established today.
NYU envisages a world in which the best students from all over the globe can move seamlessly among its network of campuses spanning all the major continents.

But there is much going on in these MNUs beyond higher education leadership and the sometimes breathy marketing hyperbole that goes with it. Each MNU is designed to generate unique competitive advantage that will enhance the quality, reputation and financial position of each American university, while giving their Asian partners the ability to access talent, know-how and credibility that it would take at least decades for them to develop themselves. The glue that makes it all work is the willingness of the Asian partners to underwrite and bear most of the financial risk of these MNUs.

China and Singapore are willing to make large MNU bets on big name universities because they believe that they will be essential to the diffusion of world class higher education know-how into their countries—MNUs today, but global quality local universities tomorrow. Again, there are clear parallels with China’s encouragement of MNCs to develop partnerships with local companies today with a clear view to creating China’s own “global champions” tomorrow. Their value proposition will encompass education of a high quality at an affordable price, world class research in world best facilities using local talent that is already globally competitive (notably through a “reverse brain drain”), outstanding career opportunities in the economies of the region, and allowing students to remain close to the family, friends and home that are so central to many Asian cultures.

Due diligence and capacity building on the ground have been a central feature of the strategies of American universities long before opening their MNUs. Indeed, there seem to be four preconditions for developing an MNU:

- Long-term presence in the region
- Practical operational experience in developing countries
- Employing the right people on the ground from the outset
- Building a trustworthy partnership with the right local institution (university and/or government)

Before being approached by Singapore to consider being a partner in the new Singapore University of Technology and Design, MIT had had over a decade of experience on the island nation. The Singapore-MIT Alliance is a self-described “innovative engineering and life science educational and research collaboration” between MIT, the National University of Singapore (NUS), and the Nanyang Technological University (NTU) in Singapore.
Yale University established its Yale-in-China program in 1901, and today it has expanded into new areas and programs beyond the historical bases of Hong Kong, Changsa and Wuhan. Yale also has joint research centres with two of China’s top universities, Fudan University in Shanghai and Peking University in Beijing.

New York University Tisch School of the Arts Asia opened in Singapore in 2007 as the university’s first degree-granting campus outside New York City. In Shanghai, NYU has had a presence since 2006 when it established a study-abroad site with East China Normal University. In doing their due diligence, Chinese authorities were impressed that NYU’s experience in Abu Dhabi gave it the know-how essential for NYU Shanghai to succeed.

Duke University established the Duke-NUS graduate medical school in Singapore in 2007. Duke learned from a failed Johns Hopkins University gambit by using an initial five-year period to ensure the partners worked through any differences and completely aligned expectations. The Duke-NUS partnership has enhanced Duke’s reputation among top medical educators across Asia, deepened Duke’s expertise in fields such as emerging infectious diseases, and provided a point of connection to other research sites, such as in India. In China, Duke entered substantive discussions with Wuhan University in 2007, six years before DKU will open its doors in 2013.

Let us now consider how each of our four exemplar proto MNUs is designed to work and what they are expected to do.

**NYU Shanghai**

NYU Shanghai is the next phase of New York University’s “global network university” strategy. It will be NYU’s third “portal campus” alongside NYU New York and NYU Abu Dhabi where students from different continents can begin NYU degrees (supplemented by 13 study-abroad sites including Sydney where existing NYU students can study). It is designed to teach 3,000 undergraduate, graduate and professional students who will be able to take classes at any of NYU’s global sites and who will be awarded regular NYU degrees.

NYU plans to enrol 300 undergraduates for its first year, with 51% coming from mainland China. Chinese students will be accepted based on a combination of their performance on China’s national entrance Gao Kao exam and an NYU screening/interviewing process. All classes will be taught in English. NYU Shanghai students will be able to spend up to three semesters on their campus of choice throughout the NYU global network.
NYU’s Stern School of Business will offer a new Master of Science in Business Analytics as the inaugural degree to be offered at NYU’s downtown Shanghai campus. Business Analytics is being touted by NYU as a new discipline that links business and technology, and leverages the use of data as a strategic business asset and decision-making tool—the first of its kind, according to Stern. The program will target English-speaking Chinese executives and expatriates working in China.

**DKU**

Duke Kunshan University (DKU) is a partnership among Duke University headquartered in Durham, North Carolina, the city of Kunshan in Jiangsu Province, China, and Wuhan University, the oldest comprehensive university in China. The state-of-the-art DKU campus is now under construction on a 200-acre site within a 1,700+ acre science and technology park in Kunshan—fully funded by Chinese authorities in terms of capital expenditures, with Duke only required to contribute to operating costs. Located near Shanghai and Suzhou, and connected to both by highspeed rail, the city of Kunshan is a centre for business and high-tech research and manufacturing that has one of the fastest economic growth rates in contemporary China.

DKU will offer a range of degree programs for mostly Chinese students with an initial focus on business. It will leverage the global quality of Duke’s Fuqua School of Business but tailor its programs to address local needs by working closely with the Chinese Ministry of Education. DKU business degrees, for example, will offer classes focused on improving service delivery in the Chinese health system—a major goal of China’s new 12th five-year plan, and thereby creating value for Duke in terms of soft power with the Chinese government, future alumni and their networks, as well as targeting a key development need of the now middle income country. In a lateral move, DKU established quasi-professional one-year degrees such as the Master of Management Studies, Master of Global Health, Master of Chinese Resources and the Master of Health Informatics, each with offshoots into executive education courses. These programs expand the market segment without changing how they compete.

A centrepiece of DKU will be its Innovation Centre (pictured on page 29), conceived as an incubator of new education and research models housed in experimental teaching spaces and wet and dry research labs. It allows the Duke faculty to tailor and test its programs before they are offered in the Chinese market.

Its Wuhan partnership will enable Duke to develop the know-how to meet the rapidly changing demands for higher education in China, while at the same time increasing the China expertise and influence. Duke will also gain a valuable revenue stream to reinvest in DKU or repatriate to Durham.
Yale-NUS Liberal Arts College (YNC)

YNC is being hailed by Yale and NUS as a new model of liberal arts undergraduate education for the 21st century and tailored to Asia’s needs—with Singapore absorbing all the costs of rolling out the new venture and incremental revenues then to be shared between the two partners. The pedagogic aim is to prepare students with the critical thinking, communication, collaboration and leadership skills needed to tackle the multidimensional and rapidly changing challenges and opportunities facing business, government and NGOs today. While Asia is renowned for the technical skills of its human capital base, these interpersonal skills are often seen to be in short supply. YNC is designed to meet this critical market need.

YNC is developing an entirely new liberal arts curriculum. For instance, its first-year humanities course will draw equally on Asian and Western literary and philosophical traditions, with the intention of then offering such a course at Yale’s home campus in New Haven. There will be a strong focus on interdisciplinarity with two courses focused on current issues that bring together science and social sciences, and a capstone research component in the fourth year.

YNC will be located in “University Town” at NUS where all its 1,000 students will live in residential college communities, as is the case for Yale students in New Haven. The majority of the 250-student intake each year will be Singaporean and will be expected to do a professional placement with an internship partner for 8-12 weeks over summer. YNC has recruited more than 40 founding internship partners, from American Express in New York and Coca-Cola in Atlanta to Sino-Land in Hong Kong and Microsoft in Singapore. YNC students will also be able to do exchange programs with Yale in New Haven.
Singapore University of Technology and Design (SUTD)

The Singapore Government in collaboration with the Massachusetts Institute of Technology headquartered in Cambridge, Massachusetts, and Zhejiang University, a member of the elite C9 League and based in Hangzhou is establishing the Singapore University of Technology and Design (pictured on page 31). SUTD is conceived as a living laboratory of interdisciplinary education, self-directed conceptual learning and real-world experience. Students will be organised in small learning communities, nurturing the skills and creativity required for innovation, leadership and entrepreneurship. The *Chronicle of Higher Education* reported that this initiative is being funded to the tune of $700 million by Singapore. SUTD aims to produce the next generation of pioneers in architecture, engineering and information systems. The president of SUTD describes this institution as how MIT would be designed if it started from scratch today.

SUTD takes an outside-in approach, meaning that the focus is first and foremost on producing the graduate attributes required for a great job in the global marketplace. This means emphasising personal attributes and interpersonal skills at least as much as technical knowledge. Internships with top corporate partners are a core component of SUTD. So too is student exchange with MIT in Cambridge and Zhejiang University in China.

MIT will develop 103 undergraduate subjects for SUTD, and both universities will offer a dual Masters degree and a postdoctoral fellows program. SUTD faculty will undergo training in MIT, and MIT academics will co-teach at SUTD. The research at SUTD takes on a multidisciplinary approach, as exemplified by the establishment of the International Design Centre in collaboration with MIT.

This focuses on three “grand challenges” (sustainable cities built environment, design for the developing world and ICT-enabled devices for better living) and six “design thrusts” (information, computation, visualisation, fostering creativity, concept selection and global hub). Zhejiang University is charged with developing and co-teaching five electives in Chinese culture, entrepreneurship and design. SUTD’s research collaboration with Zhejiang University will focus on energy, healthcare, environment and transportation, all central to both Singapore’s and China’s future prosperity. One hundred SUTD students will undergo their exchange at Zhejiang University yearly with the opportunity to intern in Chinese organisations and MNCs.

The branding of SUTD is different from the other MNUs. SUTD is “established in collaboration with MIT”, but its degrees will not bear any MIT stamp.
Managing the brand

Any elite university’s name is its most important asset, and a degree bearing its name is its most valuable product. A global reputation is a proxy for quality and helps attract and retain the best students and faculty as well as being a magnet for financial support from gifts, grants and contracts. Protecting a university’s brand is therefore essential, and not to be compromised at any cost.

The decision of an elite university to become an MNU through a strategic partnership with another institution in another country—signing over its name to a new institution and new degrees—is therefore a difficult and major one. A decade ago, for example, the University of Pennsylvania’s Wharton School of Business drove the establishment of the Singapore Management University but chose not to attach the Wharton brand to the new venture.

MIT went further several years later in allowing SUTD to say it was “established in association with MIT”. Duke and Yale are going further still by putting their names on their new Asian JVs. But only NYU went so far as to offer fully-fledged NYU degrees for Shanghai-based classes. DKU offers DKU degrees, while Yale-NUS offers NUS degrees.

There certainly is a correlation between prestige and naming. Yale and MIT can probably afford to be more cautious in how their names are used in order to minimise the risk to their reputations, on the one hand, and to maximise the benefits (funding, infrastructure, marketing) they expect from local partners. In the rarified air of “top 20” American higher education, they have even stronger brands, and bigger endowments, than Duke and NYU.
In contrast, Duke and NYU have vaulted to national and international prominence in recent decades without having the time yet to translate this prominence into endowment bottom line or world best brands.

Despite this variation, the four universities undertaking MNU experiments that are analysed here must all project benefits from these initiatives that exceed the reputational risks involved. We do not intend to second guess these decisions here, but rather focus on their strategies for maximising the upside of their MNU gambits.

Kris Olds from the University of Wisconsin-Madison argues it is better for an institution to engage itself fully in the foreign partnership and embed itself in the fabric of its host city and country. In his blog on the Insider Higher Ed website he says, “Being present while being absent provides some latitude of freedom to reduce risk, and cost, but as INSEAD’s presence in Singapore demonstrates, there are a myriad of (sic) rewards to being present.”

At its core, value creation in these international ventures is dependent on developing deep local relationships based on trust. To do this, Olds cites the importance of being seen to be contributing on the ground, to share and be seen to be sharing costs, and “to be demonstrating a medium-to long-term level of confidence in risky experiments in global higher education”.

NYU is hardwiring itself into each of its foreign jurisdictions, including Shanghai. Its President John Sexton believes the right approach is to be fully embedded in the partnership and host city. In effect the best way to protect NYU’s name is to put it at risk but to ensure everyone at NYU is responsible, and cares for, the success of each NYU international venture.

Duke is partly funding operating costs of DKU for the first five years with the goal of making the programs self-funding and viable in the long-term. In contrast, Yale has sold its name but Yale-NUS offers NUS degrees, employs NUS faculty and NUS underwrites all costs. Yale has leveraged its prestige to ensure Singapore covers almost all of the venture’s risk, while ring-fencing Yale’s input to curriculum development and academic oversight.

While Yale has gained significant start-up benefit, the question will be whether it is invested enough on the ground in Singapore to ensure the value created over the long-term will be worth the effort and the risk to reputation.
Duke and NYU are also offering executive education courses for government and business, not only hardwiring connections to China’s elite but also adding a profitable revenue stream to their more conventional academic degree programs.

The failed UNSW Asia and Johns Hopkins University (JHU) medical centre experiments in Singapore shed some insight into lessons learned. UNSW Asia—an ambitious MNU-like campus of the University of New South Wales—closed after only one semester in 2007 due to poor student enrolments. The JHU venture was to focus on biomedical research, the training of doctoral students and providing clinical services in oncology. But it ended because JHU was not able to deliver on eight of 13 key targets. For example, it was only able to attract junior researchers instead of the promised reputable scientists.

Further to the west in the Gulf States, Michigan State University’s two-year experiment offering undergraduate education in booming Dubai ended in 2010. Michigan State President Lou Anna Simon said the school just could not attract the critical mass it needed, enrolling less than a third of the expected minimum numbers of 100–150 students. MSU Dubai also opened just before the start of the global financial crisis, but its star faded as quickly as it rose. Inside Higher Ed reported that Michigan State’s partners in Dubai did not provide an additional $3.4 million in anticipated support for the 2010 fiscal year, which Michigan State’s foundation had to fund instead.

In all these ventures there was a breakdown in the relationship between both the foreign institutions and the funding government when their respective rollouts failed to meet the original plans. This reinforces the NYU and Duke approach to minimising risk by being as fully engaged and embedded as possible at all levels in the host city and country. That being said, and while there is significant negative media attention around such failures, the reputations of both universities have proved resilient.

Elite US privates wishing to pursue an MNU strategy must contend with several constraining factors such as concerns over quality of students, complex governance arrangements, navigating different legal jurisdictions and layers of government, settling tricky financial negotiations over start-up costs and revenue sharing, and ensuring academic freedom—not to mention the complex challenges of operating campuses on opposite sides of the planet. That several leading US institutions have embarked on such ambitious projects suggests that they view the strategic, economic and reputational returns as being high. China, and increasingly India and Indonesia, recognises the calibre of its indigenous higher education can be improved through deeper engagement with foreign universities.
These countries are very cautious, but they know the prize is the transfer of Western know-how to their institutions. The Chronicle of Higher Education reports The Chinese Ministry of Education’s vision is that foreign university joint ventures should provide a clear model that Chinese institutions can emulate in their own internal reforms. According to speeches by party officials, the Ministry is now inviting up to 10 leading international universities to partner with leading Chinese institutions.

Despite the Indian government now being doubtful that its Foreign Educational Institutions Bill can be passed, the government is considering “backdoor” entry options to foreign institutions. The revised intention of the Indian government is to allow the entry of higher quality foreign universities given the proposed entry test focuses more on the foreign partners’ world ranking rather than its financial resources. Indian public universities lack the financial resources to attract foreign partners and are hindered by bureaucracy. It is the private institutions and corporate partners in India who are more likely to engage in partnerships with the foreign public universities. For example, a partnership between Indiana University and the private OP Jindal University commenced in October 2010, with a focus on law, business, and public and environmental affairs, and offering faculty and student exchanges, joint research and joint degrees.

In contrast to India, the Indonesian parliament passed its Higher Education Bill in July 2012, giving foreign universities the chance to open branches in the country. The central objective is improving the quality of higher education in Indonesia. To ensure Indonesian religious and cultural values are upheld, foreign universities operating in Indonesia would come under government control. The intent of the legislation is to give Indonesian students the opportunity of pursuing a low cost university education of international standard at home rather than having to travel overseas. Foreign universities are allowed to set up branches and independent research centres in the country, in partnership with an Indonesian university with the proviso the joint venture hires Indonesian academics and staff.

This is a significant step towards long-term opportunity on the world’s largest archipelago. Indonesia needs to rapidly build the capacity of quality higher education as a first-order priority. The Indonesian government does not have the resources of China to attract leading foreign institutions, so it is expected that joint ventures will need to be largely self-financing.
Rutgers University, based in New Jersey, might offer Australian universities an insight into the economic potential of MNUs. Rutgers is currently considering a generous Chinese philanthropic gift to supply the land, construct a state-of-the-art campus, and provide the start-up operational funding to create a campus on Hainan Island in China.

The joint venture would build on Rutgers’ existing partnership with the South China University of Technology with the aim of building a 5000-student campus. The motivation for Rutgers is clearly mapped out in a resolution passed by its faculty council: enhancing Rutgers’ global brand, a permanent presence in soon-to-be world’s-largest-economy China, education and research opportunities, and “building a stable pipeline of top quality, fee-paying students (undergraduate/graduate) to Rutgers”.

It is still too soon to tell whether MNUs will revolutionise international higher education in the 21st century the way MNCs revolutionalised global commerce in the 20th century. But it is clear that something major is afoot, and all universities will have to watch closely how these MNUs evolve and decide how to respond.

4. Australian challenges and opportunities

The previous two sections describe a “perfect storm” battering Australia’s export model of higher education:

- Diminishing marginal returns from a well established export model, the classical downside of the innovation S-curve
- Unique Australian factors of the high dollar, bad press and visa tightening
- The post-GFC entry of major American public universities into the market for Asian undergraduates coupled with slower demand growth in these markets
- The emergence of proto MNUs seeking to leap over the export phase to realise higher rates of return

Beyond these big structural factors, there is a widespread perception that overseas students are merely a cash cow for Australian universities. Lack of public transport concessions in NSW and Victoria continue to make international students feel they are second class citizens. A paucity of affordable, safe and proximate housing in Sydney and Melbourne, where the cost of living is very high by world standards, condemns many students to cram themselves into overcrowded poor rental accommodation.
No matter how you slice it, the four pillars of Australian universities’ competitive advantage in the global market are eroding:

i. **Affordability** – the AUD reached parity with the USD in early 2010, significantly diminishing the price advantage

ii. **Safety and security** – the attacks on Indian students in Melbourne, and on Chinese students in Sydney, exacerbated by the apparent dismissal by some authorities of some attacks as not being racially motivated

iii. **Quality** – the dramatic growth in the very large number of Asian students in some programs is widely seen to have diminished their quality

iv. **Residency pathway** – the immediate and unexpected changes to residency visa qualification in 2010 by the Federal Government created enormous uncertainty (subsequently partially reversed following the Knight Review)

The Knight Review of the Student Visa Program signaled Australia will now give preference to higher achieving students (destined for higher skilled jobs) for residency consideration. But with the momentum of global job opportunities decidedly shifting towards Asia, such new residency pathway policies that are designed to regain Australia’s competitive advantage in the export market are likely to become less attractive to Asian students if their future jobs are going to be closer to home. Australian universities need to start considering other ways to create competitive advantage in the global marketplace for international students and not just rely on policy measures.

How should Australian higher education respond? There are three basic possibilities, in increasing order of desirability, but also of difficulty:

- a. Move downmarket by competing more on price
- b. Move upmarket by competing more on quality through improving the “on campus, in class” experience for both domestic and international students, combined with increasing experience opportunities such as internships
- c. Move to the global frontier, by MNU-ising some Australian universities in a longer-term strategy for global competitiveness

**Downmarket moves**

Without changing their value proposition to international students, the entry of elite US public universities into the global market will inevitably force Australian universities downmarket. This trend will likely be exacerbated as the new entrants learn from and improve on Australian universities’ long-established business models. Going back to our Apple analogy, it is a phenomenon akin to the introduction of i-devices forcing “non-smart” technology downmarket to lower price/higher volume, such as Nokia in Africa.
There may be ways for Australian universities to compete on cost, however, without harming quality. Texas has implemented $10,000 bachelor degrees for non-state students in a bid to increase enrolments and drive the economy in regional areas. In an analogous way, Australian regional universities could similarly attract more international students outside the big metropolitan areas, say at a cost of $15,000 pa rather than the $30,000 floor in the big cities.

The $15,000 pa regional-university bachelor’s degree could be built on cost containment while maintaining quality. These degrees could either focus on a regional university’s disciplinary strengths to shore up these programs’ future (e.g. agriculture, food security, resources, rural and regional health). Or they could be more general arts, science and commerce degrees. Offering programs that were no-frills with minimum choice/prescribed options, and fast-tracked, would contain costs.

State governments could work with their regional universities to promote regional cities as a destination for price-sensitive international students who want a Western education.

**Upmarket moves**

Moving upmarket to compete on quality will be essential for Australia’s leading research universities to ensure the long-term sustainability of their high-cost business models. Moving upmarket does not mean Australian universities now need to offer equivalent value propositions to compete with Berkeley. Rather they need to ensure their continued differentiation within their market segments along quality lines. Continuing to attract the highest possible quality international students helps reinforce high academic standards, reduces churn, minimises student support costs, provides the best possible talent pool for research students, and adds greater value to a university’s alumni network.

As the higher education systems in Australia’s source countries grow in capacity and capability, higher quality students will increasingly choose to study closer to home. Elite American universities will always be able to attract the best students through scholarships and the opportunities of a prestige education.

But there are some obvious ways for Australian universities to increase their competitiveness.
Internships: Experiential learning is in high demand from international students to make them more attractive to employers. By offering more experiential learning, and integrating these opportunities into degree programs, Australian universities could significantly boost the value proposition for international students. These need not be in the private sector. State governments, for example, could play a key role in providing internship opportunities for international students within the bureaucracy (partially offsetting the downsizing common to post-GFC governments). Governments could vet and identify internship sites in the private and non-profit sectors while universities would select and supervise students and integrate their internships into in-class based degrees with full credit.

Integrated study abroad: The US Studies Centre has developed what we call integrated study abroad. This program sends groups of undergraduate students to the US to study alongside their American peers and live in dormitories with them. Programs focus either on study or on study/internship opportunities for credit within their Australian degree programs. The Centre has developed three programs in Washington and LA through the University of California, which will benefit 80 Sydney undergraduates each year. The demand for these programs is very strong and could be expanded to include high performing students from across NSW, or potentially nationally, and could be a significant selling point in attracting high quality students from other states and overseas.

Writing program: Based on the Duke Reader Project, writing programs could be developed to offer international students the opportunity to get feedback from someone outside the classroom on a writing project relevant to their education. The feedback would be from volunteer “readers” drawn from, for example, the state public service and a university’s alumni base. The aim of the program would be to help improve the written English communication skills of international students for a project they are working on. It could be technically focused or more general expression. Volunteer members of the state public service and university alumni would play a direct role in helping international students not only improve their communication skills but be a touch point for connections outside the university.

Residential living: By and large, Australian universities are commuter campuses where students live at home; in contrast to the residential programs for many undergraduate students at most major US universities. To encourage better integration of domestic and international students through residential housing and student communities, Australian universities should adopt long-term strategies to develop more residential opportunities for domestic students, as well as providing more accommodation for international students.
Housing should be based on a student’s personal interests, rather than on whether they are international or domestic. Indiana University, for instance, arranges its residential housing in “learning communities”, as does UC, San Diego. At Indiana, there are 20 different learning communities focused on interests ranging from computing to health sciences, outdoor adventure, performing arts and religion. Other themes include “global village” and “fitness and wellness”. The benefits from integration of international and domestic students work both ways. The isolation often experienced by international students can be minimised while Australian students can develop lifetime friendships with their international peers through mutual personal interests. The potential long-term value to the student in an increasingly globalised marketplace, and to the university through stronger alumni networks, is a win-win. State government policy to support development of greater residential housing opportunities for universities is essential.

**Interpersonal skills:** University teaching will need to move from the traditional model of lectures read out loud to facilitating learning communities and the development of soft skills among all students. Business schools, particularly in executive education and MBAs, have led the way with a focus on leadership skills and critical thinking in de-centred and student-focused learning environments. These principles can and should be suffused throughout universities, even though the challenges of scaling and adapting programs for working professionals to suit the needs of full time students are real. Nonetheless, it is clear that it is interpersonal skills that are in shortest supply and greatest demand among emerging leaders in Asia, and Australian universities will have to rise to the occasion if they are to protect the market shares built in the past two decades.

**Government policy:** Given the importance of higher education exports to the economies of Australian states, whole-of-government strategic policy making at the state level is essential. However, government policy should go further than viewing international students for their economic potential and must recognise and embrace them as enriching society.

**Trade mission:** Given that Australian universities have had two decades of educating Asian students, and given the long-term strategic importance of higher education to both Australian and Asian economies, future Australian trade delegations (e.g. led by a state premier or federal minister) to the region should consider having a specific focus on the future of higher education. The delegation could provide a platform for dialogue between government leaders and university vice-chancellors and presidents from Australia, Asia and Asian-based US universities.
MNU-ising Australian universities

Hardwiring into China: To pursue a full-blown MNU strategy—as per the endowment-rich elite US institutions described in this report—might be a bridge too far for most Australian universities. Nonetheless, these universities will be well served by developing long-term strategies of hardwiring themselves into China, and diminishing their reliance on the export model. There are at least four reasons to do so:

- by 2020, China aims to double its inbound international students to more than 500,000, in direct competition with Australia, the US, Canada and UK
- between 2007 and 2030, McKinsey projects that 30% of the world’s global growth will occur in 242 Chinese cities, compared with a forecast of only 3% to be generated in India’s cities
- China could have a deficit of up to 23 million tertiary-educated workers by 2020, partly due to demographics, to insufficient higher education capacity and to poor quality institutions
- Within 15 years, China’s population will begin to decline; its labour force has already peaked (both the product of rapid development and the one child policy). To avoid the “middle income trap”, China will need an ever more highly educated workforce to drive productivity

Australian universities can pursue pro-active MNU-like initiatives as stepping-stones towards hardwiring into China, and at a pace that manages risk levels. They should target mid-tier Chinese cities with growth momentum and partner with established Chinese universities with the aim to seed education and research initiatives to benefit China, as indeed Monash China is doing. Australian universities should work with the local institution, local and provincial government.

We propose a long-term two-phased approach, the first developing human connections, and the second building physical plant.
**Phase 1**
- establish or expand double degree programs with the local Chinese university, with exchange opportunities for Australian and Chinese students and academics
- seed research collaborations, facilitate exchange opportunities for Australian and Chinese researchers. Build research programs, including commercial research opportunities involving Chinese state-owned enterprises (SOEs) and companies, with a keen focus on solving China’s problems
- develop internship opportunities for Australian and Chinese undergraduate and postgraduate students in both countries. Chinese-speaking Australian PhD students could intern in establishing research labs in Chinese universities, along the lines of the MIT International Science & Technology Initiatives.

**Phase 2**
- establish a physical presence even if not a full campus in partnership with the local university, leveraging relationships with government, companies and the Chinese city and region.
- the international campus could offer degrees from an Australian university or jointly with the local partner with the aim of building capacity and capability of the Chinese workforce
- innovative interdisciplinary research labs could be built around thriving collaborations, with the financial assistance of the local government. These could be centres of excellence focused on solving China’s problems.
- establish an executive education program for SOE and government officials

**Building capacity in India and Indonesia:** These two giant countries will also be central to Australia’s higher education future. They are a generation behind the modernisation of China and both have significant challenges relating to infrastructure, high population densities and underdeveloped higher education systems. But unlike China, they have young populations with high birth rates. The strategic path ahead for either country is becoming clearer with recent policy decisions; the potential of both is vast.

We recommend that Australian universities begin due diligence and capacity building by establishing integrated study-abroad sites with leading local universities in both countries, at a scale of at least 20 students, and/or moving towards establishing branch campuses with the aim to move upmarket into higher valued-added parts of higher education. Seeding research collaborations geared towards the needs of these developing economies is smart. These sites could then act as learning-by-doing platforms for more engagement in India and Indonesia with a view to rolling out more aggressive MNU-like initiatives when and if appropriate.
Conclusion

The fundamental problem facing Australia’s “higher education as export” business model is that the increase in supply of global higher education will both lower the global market price for degrees as well as the average quality of students willing to pay for them. The big winners from supply outstripping demand will be consumers of higher education in developing countries. But this poses a major financial and reputational threat to campus-based universities in developed countries with high fixed costs for staff and infrastructure.

But it is also a question of global relevance for Australian higher education. With international student numbers predicted to almost treble to 7 million by 2020 from 2009 levels, the Australian share of the international market will inevitably decline. Unlike Australia’s iron ore and coal industries that can increase capacity in response to world demand, Australian universities are not so capable. Already at the highest level in the developed world with around one in four students at Australian universities from overseas, these institutions would need to add on average an additional three places for local students just to make way for one international student if current quality levels are to be maintained.

Australia’s export-focused universities have enjoyed almost two decades of largely unchallenged access to the students from Asia. For almost two decades, Australian universities have relied on this rich source of revenue to underwrite their operations, fund research programs, build infrastructure and support student services. So any danger to the viability of this business model is serious indeed.

The three threats we have identified in this report—the lateral threat from American public universities aggressively entering the Asian market, the threat from above by elite US private universities pursuing MNU strategies and thereby creating universities for a globalised world, and the threat from below in the form of low-cost online education (MOOCs)—signal serious and growing challenges to the Australian university business model. Combined with local factors like the high Australian dollar and residency pathways, the effect has been to diminish Australian universities’ global competitiveness in the international student market. But these threats also signal the arrival of a new era for global higher education defined as much by the rapid emergence of creative innovations and new business models as by the rapid and unpredictable dynamics of the global marketplace. None of the threats we have outlined here existed much before the global financial crisis only four years ago. Australian universities must be on the front foot to shape their increasingly offshore future in global higher education rather than have their onshore operations shaped by the international market.
Appendix 1. Drivers of international higher education demand

The June 2012 report by the British Council “The shape of things to come: higher education global trends and emerging opportunities to 2020”, takes a close look at global higher education this decade based on the three drivers of higher education demand: demographics, macroeconomics and national policies. While national policies are hard to predict, demographics and macroeconomics work in unison to determine potential growth in tertiary enrolments.

Demographics tell a compelling story as to where forces of demand will be most keenly felt over the coming years. By 2020 almost half of the world’s 18 to 22-year-olds—the age group most likely to go to university and gain the higher skills needed to support rising incomes and national prosperity—will live in China, India and Indonesia. In turn, the growth of these three Asian giants will shape the trajectory of the increasingly interdependent developing economies across the region. Another 25% of the global share of higher education comes from nine developing countries, four of which are in Emerging Asia—Pakistan, Bangladesh, Philippines and Vietnam.

Combining demographic and macroeconomic drivers, China is predicted to experience the highest growth in tertiary enrolments from 24% to 38% of the 18-22 population, followed by India which will grow from 16% to 23%. What is most striking is that by 2020, China, India and Indonesia could add almost 15 million enrolments to the world’s stock of higher education, a figure approaching 10 times the predicted growth of all higher education enrolments in the rest of world combined.

According to the British Council report, in 2020 the top five tertiary education systems by size will be:

1. China – 37 million
2. India – 28 million
3. US – 20 million
4. Brazil – 9 million
5. Indonesia – 8 million

To determine the size of the global market of international students, the ratio of outbound mobility to gross tertiary enrolments for each country was determined; again showing China will be the largest source of international students. By 2020 around 1.5% of China’s 37 million tertiary enrolled students will be studying in foreign countries, above India’s 1% annual trend over the next decade.
However, the report’s conclusion that Australia is set to see the highest increase in the number of international students based on demand by 2020, ahead of the UK, US and Canada, must be questioned. Based on tertiary enrolment figures up to 2009, this report records Australia at its zenith and the US just as it starts to ramp up enrolment of overseas students, particularly at the undergraduate level (see Figures 5 and 6). Canada, too, is starting off a low base. Neither do these forecasts consider the capacity constraints in Australia as shown in Figures 11 and 12 compared to these competitor nations. And as the report notes, the projections assume China—Australia’s largest source market—will avoid a hard landing from its long period of hyper economic growth rates.

Perhaps the most critical factor determining the future of Australian higher education is the quality of the numbers. Other than the competitive advantage of residency pathways that is hoped to materialise under the Knight Review, Australia’s cost advantage has been neutralised. All things being equal, international students will increasingly judge the quality of an Australian education—and the opportunities it provides—against competitor nations.

The value of a 21C university education, in our view, should encompass the totality of a student’s education and how it best prepares a student for life and the global workforce. The strongest value proposition for students over the three to four years of an undergraduate degree would include quality curriculums combining knowledge and skills, residential life, study abroad, community-based service, internships and student life activities. The holistic view of a 21C higher education therefore should not only embody what universities teach and how they teach, but also how and where students learn. Increasingly, this is the quality education that full-fee paying international students seek.

“New” entrants into the international undergraduate market, such as US and Canadian public universities, rate more highly than Australian universities on this rendering of the value proposition with the packages they have on offer. Add to this the attraction of a degree with a global brand and influential alumni networks of institutions like Berkeley, UCLA, Washington and Indiana, and the competitiveness of Australian universities at the quality end of the market diminishes.
Appendix 2. MOOCs – an online revolution?

Elite US universities offer free web courses

This section is based on an opinion piece by this report’s authors published in The Australian newspaper, 6 June, 2012.

In June 2012 Harvard University and MIT entered into the brave new world of massive open online courses (MOOCs). With their new “edX” initiative, these two leading Boston-based universities have for the first time staked their credibility online by offering Harvard and MIT certificates of completion for their MOOCs.

These certificates are a long way from fully-fledged degrees. But students all around the world will no doubt consider getting edX certificates for classes that are free and open to anyone who wants to take them. The student benefits of edX are clear—great classes taught by world leading professors at no financial cost to students. Online education pioneer and former University of Southern California Provost Lloyd Armstrong goes so far as to contend that “because of the rigour of (Harvard and MIT) courses, the graduates (of edX) would likely be better prepared than the grads of a large fraction of accredited schools”.

But why are Harvard and MIT willing to risk their priceless reputations by credentialing students they don’t admit through traditional quality channels? The simple answer is that they don’t see it as a risk. Rather than potentially undermining their brands, the intent of edX is to globalise them. And in time, Harvard and MIT probably think they will be able to make money from edX the way The New York Times now profits from online content it used to give away.

Students all around the world will get the chance to find out firsthand what Harvard and MIT offer. They will be indebted to the universities for their online educations. Some may even then try to get into a real degree program in Cambridge, Massachusetts. If anything, the value of the brand—and the premium for Harvard and MIT on-campus educations—will rise still higher.

Harvard and MIT are far from alone in adding MOOCs to their curriculums. Other major American universities are also giving online access to popular classes using sophisticated video and interactive technology to allow anyone to enrol, anytime, anywhere in the world. Stanford, Princeton, Penn, Berkeley, Duke and Michigan among others have created MOOC platforms behind names like Udacity, Udemy and Coursera. And in September 2012, in announcing it would join Coursera, the University of Melbourne became the first Australian university to be part of a MOOC platform alongside prestigious American universities.
That all these elite American universities are investing their reputations, and almost $100 million of their own money with Silicon Valley backing on top, is the strongest indication yet that online learning will be a major part of the future of higher education.

Student response has been extraordinary. Some classes have already attracted enrolments of over 100,000, with students coming from more than 100 countries. Around the globe, students believe that online access to the world’s best universities will improve their skills and enhance their careers. The New York Times refers to MOOCs as the “democratising of higher education”.

MOOCs are also a great example of what Harvard Business School professor Clayton Christensen calls “disruptive innovation”, where a new technology and a new business model combine to disrupt incumbents by making a previously exclusive product more accessible to more people, at lower cost.

Harvard and MIT stress that edX “will never replace the traditional residential model of undergraduate education”. MOOCs can and will expand the reach of the global titans of higher education, in markets that will increasingly look like “winner take all”.

Why show up to an average history lecture in an aging lecture theatre in Delhi, Durban or Durham when you can stay at home and take the class from Harvard’s Niall Ferguson?

But the bigger upside to MOOCs concerns the potential credentialing they generate—credentialing for which major universities with “killer app” MOOCs will begin over time to charge students. Consider three possible future worlds of MOOC higher education.

First, MOOC credentials from world-class universities could come to be accepted as comparable to degree training from lesser institutions. For instance, might some employers not value the skill set and competency of someone who completed Udacity’s “Building a Search Engine”, taught by legendary Stanford professor Sebastian Thrun over a computer science degree from a university outside the Jiaotong 500?

Right on cue, the vice-chancellor of Deakin University in Victoria, Professor Jane den Hollander, announced in August 2012 that some MOOC courses would be embedded in the Deakin curriculum with the aim of freeing up academics to focus on assessment tasks and more personalised teaching. And for the first time, a US tertiary institution—Colorado State University—announced in September 2012 it will give full transfer credit to students who complete a free introductory computer science course offered by the online-education start-up company Udacity.
Second, MOOCs might be used as prerequisites for on-campus degrees. In Australia and other countries with large international student populations, completing MOOCs could potentially augment if not replace other admissions criteria.

Finally, universities could start incorporating elite MOOCs into their degree programs. For example, MOOCs could potentially replace some first-year, large lecture format teaching of core subjects taught the world over, say introduction to macroeconomics by Harvard’s Greg Mankiw?

Time will tell if any of these futures play out. After all, elite online higher education died an abrupt death when the dot com bubble burst a decade ago. But this time it looks different.

The most striking thing about edX and other top MOOCs is the commitment of world leading institutions to the global proliferation of knowledge. For centuries, universities have practiced this credo, but they have done so one student, or one seminar room or lecture hall, at a time. In the MOOC world, the proliferation possibilities are limitless and instantaneous.

Traditional universities therefore face at least two challenges. First, they must decide how to get into the MOOC game, either by producing their own MOOCs where they are competitive or integrating best of breed MOOCs into their educational offering.

Second, universities must re-focus on the value proposition of a costly on-campus higher education when free or lower cost online yet higher quality options are everywhere. This will inevitably mean enhancing group learning skills like communication, collaboration and leadership rather than merely imparting textbook knowledge.

This new field of MOOCs is still in its infancy, moving fast and evolving rapidly. With new players and new business models appearing almost weekly, it is too early to be able to make sensible and considered recommendations upon which policy action could be based or universities could rely. The US Studies Centre’s 2013 report on international higher education will specifically focus on global online education initiatives being pioneered by elite US universities.
Appendix 3 – Preparation of this report

This report is the product of research and review that occurred in three draft stages. The first draft was based on research including interviews and discussion with key people at the US, Australian and Asian universities profiled in this report. The second stage draft incorporated comments and suggestions from international panelists and Australian respondents on the first draft. The panel and round table discussion then considered the final draft of the report. The authors wish to thank interviewees, reviewers and participants for their generous time.

INTERVIEWS

- Professor CHONG Tow Chong, Provost, Singapore University of Technology and Design, Singapore
- Professor KHOO Hoon Eng, Director, Office of Exec Vice President (Academic Affairs), Yale-NUS College, National University of Singapore, Singapore
- Mr Luke Hanguo LI, Regional Director, East Asia, Fuqua School of Business, Duke University, Shanghai
- Professor Shirish Shenolikar, Professor and Senior Associate Dean, Duke-NUS Graduate Medical School, Singapore
- Professor John Sexton, President, New York University, New York
- Professor May LEE, Associate Vice Chancellor – Asia, New York
REVIEW

*International respondents and panelists*

- Professor Tony Chan, President, Hong Kong University of Science and Technology
- Professor Peter Lange, Provost, Duke University
- Professor Scott Waugh, Executive Vice Chancellor and Provost, University of California, Los Angeles

*Australian respondents*

- Professor Steven Schwartz, Vice-Chancellor and President, Macquarie University
- Professor Chris Findlay, Executive Dean, Faculty of the Professions, University of Adelaide
- Professor Simon Marginson, Centre for the Study of Higher Education, University of Melbourne

*Australian panelists*

- Professor Steven Schwartz, Vice-Chancellor and President, Macquarie University
- Professor Paul Wellings, Vice-Chancellor, University of Wollongong
- Professor Richard Henry, Senior Deputy Vice-Chancellor, University of New South Wales