

UNIVERSITIES AUSTRALIA SUBMISSION

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# 2020-21 PRE-BUDGET SUBMISSION

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# 1 INTRODUCTION

Universities Australia (UA) welcomes the opportunity to make this submission in advance of the Government's 2020-21 Budget to be delivered in October. UA is the peak body for the university sector, representing Australia's 39 comprehensive universities. Universities Australia's members educate more than 1.4 million students and conduct research and development on behalf of the nation. Now, more than ever, Australia's universities are central to our wellbeing and prosperity, as they help guide our response to the COVID-19 pandemic.

Australia's universities are stewards of a vast wealth of expertise and knowledge that can be deployed on behalf of the nation. In a year filled with uncertainty and hardship, universities are working hard to make sure the future for Australians is bright. Universities are creating the knowledge that will make us safe. Australia's universities are making sure that the economy will continue to have the skilled graduates it needs, to drive our economic recovery.

The pandemic has created significant challenges for Australia's universities. Physical distancing requirements have disrupted face-to-face teaching and on-site research activities, as well as curtailing the ability of universities to provide many community services. Border closures have prevented the normal flow of international students to and from Australia, interrupting their studies and presenting a substantial financial challenge for universities. At the same time, universities remain keenly aware of their role to respond to the challenges that the community faces, through vital research to beat COVID-19 and providing Australians with the knowledge and skills they will need to have the best chance of securing employment and wellbeing as Australia recovers from the economic effects of COVID-19.

The disruptive effects of the pandemic on international education will have impacts throughout the Australian economy. The reduction in revenue from international education will have a serious flow-on effect to the capacity of Australia's universities to conduct research and development on behalf of the nation. Universities conduct more than a third of all R&D in Australia, including 43 per cent of the nation's applied research and virtually all discovery research. More than half of this (56 per cent) is funded through university internal revenue sources. This substantial contribution to Australia's prosperity is at risk through the effects of the pandemic.

Universities Australia is also concerned about the effects of the pandemic on some of the most vulnerable in society. Psychology and social work students have been involved in providing mental health and social support via telehealth to people facing ongoing and COVID-19 specific challenges such as social isolation, job-loss and other issues. There is also concern for temporary visa holders (such as international students) who are unable to access Australian social security systems, and for whom returning to their countries of origin may not be feasible. Australia's universities are attempting to assist students and staff through hardship funds, but the resources available to assist those in need is limited.

Universities Australia encourages the Government to recognise the central role of universities in the COVID-19 response and recovery. If we integrate the invaluable human capital and knowledge that universities build into our response and recovery, we can create new opportunities for Australians to prosper. Australia has significant assets in intellectual capital and research infrastructure that we can use to speed up our recovery; assets that universities have built for the benefit of Australia. We look forward to working with Government to ensure the value of these assets are preserved through the pandemic, and will continue to assist Australia to reach its full potential.

## 2 UNIVERSITIES ARE CENTRAL TO OUR RESPONSE AND RECOVERY

The expertise and knowledge developed within the research centres of universities has already been put directly into public service to help combat two different catastrophes just in the last nine months. University experts have been critical to responses to both the COVID-19 and bushfire crises.

During the bushfire crisis, universities worked side-by-side with their local communities—from providing accommodation and food to evacuees and visiting firefighters, to sending out health and medical teams to impacted communities. They provided veterinary services for millions of displaced and injured animals, provided advice and expertise to state governments on how to help support the physical, economic and emotional needs of the thousands of Australians who had lived through the terrifying ordeal. University experts filled the airwaves, helping Australians understand and cope with the catastrophic circumstances. For universities, this is just a normal part of serving their communities with every means available to them.

Universities are now playing a similarly deep and broad role in our COVID-19 response. They play a major role in developing Australia's health workforce and are undertaking projects that are directly fighting the virus, understanding how the virus spreads and helping to design effective public health interventions. Activities to help the COVID-19 response are being undertaken at every university across Australia and include:

- developing a vaccine;
- studying the body's immune response to COVID-19;
- developing new ways to test for the virus;
- considering how groups of people are affected differently by the pandemic (such as Indigenous people and the elderly);
- identifying novel cures for COVID-19;
- developing a blood test to predict which patients will need the most care;
- testing the effectiveness of personal protective equipment;
- assessing the impact, effectiveness of and response to social distancing measures;
- developing drones for medical delivery, disinfection and quarantine enforcement;
- communication strategies to enhance appropriate behaviour;
- investigating the mental health and wellbeing of Australians during the pandemic – the resilience of frontline workers, the impact of home schooling, domestic violence, effects on criminal behaviour, people living with intellectual and developmental disabilities etc;
- studying how people are coping with the trauma of losing loved ones at a time of social distancing;
- learning how Australians are consuming news about COVID-19;
- evaluating the impact of COVID-19 on residential aged care;
- understanding panic buying;
- developing a stretcher to transport patients in a standard 3 seater row of a commercial aircraft;
- determining the impact on electricity demand, supply and prices in wholesale and retail energy markets and networks;
- considering the loss of languages – accelerated by the pandemic;
- looking at how youth sport could be affected by the pandemic;
- assessing the effect of the pandemic on career development; and
- modelling the economic impact to the global economy.

Other services to the community include:

- deployment of health academic staff and students into local health services;
- offering expertise and services to struggling businesses;
- modelling the COVID-19 pandemic and advising local, state, territory, national and international governments on their response – including the Australian Health Protection Principal Committee (AHPPC) and World Health Organisation (WHO);
- educating local government staff to take on new roles in the expanded public health response;
- opening up university accommodation for surge support staff working at the local hospital;
- donating hospital beds to local health authorities;
- testing, designing, improving and manufacturing PPE – face shields, face masks;
- producing hand sanitiser;
- developing simple ventilators from cheaper materials for use in hospital settings;
- offering free programs to help businesses rebuild; and
- manufacturing copper coatings for high touch surfaces.

Australia's universities are working around the clock to help Australia respond to, and recover from, the COVID-19 crisis. However, there are challenges facing universities' ability to work on behalf of Australia. Universities Australia urges the Government to consider support to ensure that universities' vital activities can be continued throughout the pandemic.

### 3 AUSTRALIA'S R&D CAPABILITY IS AT RISK

Universities Australia estimates that the university sector is expected to experience a revenue shortfall of approximately \$3.1 to \$4.8 billion in 2020<sup>1</sup>, and up to \$16 billion between 2020 and 2023 as a result of the COVID-19 crisis, due to the fall in international student tuition fees and other income not sourced from Commonwealth and state/territory governments.

**Table 1: Estimated university revenue losses**

	2020	2021	2022	2023	2020 to 2023
Estimated revenue losses compared to business-as-usual	\$3.1 to \$4.8 bn	\$5.8bn	\$4.2 bn	\$2.9 bn	\$16 bn

Source: Universities Australia modelling based on Department of Education, Skills and Employment university financial data

As publicly-focused, not-for-profit institutions, universities have limited means by which to source additional revenue to offset this shortfall. Universities do not have shareholders to make equity injections, and as independent bodies corporate are not able to rely on the resources of their respective state or territory government to provide liquidity at this time.

The effects of the financial shock to the university sector will be felt most heavily in Australia's research and development capacity. As universities have few options to offset the revenue loss caused by the COVID-19 crisis, universities will be forced to make significant savings in their budgets. Although universities are taking all prudent steps, such as deferring capital expenditure, reducing administrative expenses where possible and banking savings from activities no longer possible, such as travel, it is expected that savings will need to be realised from staff salaries. Universities Australia estimates that **21,000** FTE jobs are at risk before the end of 2020, including many researchers with invaluable expertise built up over decades, expertise that is currently informing our response to health, economic, social and other challenges.

In 2017-18, Australia's universities undertook 34 per cent of Australia's total R&D, and more than 77 per cent of public sector research.<sup>2</sup> In 2018, Australia's universities contributed an estimated \$12.2 billion into research and development.<sup>3</sup> Universities invest in research on behalf of the nation, developing new knowledge, technology, practices and innovations that improve the economic, social, cultural and environmental wellbeing of the community. However, as the COVID-19 crisis impacts university revenue, \$3.3 to 3.5 billion—or more than a quarter—of university R&D activity is at risk.

<sup>1</sup> UA has revised the revenue loss estimates for 2020 to include the fall in other income not sourced from Commonwealth and state/territory governments and new estimates on international student enrolments.

<sup>2</sup> Australian Bureau of Statistics 2019, *Gross Expenditure on R&D (GERD), Research and Experimental Development, Businesses, Australia, 2017-18*, cat no. 8104.0, 20/9/2019.

<sup>3</sup> Australian Bureau of Statistics 2020, 'v – by source of funds, 2016, *Research and Experimental Development, Higher Education Organisations, Australia, 2018*.

Australia's researchers are remarkably productive. This country's share of the world's scientific research publications is 4.2 per cent, compared with 0.3 per cent share of world population).<sup>4</sup> This standing army of experts is productive, and essential to Australia's economic and social well-being. Their work ensures Australia can respond to crises as they emerge, that Australian businesses can innovate, that Australia's people are healthier, our unique environments are supported. Australia's research workforce provides the nation with essential international connections. These both ensure that our population has access to the best knowledge and innovations the world has to offer, and places Australia in a position to influence and aid countries around the world.

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<sup>4</sup> [Australian Innovation System Monitor](#), Department of Industry, Science, Energy and Resources (accessed 18/08/2020).



## Why is university R&D so important?

Universities employ researchers who create new knowledge, technology and practices that allow improvements in economic prosperity and social and community wellbeing, and ultimately improve the quality of life for all Australians.

- University research allows discovery of **knowledge**.
- University research creates **expertise** that can be called on in times of crisis.
- University research leads to **innovation** that solves problems

Without **knowledge, expertise, and innovation**, we cannot defeat COVID-19. The tools to defeat the pandemic and the associated economic and social disruption will come from all fields of research, working together. The contributions of university researchers have already sped up the development of potential vaccines, created innovative solutions to resource shortages, helped design how COVID-19 information is communicated to people, helped to develop global models for the spread of the disease and so much more.

Experts in such a wide range of fields are only found inside universities. The private sector, government and specialised research institutes make valuable contributions, but the vast majority of Australia's public good R&D is done in universities.

Without university R&D, we would not have access to this cohort of experts, working to guide the country through this crisis. If a successful vaccine against COVID-19 is developed, it will rely on knowledge that has been generated in a university somewhere, probably including some discoveries made at an Australian university.

University research improves the life of every Australian—either through the economic contribution that Australian university research makes, or through discoveries, innovation and knowledge that Australian universities have brought into being.

Australian industry increasingly relies on these discoveries and innovations to fuel their growth, with universities performing the highest proportion of Australia's applied research.

## A wide range of R&D is at risk

Universities Australia analysis shows that, in 17 of the 22 Fields of Research, university internal funding is supporting 40-99 per cent of expenditure (the main exceptions are ICT, technology, engineering, agriculture and chemical sciences). This funding allows universities to maintain national capacity in disciplines not attracting government or industry funding. It is also important to manage other disciplines through grant funding cycles and make strategic investment in new research capabilities.

Independent estimates of the quantum of university R&D at risk are very large. Respected higher education analyst Andrew Norton suggests that up to \$3.3 billion of research could be in jeopardy.<sup>5</sup> Analysis conducted by Professor Chris Moran of Curtin University has concluded that \$3.5 billion of university R&D could be at risk. This will be bad news for every Australian and every part of the community—from health and hospitals, to agriculture and primary industry, to industry looking for expertise to reinvigorate a sovereign manufacturing capability. The 21,000

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<sup>5</sup> Norton, A (2020), *How reliant is Australian university research on international student profits?*, *Higher education commentary from Carlton*.

FTE job losses expected in the university sector will disproportionately impact research and development capability and will significantly affect researchers earlier in their careers. Early career researchers need to build experience at a variety of institutions and tend to be employed under short term or casual arrangements. It is a sad reality that many of these younger researchers will suffer most from the impacts on university revenue.

The loss of significant university research capacity would also jeopardise efforts to improve the representation of women in STEM disciplines. It would be expected that many of these researchers will be forced to look for work outside the university sector, and their valuable expertise may be lost to Australia's research system permanently. This has a follow-on impact for the pipeline of research productivity, as talented researchers no longer produce important discoveries, nor mentor new researchers.

For the broader economy, a collapse in university R&D would lead to a loss of the source of knowledge that enables innovation. The spillovers from public-sector R&D into the broader economy will see a dramatic reduction, along with severe cuts to the ability of universities to create the evidence that underpins Government's response to the pandemic.

Immediate intervention is needed to preserve the hard-won, world-renowned R&D assets that Australian universities have built for the community.

### **Stabilising research through the pandemic**

Australia's universities face a major challenge in stewarding Australia's R&D capability through the COVID-19 crisis. Private sector investment is expected to continue a sharp decline for the foreseeable future,<sup>6</sup> which will have a consequent impact on levels of private sector R&D. This means that the role of universities in keeping Australia's R&D effort alive is even more important.

The university research sector needs policies and investments that address short, medium and long-term issues created by the pandemic.

The pandemic has created disruption for university researchers. Students and staff needing to work at home due to the COVID-19 restrictions have not been able to progress laboratory or fieldwork based research, and important experiments may have been abandoned. Collaborations are more difficult to establish and progress. Researchers and students will need more time and funding to overcome the disruption to their important work caused by the pandemic – without it, considerable investment of tax-payer funding in current projects will be wasted. Although research funders and the Australian Government have been willing to provide flexibility and unfunded extensions to researchers impacted by the pandemic, no additional funding has yet been made available to allow researchers time to overcome disruptions caused by the pandemic.

Immediate bridging relief is needed to support Australia's university researchers and ensure the investments already made in projects and facilities are not wasted. Other countries have acknowledged this immediate threat to research and provided funding to support research continuity and retention of talent.

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<sup>6</sup> Reserve Bank of Australia (2020), 'Economic Outlook', *Statement on Monetary Policy*, August 2020, <https://www.rba.gov.au/publications/smp/2020/aug/economic-outlook.html>

## **Safeguarding the future research workforce**

The financial challenges that are facing universities will have consequences for Australia's ability to retain and develop a strong research workforce. Many researchers are supported either partially or completely through internal funding. Research grants almost invariably require co-contributions from universities, and universities use internal funding to support researchers between grants and to develop new research areas of strategic importance. These avenues of funding are particularly important for the establishment and development of new researchers.

The reduction in revenue available to universities to support these researchers means that many will not have their contracts renewed, or universities will not be able to provide essential funds to support grant applications. The loss of junior researchers from the research workforce means that the pipeline of research talent is at risk. For academic staff who don't lose their jobs, the pressure on staff time will be considerable. While some academics have full-time research positions, most do not. As teaching and research academics, they ensure an important flow of knowledge from creation through to undergraduate students. With the 'Job Ready Graduates' package, university academic staff will see a rise in the number of domestic students, but a drop in funding per student. Time for research will be under extreme pressure.

An investment in Australia's research workforce will pay dividends into the future. For every dollar invested in higher education R&D, \$5 is returned to Australia's GDP.<sup>7</sup>

## **Enhance proven avenues to support business innovation**

As the capacity of business invest in R&D is constrained, there are opportunities to continue the vital work that universities do in collaboration with business throughout the response and recovery to COVID-19. There are many existing, proven vehicles to facilitate cooperation and collaboration between skilled researchers and industry, including the Cooperative Research Centres, the Rural Research and Development Corporations as well as Australian Research Council schemes such as Linkage projects and the Industrial Transformation Research Program. These schemes offer proven, ready-to-work avenues to help business take advantage of the latest knowledge from universities.

Universities are also an enabler for startup creation. According to the Australian Government, startups are the largest contributor to job creation in Australia. From 2004 to 2011, they created more than 1.2 million new jobs<sup>8</sup>. This represented 90 per cent of net positive job creation (820,000 new jobs) over the same period. Startups also contributed \$164 billion to the Australian economy between 2004 and 2011, or nearly 40 per cent of the value added to the economy in those years.

Universities and their capacity to support research are essential to the success of innovation precincts around the country. Universities bring a workforce, knowledge and infrastructure to enable collaboration between the actors in the innovation system, as well as being a strong driver of innovation in their own right. Long term strategies to increase support for university research will underpin business innovation in this country.

As Australia moves to the recovery phase, business needs support to invest and innovate. Universities are ready to partner with all types of businesses, with university-business collaboration delivering a return of \$4.50 to business for every dollar invested in collaboration with

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<sup>7</sup> Deloitte Access Economics analysis for Universities Australia.

<sup>8</sup> ] Australian Government 2016, Australian Innovation System Report 2016, Department of Industry, Innovation and Science, Office of the Chief Economist, Canberra.

a university.<sup>9</sup> As recommended in the 2016 *Review of the Research and Development Tax Incentive*, a premium rate of the Research and Development Tax Incentive, payable to businesses collaborating with universities, could increase the benefits that accrue to both business and the community from investment in R&D. The recovery from COVID-19 presents an ideal time to trial a collaboration premium to encourage new practices in collaborative innovation, and would ensure that Australia can capitalise on new opportunities in a COVID-safe world.

### **Consultation with the Broader University Sector**

UA appreciates the efforts of government and the Research Sustainability group of Vice-Chancellors to devise short, medium and long term options for research sustainability in the sector. We look forward to broad consultation with the sector as a whole during this process, to provide the best possible chance for Australians to benefit economically and socially from every university's research efforts.

#### **Recommendation 1:**

The Australian Government provide stabilisation funding for the university research workforce as soon as possible.

#### **Recommendation 2:**

The Australian Government increase investment in university research as an essential pillar that underpins national prosperity, competitiveness and security.

#### **Recommendation 3:**

The Australian Government should consider implementing a collaboration premium for the Research and Development Tax Incentive.

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<sup>9</sup> Universities Australia (2017), *Clever collaborations – the strong business case for partnering with universities*, Canberra. <https://www.universitiesaustralia.edu.au/wp-content/uploads/2019/06/Clever-Collaborations-FINAL.pdf>

## 4 WELCOMING INTERNATIONAL STUDENTS

Australia's international education system is a success story. It has helped Australia build a university system that is the envy of many comparator countries and has benefited Australians enormously. Of the \$40bn that international students contribute to the Australian economy annually, \$17.3 billion goes to the universities and other education providers in fees, and the remaining \$22.8 billion is injected into local economies.<sup>10</sup>

Although Australia remains an attractive destination, efforts should be made to maintain Australia's reputation as a welcoming place for international students. Other competitor nations have been mindful of preserving their competitive advantage in international education. Government wage subsidy and income support programs implemented in response to the pandemic in the UK, New Zealand and Canada have been extended to international students, providing protection and support to those students who have lost their part-time work and meet the necessary eligibility criteria.

### Helping international students in Australia

The widespread disruption to international travel brought by COVID-19 has brought serious difficulties for many students, but particularly for international students. These students are faced with prolonged separation from their families and support networks, and many are facing financial difficulties as a result of loss of employment or difficulties faced by family members in their home country. As temporary visa holders, international students are excluded from Australia's social security system, and many have faced serious hardship. For many, it is impossible to return home while the COVID-19 crisis disrupts international travel.

Australia's universities have established support programs to help international students experiencing pandemic-related hardship. This support has been delivered through the provision of hardship funds and other types of assistance. Between March and June 2020 Australian universities provided \$110 million to more than 75,000 international students in need. This is during a time when university finances are under serious pressure and many other cost saving measures were being implemented. Funds are close to exhausted and numbers requiring assistance are not diminishing.

UA has welcomed contributions made by state, territory and local governments to help international students, but continues to call on the Commonwealth to provide hardship assistance to temporary visa holders, including students.

#### **Recommendation 4:**

The Australian Government should augment existing university hardship funds to support international students to meet their basic needs for the duration of the COVID-19 crisis.

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<sup>10</sup> ABS 2020, *International Trade: Supplementary Information, Calendar Year, 2019*, Cat. No 5368.0.55.004.

## 5 MAINTAINING A SKILLED AND CAPABLE HEALTH WORKFORCE

Australia's universities have a critical role in training Australia's professional workforce, including our health and medical workforce.

Quality pre-registration health professions education (HPE) is critical to the development of a skilled and capable workforce. In Australia, university-delivered HPE involves compulsory clinical education. The majority of this can only be delivered through supervised health service placements and/or simulation. Without completing the mandatory clinical components, students are unable to graduate and register as health professionals and their contribution to the health workforce is delayed – or sometimes even lost. Similar issues face other disciplines, such as initial teacher education.

During COVID-19, the pressure on health services, especially in outbreak areas, has made clinical education continuity difficult – despite the significant efforts of all involved. We are now seriously concerned about university and health service capacity to provide sufficient high quality education in clinical/health professions to sustain graduations and maintain workforce supply, during the pandemic and as we emerge from it. Concerns are due to:

- a backlog of clinical placements which is expected to build further from next year<sup>11</sup>;
- additional pressure on the health system from COVID-19 which could potentially grow with further outbreaks, creating a greater log-jam for placements;
- financial impact on universities to deliver health courses at required levels while also remaining COVID-19 compliant. For example:
  - simulation labs must be run multiple times due to social distancing requirements; and
  - simulation equipment itself is expensive – running to several millions of dollars across various disciplines within an individual institution.

These concerns are exacerbated in outbreak areas such as Victoria.

To avoid a lag in workforce supply there is a need to find acceptable substitutes for clinical placement and experience.

Simulation is one such approach that is already used as part of clinical education and for which there is good evidence of its effectiveness. However, simulation equipment is expensive and capacity is limited. Supporting universities to run a greater number of labs through additional resourcing, including funding for simulation equipment, would support more efficient student flow-through.

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<sup>11</sup> Final years students have been given priority for clinical education and placements during 2020 creating a growing backlog of placements for subsequent years

An additional, complementary approach to expand clinical education capacity is to support universities to establish more university-run clinics. Such clinics provide community health and disability services at low cost to clients, as well as required clinical education for students. A number of these clinics already exist. With further support, universities could rapidly expand student-led clinics and placements. This would simultaneously: take pressure off hospitals; support additional community-based services for vulnerable groups; and provide more clinical placements.

**Recommendation 5:**

The Australian Government should consider further funding to support alternative models to provide clinical experience, including additional simulation capacity and university-run clinics.