Post-COVID Australian universities

The need for a new teaching and research vision

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Australian universities have used the revenue from overseas student fees to enhance their international research standing. COVID-19 has undermined this business model. A new strategy is required, based on the universities' contribution to making Australian industry more self-reliant. This outcome will require a national industry policy, such as has been successfully pursued in Israel. Australia's universities will need to adjust their research activities in order to contribute to this end. The Australian government will have to provide the funds and direction. The universities too, need to embrace this vision.

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Introduction

Pre-COVID, Australian universities had flourished despite very limited growth in Australian government funding. They had done so by expanding their overseas student enrolments. Now, in the post-COVID setting, most of the funding from this source has gone and is unlikely to return to 2019 levels for several years.

Universities are appealing to the Australian Government for additional funding that will cover the likely shortfall.

They are doing so in a context in which the Government has decided to implement major higher education reforms. These involve greater focus on job relevant teaching and research that addresses Australian industry needs. This is what university leaders claim they have been doing.

However, in the ominous words of the Minister for Education, Dan Tehan: 'Our reforms are being implemented to support universities to strengthen their focus on domestic students and strengthen the mutually beneficial relationship with business and government' (Tehan, 2020).

The challenges of this new situation are immense, since in order to promote overseas student enrolments Australia's universities prioritised quite contrary objectives. This particularly applies to the Group of Eight (Go8) universities. They massively increased their enrolment of overseas students and, partly to attract these students, focused their research effort on work adding to the global stock of knowledge in the hard sciences. As for domestic teaching it has become a second order priority, subordinate to the research effort. This opinion piece assesses the scale of the financial and reform challenge.

The overseas student focus

Australian universities have long been engaged in a competition to expand their research effort. Research output has been regarded as the key to their overall prestige, but Commonwealth government funding has been limited. One option, the deregulation of domestic fees, which would have augmented the revenue of the more prestigious universities, has been denied.

The Abbott Government presented legislation to implement this deregulation in its 2014-15 budget. However, the legislation was rejected in the Senate.

The Abbott Government, however, like the preceding Gillard Labor Government, wanted to promote the overseas

student industry, both as a source of funds to finance research free from taxpayer reliance and to promote the export performance of the overseas student industry.

In the case of the Labor Government, prior to losing office in late 2013, it had taken action to rectify some of the excesses of the industry in the years up to 2010. It introduced reforms in 2010 and 2011, mainly involving higher English language entry requirements and increasing the funds overseas students were required to show they could access prior to taking up their enrolment. These initiatives resulted in a sharp decline in the number of overseas student enrolments in universities at the time. This intervention provoked a sharp push-back from the overseas student industry.

Since 2012 successive Australian governments have reversed the 2010 and 2011 reforms, at least as they affected the universities.

The tough rules on English language standards have been softened. Overseas students do not have to achieve the English levels needed for university-level instruction.

The funds each overseas student must have access to have been reduced and decisions on the matter have been devolved from the Immigration Department to the universities. Overseas students are only required to establish that they have access to the funds needed for one year of study and living expenses.

This means that, for most students, especially those from the Indian subcontinent (see below) they arrive with the presumption that they will be able to access the Australian labour market in order to meet their expenses. From the time of their arrival they are permitted to find employment (in theory 40 hours of paid work a fortnight). In addition, overseas students enrolled since 2012 and who complete any degree level course, can stay in Australia with full work rights for a further two years.

There have been no limits on the number of overseas students a university can enrol except for a vague and rarely enforced government statement that such enrolments should not be at the expense of domestic enrolments. Moreover, universities have been free to charge whatever fee level they think these overseas students will pay.

Both the universities and overseas students have rushed to take up the opportunities offered. For the year 2018-19, 216,724 higher education visas were granted. The students are drawn from two major markets. Some 32 per cent were from China and around 43 per cent from the Indian subcontinent (Department of Home Affairs, 2019).

These two dominant streams are quite different.

The Chinese market

In recent years, the Chinese students have been attracted to the Go8 universities, where they dominate the enrolments. They are paying $40,000 plus a year for undergraduate and postgraduate by course work degrees. The courses themselves have been customised in order to cope with the limited English language skills of their overseas students. Around half are in the business and commerce field of education, mostly at the master's by coursework level.

These courses are relatively cheap to provide. They do not usually require additional teaching accommodation because they can be crammed into existing campus buildings.

What are these students buying? They are attracted to the Go8 because most are ranked in the top-100 research universities in the world. The Chinese are buying credentials which carry this status and, on this account, are valuable at the elite level in the Chinese job market.

The Indian subcontinent market

The second stream of overseas students is primarily recruited from the subcontinent of India, particularly from India and Nepal. Most attend non-Go8 universities where the course fees range from $20,000 to $25,000 a year. They too are mainly enrolling in business courses and to a lesser extent, IT and engineering courses.

What is this stream of students paying for? It is mainly access to the Australian labour market and the potential of obtaining a permanent residence visa. This is what the post-2011 changes to the enrolment rules facilitate. The sub-continent stream dominates the ranks of overseas students who are in the Australian labour market. They also show the highest propensity to take up the two-year post study work visa referred to above. They are mainly employed in low skilled service jobs, as in hospitality, retail, cleaning and the like.

The result

As Table 1 indicates, the outcome is an explosion in the level of overseas student enrolments relative to domestic student enrolments. It is strongest within the Go8. By 2018 over 40 per cent of all commencing student enrolments in these universities were overseas students. Most of these students came from China. No comparable data are available for 2019, though this ratio would have increased further because, in 2019, overseas student enrolments continued to grow faster than domestic enrolments.

For the Go8, this enrolment has delivered a revenue bonanza. In the case of the University of Sydney, total revenue from overseas student fees increased from $285 million in 2012 to $884 million in 2018. By 2018, this overseas student fee revenue accounted for 34.1 per cent of the University of Sydney's total revenue of $2,589 billion (Department of Education, Skills and Employment, Finance Publication, 2020).

In the case of Monash University, this fee revenue increased from $319 million in 2012 to $852 million in 2018, by which time it also made up 34.1 per cent of the University's total revenue. This was $2,498 million in 2018.

This is not all. With the imposition of COVID-19-related travel restrictions, most Go8 universities face additional losses in revenue from accommodation fees, parking and other services provided to overseas students.

Losses of revenue of $300-$400 million over 2020-21, compared to budget expectations for the largest Go8 universities are in store.

Australia's non-Go8 universities have also become dependent on revenue from overseas students, though to a lower degree than the Go8. The proportion of overseas student commencing enrolments to total commencing enrolments across the non-Go8 spectrum was between 20 and 30 per cent by 2018. For example, in Victoria, Deakin had reached 29.7 per cent, La Trobe 25.9 per cent and Swinburne, 23.2 per cent.

Overall, total Australian university overseas student fee revenue more than doubled from 2012 to 2018, increasing from $4.1 billion in 2012 to $8.9 billion in 2018. By 2018 this revenue amounted to 26 per cent of total university revenues and represented an increase of 117 per cent.

By contrast, over the same period Australian Government Financial Assistance increased from $14.67 billion to $17.62 billion, an increase of 20 per cent.

What have the universities done with this revenue bonanza?

As the universities have made clear, the expansion in university research activity, which has delivered the Go8's top-100 international research ratings, has heavily depended on fee revenue from overseas students.

While the Australian government pays for much of the costs of the research workers who receive competitive grants, the universities have to pay for the infrastructure (laboratories, equipment and the like) needed if the research is to proceed. Overseas student revenue pays for much of this.

The research itself has focused on that which enhances the global stock of knowledge in the hard sciences. It is the research output that is most likely to find a home in the prestigious international science journals which are the basis of the global research university ratings.

This research usually has little direct relevance to the needs of Australian industry. It could hardly be otherwise. Even if the universities had wanted to focus on applied research, the demolition of Australian industry through Australia's globalisation priorities (detailed below) has denuded the ranks of the locally based industries able or willing to finance applied research.

This is not all. A far bigger financial hole looms. The loss of revenue from the decline in overseas student numbers threatens the business model on which universities have operated over the last decade. These funds have directly

Table 1: Proportion of commencing onshore* overseas students to all onshore commencing students, Go8 universities and all Australian higher education institutions, 2012, 2016, 2017 and 2018

Group of 8:	*2012*	*2016*	*2017*	*2018*
Melbourne	27.3	36.2	38.7	41.2
Sydney	22.8	39.2	42.9	45.6
Monash	24.0	36.5	39.8	43.6
ANU	28.8	36.5	43.1	48.8
University of Queensland	27.4	31.8	37.0	41.8
UNSW	30.2	38.7	42.9	45.7
Adelaide	28.5	28.3	31.4	33.0
UWA	19.1	20.8	25.1	24.3
All Australian higher ed institutions	21.8	26.7	28.9	31.6

Source: Department of Education, Skills and Employment, Selected Higher Education Statistics (2020), Table I.10, Commencing Students by State, Higher Education Provider, Citizenship and Residence Status, full year 2018

** The term onshore is used to distinguish overseas students being educated in Australia from those in Australian campuses set up overseas. The latter are not included in these figures.*

financed (or have been used as collateral for loans) to pay for the campus rebuilding across the sector: in the form of shiny research centres, student accommodation, trophy administration headquarters and grand landscaping. The funds have also helped pay for the massive expansion in university administrative salaries. These grew from $4.8 billion in 2012 to $6.5 billion in 2018 (Department of Education, Skills and Employment, Finance Publication, 2020).

The impact on domestic teaching

Because this issue has been given a thorough public airing in the context of government proposals to focus teaching in vocationally relevant fields of study, I do not offer any extended comment.

The universities can, at least, look forward to the fulfilment of the recent Government promise to expand the funds it will provide for taking on more students and that it will index this funding in order to 'maintain the real value of funding for domestic students.' (Minister for Education, 2020). This is not the case, as noted above, for the funding of research activities.

The universities like to claim that their overseas enrolments enrich the educational experience for domestic students. This is a claim that is wearing thin. It is reflected in Dan Tehan's demand, cited above, that the universities need to focus more on domestic training.

Indeed, it is obvious that domestic training has become a second order priority. The universities' top priority is to

maximise their research output. To this end, teaching has been subordinated to research, and is increasingly carried out by casual staff.

The Government must share much of the blame for this outcome. As noted, the only direction to universities has been that the overseas student presence should not be at the expense of domestic teaching. This directive has not been enforced.

In the case of the Go8, domestic commencements (at undergraduate and post graduate levels) in the Go8 actually fell, from 87,939 in 2012 to 85,529 in 2018 (Department of Education, Skills and Employment, Selected Higher Education Statistics, 2020). Whatever capacity the Go8 has had to increase enrolments has been devoted to overseas students. The number of commencing overseas students at Go8 universities has increased over the years 2012 to 2018 from 30,320 to 62,423, an increase of 32,103.

The Go8 could have increased domestic enrolments prior to the 2017 when the Coalition put a cap on domestic enrolments. They chose not to do so.

This priority is less evident for the non-Go8 universities. Their overseas student commencement numbers grew by 53,737 between 2012 and 2018 (from 72,820 to 126,557). But this increase was not completely at the expense of domestic enrolments, which grew over the same years from 282,375 to 323,841, an increase of 41,466. Relative rates of growth were 73 per cent for overseas students, and 15 per cent for domestic students.

The Government's proposals to focus more teaching in STEM and other more allegedly job relevant fields has been widely canvassed. I do not think that the criticism of the humanities and social sciences implied by this proposed change is warranted. This is because these fields of education offer a crucial enabling skill to those employed as professionals and managers. That is communication skills. University level training, first in the humanities or social sciences then in postgraduate level vocational skills, is thoroughly justified from a vocational perspective.

However, in this context, the universities are vulnerable to criticism. I refer to another crucial enabling skill: this is IT literacy. The universities have sat on their hands regarding this issue. IT literacy is not a requirement of the humanities, social sciences or business and commerce fields of education.

The universities are also vulnerable to criticism for their limited teaching in the specialist IT fields of study.

Between 2014 and 2018 course completions at the domestic undergraduate level in IT in Australian universities grew from just 3,208 in 2014 to 4,088 in 2018. This is a miniscule number when measured against the total number of undergraduate completions in 2018 of 139,458.

To the extent there was any significant increase in training in the IT field in Australian universities it was delivered to overseas students. Most of this growth was at the masters by course work level, where such overseas student completions increased from 3,385 in 2014 to 8,141 in 2018.

The Australian Government and the universities have been content to outsource the inflow of IT specialists to the immigration program. The number of IT professionals recruited annually, from the temporary entry work visa program alone, is around 10,000 a year. They are mostly coming from India.

The COVID-19 calamity

Since 20 March this year, overseas students have not been permitted to travel to Australia. The universities' initial reaction was that this was not a major blow because, as of April 2020, 80 per cent of those holding overseas student visas were in Australia.

However, most of the 20 per cent not here were Chinese students. Some 67,919 of the total of 177,442 Chinese citizens holding student visas were not in Australia at the end of March 2020 (Department of Education, Skills and Employment, Research Snapshot, 2020). Thousands of these are likely to defer or delay their studies in Australia, thus diminishing the fee revenue Australian universities, especially the Go8, had budgeted for.

The revenue crisis will deepen for all universities over the year 2020-21. This is because normally about half of those taking up higher education student visas do so in the second half of the calendar year. Few will do so in 2020.

It seems likely that new offshore enrolments will be slow to pick up in 2021 because of continuing restrictions on international travel.

Even if these restrictions are removed, in the case of Chinese students it is possible that the Chinese Government will obstruct enrolments of its citizens in Australian universities. This will mainly have an impact on the Go8.

However, other universities will also be affected. For the next few years, Australia's attractions for Indian subcontinent students are likely to diminish because of the increased costs of studying in Australia (including health insurance in the post-COVID environment) and the weakness of the Australian labour market. Prospective applicants, as indicated, have to take into account the money they can make from working in Australia. This is likely to be less than in the past because of the collapse of low skilled hospitality and similar work opportunities and because a huge number of residents will be chasing similar employment.

Impact on Australian universities

Australia's universities face a dire financial outlook. Their leaders have made this plain in the course of their appeals for government assistance.

The crisis has prompted several vice-chancellors to take a pay cut themselves. For example, at Monash the Vice-Chancellor, Margaret Gardner and her senior executives have 'volunteered' to take a 20 per cent pay cut. This unprecedented action is signalling to researchers, teachers and administrators across Monash's campuses that they too face cuts to staff numbers and perhaps to their salaries.

The Government response

The universities' appeals to government have been rejected. They have not even been made eligible for the Job Keeper allowance that has helped keep thousands of private sector firms afloat.

To be eligible, a large organisation has to show it is losing 50 per cent or more of its ongoing revenue. The universities' total revenue in 2018 was $33.7 billion, of which $17.6 billion came from the Commonwealth Government. Since the Government has promised that this revenue will be sustained over the next few years, and because the universities 'only' face a sharp contraction in the $8.8 billion they received from overseas student fees in 2018, they fall well short of the 50 per cent criterion.

The Government has left universities to cover their COVID-19 losses. This implies that they must continue to rely on overseas student revenue. Yet, revenue from overseas students is likely to be depleted for several years.

In any case, the core rationale of this business model has been undermined. The revenue from overseas student fees helped the universities (especially the Go8) achieve a high international research standing, and in turn helped promote overseas student enrolments.

A new business model is required

A radical rethink is required, not just within the universities but in the Government as well.

Without some new source of funds, Australia's university research capacity will languish. The existing model, based on contributions to the global stock of knowledge is not sustainable, at least not while the Government insists on prioritising industry relevant research.

A new focus is required which is consistent with this government priority.

The universities need to capitalise on the widespread (if belated) recognition in government, business and community circles that Australia has become too dependent on overseas manufactured products, especially from China. China, as is well known, is simultaneously Australia's main market for commodities and the main source of knowledge intensive manufactured goods imports. As a consequence, Australia is now highly vulnerable to any disruption of these global supply chains.

A new spirit, prizing self-reliance, is in the air. Not before time, given that as Australia's manufacturing capacity has been gutted over the past two decades, so has Australia's productivity performance.

This is because knowledge intensive manufacturing is currently the main source of productivity gains in advanced economies (Birrell & McCloskey, 2020). The potential employment and productivity gains from a boost to knowledge intensive industries are enormous. However, for this to occur will require the establishment of industries that can apply the accumulated technological advances achieved in other advanced economies.

This is why some developing countries like China have generated such rapid productivity gains. China is in the process of transforming from a low to a high technology industrial base by drawing on western technology. It has done so by offering inducements to direct investment from western firms and/or by transferring technology to Chinese state or private enterprises in return for allowing foreign enterprises access to the Chinese market, or simply 'borrowed' without authorisation.

If something similar is to occur in Australia, it will need the mobilisation of Australia's main source of research expertise, our universities. It will require the same sort of mutuality between business and academe as features in the research universities located in the US's Boston and Silicon Valley areas.

For this to happen, Australia's universities will need government assistance to make the transition from pure to applied research. This would offer Australia's universities a new business model.

Of course, given the depletion of Australian manufacturing, this option could only occur if Australian state and federal governments embrace an industry policy in which they invest in knowledge intensive enterprises themselves or assist the private sector to do so. This will require a sea change in Australian economic policy priorities. This may seem implausible. However, it could be done, as I illustrate below by reference to the Israeli experience.

An unlikely prospect?

It may seem implausible because Australian elite opinion is hostile to industry policy initiatives. This is evident from the current public discussion as to how Australia might achieve a more self-reliant industrial structure.

This discussion assumes that all that is needed is a reassertion of policy reforms dating to the Hawke/Keating era. It was assumed at the time, and since, that once all forms of industry protection are removed in favour of the bracing effects of competition in the global marketplace, knowledge intensive Australian enterprises would flourish.

However, policy makers also assumed that to be successful, this removal of industry protection must be accompanied

by neoliberal measures (referred to by the Treasury since the Hawke/Keating era as 'micro-economic reform'). This includes the removal of red tape, lower business taxes, ending the centralised arbitration system in favour of enterprise bargaining, privatisation of public enterprises and removal of welfare incentives that discourage workforce participation.

Current policy discussions repeat this assumption. They imply that Australian knowledge intensive industries will flourish in an open global economy, but only if another tough set of micro-economic reforms are implemented.

The pivotal event in the history of Australian economic policy when this neoliberal or micro-economic hegemony took over, occurred in the late 1980s. It happened in 1988 when the responsibility for industry policy was removed from the Department of Industry to the Treasury. This included the transfer of the Industries Assistance Commission (the forerunner to the current Productivity Commission) to the Treasury (Tilley, 2019, p. 208). Ever since, the Treasury's microeconomic priorities which Paul Keating, the Treasurer at the time, embraced have dominated the Australian government's economic policy focus.

This is despite the obvious evidence that, far from delivering a surge of knowledge intensive industries, the reverse has happened. Australian manufacturing, including its knowledge intensive sectors, has been in decline ever since the Hawke/Keating reforms were implemented.

This micro-economic hegemony has obliterated the memory of Australia's previous successes with industry policy.

Australia's industry policy record has been derided as based on tariff protection that propped up inefficient and globally uncompetitive industries. In fact, it involved much more than this. It reached its most sophisticated form during the early years of the Hawke Government from 1983 to 1988, under the leadership of the Minister for Industry, Senator John Button. Australia-based enterprises were incentivised to invest in new capacity in return for targeted tariff protection, government financial assistance and union promises to initiate workplace reform.

Evidence of Australian success with industry policy has been forgotten (as with the case of CSL Limited, considered below). So have the successes of other countries with industry policy.

Israel is a stunning exemplar. Though a small country of just 8.6 million people it has achieved a niche in the global marketplace in the IT field, especially in the cyber security industry. It has done so on the basis of the advanced research capacity of its universities, its private enterprises and of the Israeli military. The Israeli government has poured resources into mobilising this research capacity into targeted industries. Such is this success, that all the global information technology giants like Alphabet have established research branches in Israel.

The case of CSL

The ABC's business editor, Ian Verrender, has recently addressed the now topical issue of how Australia might become more self-sufficient in knowledge intensive industries.

Verrender cites the case of CSL. He says that CSL and one or two others (including Cochlear) 'have developed world-beating medical technologies that are now sold around the globe'. How did they do it? His answer is 'the lack of protection has forced them to be innovative and hungry' (Verrender, 2020). In other words, chalk this one up to the alleged continuing efficacy of neoliberal policies.

CSL is indeed a striking success. It currently has the highest market capitalisation on the Australian stock exchange, even bigger than BHP and the Commonwealth Bank. It holds a large chunk of the global market in blood products, with research and production facilities in multiple locations, including Australia.

Verrender does not know, or chooses to ignore, the fact that CSL was not a product of the bracing impact of international competition. It flourished because it was able to build on the production and research capacity base attributable to Australian industry policy.

It is the direct descendent of the Commonwealth Serum Laboratory, an Australian government statutory organisation. By the 1980s, the Commonwealth Serum Laboratory had become Australia's 'largest pharmaceutical enterprise, a fully integrated manufacture (sic) in serum fractionation, human and veterinary vaccines, antitoxins, antivenoms, insulin, antibiotics and diagnostics with some 1100 employees, 140 research staff and capital investment close to $250 million'(Australian Academy of Technological Sciences and Engineering, 1988, p. 661). It achieved this status courtesy of decades of government investment in its research and production facilities.

When it was privatised in 1994, CSL was also one of the largest beneficiaries of the Factor f program. This was one of the industry policy initiatives of the Department of Industry prior to 1988. In 1987 the Labor Government approved the Factor f scheme, which paid drug companies a premium price (in effect a taxpayer financed subsidy) if they increased their production, R & D and exports from Australia.

The Factor f scheme ran in various forms through to 1999, during which time it channelled some $1 billion to participating drug companies (Lofgren & de Boer, 2004. 2404). It was remarkably successful. Exports of pharmaceutical products increased by 21.4 per cent a year between 1990-91 and 2000-01 (Coppel & McLean, 2002, 3). Factor f came to an end during the 2000s and with it this record of exports.

Conclusion

The sudden interest in a more self-reliant Australia offers Australian universities a potential new business model as the facilitator of new knowledge intensive industries both though their training function and their applied research potential.

They have been invited to play this role by the Coalition Government. It wants the universities:

To be even more entrepreneurial and engaged with industry. In the post-COVID world, universities need to re-focus on domestic students and offer greater alignment with industry needs (Minister for Education, 2020).

There is no sign yet that the universities are ready to embrace this message. Rather, their focus is on sustaining their existing business model. This includes desperate measures to revive the influx of overseas students.

It also involves continued assertions that their existing research achievements will drive the Australian economy to a new and more productive future. The hollowness is evident, given that this achievement has occurred at precisely the time that Australia's lack of self-reliance in advanced industry has become obvious.

The Commonwealth Government is equally culpable. On the one hand, it has expressed some recent interest in a new vision of a more self-reliant industrial outcome.

It has also recognised that the universities' present operations are doing little towards this end. It has offered them a new pathway such that they can make a contribution to this new self-reliant vision.

On the other hand, the Government continues to assume that all that is necessary to achieve this self-reliant outcome is a further dose of micro-economic reform. It has shown no interest in industry policy. Nor has it offered the universities the funds needed to redirect their research capacity towards the growth of knowledge intensive industries.

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