# Response to the Australian Universities Accord Panel Discussion Paper

April 2023



### Acknowledgement of Country

We honour and respect the Indigenous peoples who have been, and continue to be, the custodians of the lands, skies and waterways upon which we at Universities Australia, and our member universities, live and work.

We acknowledge that Indigenous elders and knowledge holders maintain and nourish Indigenous ways of knowing, being and doing. Research, teaching and the academy, both locally and abroad, have benefitted from the enrichment and innovation these gifted knowledge systems grant.

We recognise all Indigenous staff and students who work and study at Australian universities. The significant contributions they make within the higher education sector impact far beyond the footprint of their institutions.

We acknowledge that sovereignty has never been ceded, and that connection to Country and Culture has been maintained, nourished, and continues to thrive.

We pay respect to elders and knowledge holders, past and present, as we listen carefully, tread lightly and nurture those who are our future.

### The value Indigenous peoples and knowledges bring to higher education and research

We welcome the commitment in the terms of reference to equity and advancement of Australia's Indigenous peoples, but we are disappointed that student equity is the only context in which the terms of reference consider Indigenous students and staff.

The contributions of Indigenous peoples and knowledges to Australia's universities reach far beyond the access and equity space. The unique knowledges and knowledge systems held by Indigenous communities are fundamentally important to Australia's intellectual, social and cultural capital.

Australia's universities recognise that Australia's Indigenous peoples were the first teachers, learners and researchers on the lands that universities are built on, but their voices, knowledge and experiences could play a greater role in the important work of universities.

We urge the Accord panel to take a broad view of Indigenous matters and their place in the review. We, along with UA's DVC/PVC Indigenous committee, would welcome the opportunity to discuss with the panel how universities are working to value Indigenous knowledge and values and how this approach might inform policy development to drive the future of Australian higher education and research.

### **Universities Australia**

Universities Australia welcomes the opportunity to respond to the Australian Universities Accord Panel Discussion Paper. We are the peak body representing Australia's 39 comprehensive teaching and research universities. Our members educate 1.5 million students each year and conduct world-class research for the benefit of the nation.

### Contents

Executive summary	2
Summary of recommendations	5
Enabling a strong university system	9
Access, equity and student experience	15
Knowledge and skills for our future	19
Research	23
Innovation and industry cooperation	27
Conclusion	30
Appendices	31
Endnotes	37

# Executive summary

The Albanese Government's review of Australia's higher education sector – the first in more than a decade – comes at a crucial time. Skill shortages, economic uncertainty, geopolitical tensions and a new industrial revolution are changing the domestic and global landscapes in which we operate.

Australia is also emerging from one of the most significant health, social and economic challenges of our time – the COVID-19 pandemic. Universities, like most sectors, were impacted heavily during this period. Despite the challenges they faced, our institutions continued to deliver for the nation – through the provision of highly educated graduates to fuel our workforce, important research to guide us through the pandemic as well as in other crucial endeavours, and in generating significant economic activity.

This work propelled Australia's world-leading recovery on the other side of the pandemic and will continue to lift productivity and spur economic growth in the face of new economic headwinds. It will prepare us to respond to new and emerging challenges and opportunities.

### **National priorities**

Australia's universities have played a vital role in turning Australia into the safe, successful and prosperous nation it is today, but we cannot take this status for granted. We are facing a series of significant challenges that universities can, and must, prepare us for.

Skills shortages are choking productivity and weighing heavily on our economic performance, threatening to undermine our high standard of living. Climate change is the greatest challenge we face, and every move we make to reshape our energy mix and our economy must be grounded in carefully-honed expertise. Australia's stagnant export capability puts our nation at great risk of falling behind other advanced economies, sparking the urgent need to grow and diversify our economy. Meanwhile, a volatile geopolitical environment threatens to upend the world order, putting our way of life at risk.

Universities are vital to how Australia responds to these shifts in global, domestic and economic environments. In this age of geo-global complexity, it is vital that we build partnerships with our near and distant neighbours and seek a stronger understanding of the world's many cultures, histories and emerging challenges. As with almost all our national priorities, the knowledge and skills of university graduates and the research and development undertaken in our institutions will dictate whether Australia navigates these challenges successfully.

Educating more graduates and undertaking greater research and development on behalf of the nation requires the full support of government. We need more university places to ensure we have enough cyber professionals, teachers, engineers, historians and health workers to prevent the looming shortfall. And more university research and development, in partnership with industry, to support Australia's energy transition without compromising our supply of affordable and reliable power.

Universities are innovative and sit at the heart of skill development, capacity building, knowledge creation and transfer, and the international reputation and relationships that have served Australia well. The need for this is greater than ever.

### For the good of the nation

Universities generate and transmit knowledge and skills that transform societies for the better, producing the pipeline of skilled workers who power almost every sector of our economy and make it \$185 billion bigger than it otherwise would be. Australian researchers and scientists, meanwhile, have produced some of our most important innovations – from medical marvels to technological breakthroughs we can't live without.

The unique knowledge and knowledge systems held by Indigenous communities are crucial in these endeavours and will continue to be fundamentally important to Australia's intellectual, social and cultural capital.

Universities are also vital community hubs – in our regions, in outer metropolitan areas and in our cities. From providing health facilities to community sport complexes, our institutions are an indispensable part of our communities. They provide services for everyone, not just those who attend university. This is particularly evident during natural disasters, when universities open their doors to those affected by floods and fire.

# Supporting a system that supports Australia

In navigating the coming years safely and successfully, Australia will need more of what universities, TAFEs and other tertiary institutions do – not less. More skilled individuals to meet the changing needs of our labour force and to grow our economy so Australians can continue to enjoy a high standard of living. More research and development to build our sovereign capability in the face of new opportunities and challenges, including the whole-of-economy push to achieve energy transition, as well as delivering national priorities like AUKUS. The knowledge and skills needed for these important endeavours are taught and housed in our tertiary education system, and universities stand ready to play their part.

Our institutions are each unique and independent, with differing approaches and priorities as appropriate to their own specific contexts and communities. This will be evident in the recommendations put forward by our members in their own submissions to the Accord panel. Despite that, our sector has a common mission: to contribute to the advancement of knowledge, in the public interest, via the application of intellectual curiosity and rigour in research, education and community-focused activities. This is a mission unique to universities.

Universities produce benefits for society that are accessible to everyone, including those who have never studied at university. They stimulate new ideas and produce research which have far-reaching impacts. Through education, students gain knowledge and skills that are valuable not only to themselves but also to society. Australian universities make it their highest priority to maximise their value to Australia and to global knowledge systems. Ensuring that all Australians can access a university education if they wish to, regardless of their background or circumstances, is critical to achieving that goal.

In changing domestic and global landscapes, universities will continue to play a significant role in maintaining Australia's enviable position as a worldleading economy and democracy. As the world around us shifts, strengthening our institutions will ensure they can continue to play their part.

The Australian Universities Accord provides a rare opportunity to review the policy settings for the whole of the higher education and research sector and to consider how all the different parts of the sector relate to and interact with each other. We have a chance to identify areas of the system that need attention and to develop solutions that will enable all elements of the sector to work together even better as an effective and harmonious whole for the benefit of all Australians.

Our submission contains a series of recommendations to government, centred around five key pillars, to ensure universities can continue to best serve Australia's interests. We are a crucial partner of government in delivering national priorities. We should be adequately supported in this role.

#### Enabling a strong university system

Universities provide value to Australian society, to individuals, to industries and to global knowledge flows. To maximise the value universities can provide as part of a strong post-secondary system, we need policy and funding settings that recognise that university education and research make our nation stronger.

### Access, equity and student experience

The highest priority for the Australian Universities Accord is to ensure that every Australian has access to higher education, regardless of their location, background or financial position. We have a diverse and talented population which we are not fully tapping into, which is holding back individuals and our nation. This is a cost Australia cannot afford.

#### Knowledge and skills for our future

Australia and Australians are living in a rapidly changing industrial, technological and geopolitical environment. More jobs in the future will require a university education if Australia is to keep pace with our competitors and continue to grow economically, socially and technologically. Further, our workers will need to continue accessing different types of education throughout their lives. Without these flexible, lifelong learners fuelling our workforce, Australia will fall behind.

### Research

Australia's current research and development policy settings do not reflect the shape of our economy nor our national aspirations. With services comprising the majority share of the economy, and exports led by commodities and education, the level of research and development by the business sector continues to decline as a proportion of the nation's overall research and development investment. It is timely for the government to consider whether the right measures are in place to encourage businesses to invest in research and development. The problems Australia faces are large. From climate change to our aging population, to cyber security threats - the world is becoming increasingly complex. However, research activity can turn these problems into opportunities. With institutional settings that incentivise the appropriate deployment of new technologies into our society and economy, high-quality research can see Australia not only manage these problems but continue to thrive in the process.

#### Innovation and industry cooperation

Our global competitors have done a good job at diversifying their economies to shield against global shocks. Australia is at the back of the pack in this regard. Greater collaboration between universities and industry is needed to drive more innovation in Australia to open new industries, exports and opportunities that can support our growth as a nation. We must continue to pursue options to turbocharge universities' relationships with industry.

### An ongoing Accord

The Australian Universities Accord must be structured and focused to balance flexibility with certainty. The Accord must be flexible enough to respond to developing trends in higher education, but must also be implemented with enough certainty for universities to make long-term planning and funding decisions. To achieve this balance, several factors need to be considered.

Firstly, to ensure that the Accord is effective in addressing the needs of the sector, it must be underpinned by a mechanism for determining the current and future challenges facing higher education. This mechanism should involve an ongoing process of consultation and engagement with all stakeholders in the sector, including universities, VET providers, industry and government. Through this process, foci for the Accord can be identified and refined, and strategies can be developed to address them. In addition to consultation, the mechanism for determining matters for the Accord should be underpinned by research and analysis of trends and developments in post-secondary education. This could include analysis of demographic and social changes, technological advancements, changes in the labour market and emerging policy and regulatory frameworks. By continually monitoring these trends and developments, the Accord can ensure that it remains relevant and responsive to the needs of the sector.

Secondly, to be most effective over the span of several decades, the Accord must be developed with bipartisan support. This will be critical to ensure that there is stability and consistency in the implementation of the Accord over time and to ensure that universities have certainty in policymaking decisions.

Thirdly, the Accord must take a cross-portfolio focus, and work with all relevant government departments to achieve shared goals. For example, Jobs and Skills Australia must be engaged to model emerging skills needs.

We stand ready to work with the independent panel and government through this process to get the policy settings right now to ensure the future success of universities and our nation over the coming decades.

4

### Summary of recommendations

Through the development of the Australian Universities Accord, we make the following recommendations to government.

### Enabling a strong university system

Recommendation		Implementation period
<ol> <li>Establish partnership agreements between u government, based on the locations and spe of each university, with a flexible funding env minimum basic grant amount for university of on an appropriate funding measure (such as with other factors).</li> </ol>	ecific institutional visions elope that includes a perational activities based	Short-term
This should be combined with financing for a and place-based program delivery of nationa in teaching and learning, research, access a engagement and innovation. It should align t ensure program implementation, completion other regulatory requirements.	al and university priorities nd equity, community o a five-year cycle to	
Combined with an annual accountability and for reporting against agreed targets, governr can deliver the programs needed to respond future.	nent and universities	
<ol> <li>Replace the Job-ready Graduates package for teaching and learning based on principle</li> </ol>	-	Short-term
<ul> <li>student contributions do not deter student education, nor influence student choice</li> </ul>	s from undertaking higher	
<ul> <li>any changes to the Higher Education Loar fundamental policy intent of the scheme – to the cost of their higher education when</li> </ul>	that graduates contribute	
<ul> <li>funding settings maximise access to universe demand-driven funding to all Indigenous s where they live).</li> </ul>		
<ol> <li>Changes to funding arrangements should in provision to ensure certainty of funding withor for all institutions across the entirety of the tra-</li> </ol>	ut negative consequences	Short-term
4. Develop a new infrastructure financing facility student and researcher in Australia has accer and research facilities.		Medium-term
5. Continue support for national research infras	tructure.	Medium-term
<ol> <li>Initiate a detailed regulatory stock and flow a of overlap, inefficiency and red tape across t</li> </ol>		Medium- to long-term

### Access, equity and student experience

Recommendation	Implementation period
<ol> <li>Review the unmet and partially met access and equity recommendations set out in the Bradley review (see <b>APPENDIX 1</b>) and progress and implement those that apply.</li> </ol>	Short- to medium-term
8. In the spirit of the Bradley review, consider post-secondary students in policies and programs to address cost-of-living issues.	Short-term
9. Ensure HECS-HELP policy settings are fit-for-purpose and are serving the original policy intent to remove financial barriers to higher education.	Short-term
10. Set the higher education attainment target for Indigenous graduates in line with non-Indigenous graduates and align new attainment targets with the targets in Closing the Gap.	Short- to long-term
<ol> <li>Remove barriers to Indigenous participation by providing uncapped Commonwealth supported places for all Indigenous Australians, regardless of their postcode.</li> </ol>	Short-term

### Knowledge and skills for our future

Recommendation	Implementation period
<ul><li>12. Develop a National Lifelong Learning Strategy that provides a vision for Australia's education future and a foundation for recognising individuals' lifelong learning experiences, skills and interests as they align with skills needs.</li><li>As part of this strategy, increase funding for higher education to enable lifelong learning through attainment of microcredentials and the extension of Income Contingent Loans to such offerings.</li></ul>	Medium- to long-term
13. Establish a Lifelong Learning Trust that provides an equity-based funding arrangement for people to access ongoing skills development for work or interest in support of their career life.	Medium- to long-term
14. Develop a nationally consistent, transparent and accessible Recognition of Prior Learning framework that would enable a post- school education ecosystem to support student skills and knowledge needs at different life stages.	Medium-term
15. In support of a Recognition of Prior Learning framework, create a unit within Jobs and Skills Australia dedicated to skills mapping to post-secondary education curricula. This could inform admissions practices, the application of Recognition of Prior Learning assessment and assessment review.	Short- to medium-term

16. Work with universities, industry, representative and accrediting bodies to support the implementation of the National Work Integrated Learning Strategy, with a focus on creating a learning ecosystem that enables engagement between all stakeholders.	Short- to medium-term
17. Federal and state governments should work closely together, and with universities and industry, to develop a framework to support and resource compulsory placements for health and education students across Australia.	Short- to medium-term
<ol> <li>Replace the genuine temporary entrant visa requirement with a genuine student visa requirement that focuses on a student's academic record.</li> </ol>	Short-term
19. Automatically grant temporary graduate visas to all international students who meet the course requirements for graduation and relevant character conditions.	Short-term
20. Establish a unit within Jobs and Skills Australia that provides advice on migration-related issues, ranging from the suitability of visa types to fill occupations through to differences in regional and state-based skilled occupation lists.	Short-term

### Research

Recommendation	Implementation period
21. Increase Australia's level of research and development investment to at least be equal to the OECD average by 2030.	Medium- to long-term
22. Work towards funding the full cost of research by 2030.	Medium-term
23. Implement a target for indirect cost of research at 50 cents to the dollar by 2025, funded across the whole of government.	Short-term
24. Ensure Australia has the correct policy settings and level of funding to be competitive in training a future research workforce that will support the nation's needs.	Short-term
As part of this, lift the rate of PhD stipends without impacting the number of higher degree by research places or stipends offered, to maintain an attractive pathway for the higher degree students who will be required for the nation's future.	Short-term
25. Align Australian migration policy with higher education policy to better enable engagement of the global academic workforce.	Short-term
26. Prioritise funding for university programs that value Indigenous knowledge systems in universities, support and elevate Indigenous research and Indigenous academics, and promote Indigenous agency and autonomy.	Short- to medium-term

### Innovation and industry cooperation

Recommendation	Implementation period
27. Implement and augment Recommendation Two from the 2016 Review of the R&D Tax Incentive, to introduce a premium rate to the Research & Development Tax Incentive for businesses collaborating with universities, especially in the small and medium enterprise sector.	Medium- to long-term
28. Build capacity in the small and medium enterprise sector to be able to better absorb research and development.	Short- to medium-term
29. Increase emphasis on direct investment in business research and development.	Short- to medium- term

# Enabling a strong university system

**THE CHALLENGE:** To strengthen Australia's university system for the good of Australia, Australians and our economic prosperity.

**COST TO THE NATION:** Without a strong university system, Australia's economic growth potential would be severely impacted, not to mention the social and geopolitical ramifications.

**THE OPPORTUNITY:** Support the growth of Australia's universities to unlock the full potential of the Australian population by meeting demand for skilled workers and expanding our capacity for innovation.

**EXPECTED BENEFIT:** Higher productivity to supercharge the Australian economy, setting us up to meet new and emerging global and domestic challenges.

### The big picture

- For centuries, universities have helped shape Australia into the safe, successful and prosperous nation it is today.
- Our higher education institutions educate the skilled workforce that makes our economy \$185 billion bigger than it otherwise would be, drives research and innovation to prepare us for the future, supports hundreds of thousands of jobs and generates significant economic activity that underpins our standard of living.
- Because of their value to society, governments financially invest in universities. Given universities' value to individual organisations and students or graduates, it is also reasonable that contributions are made by these parties, in recognition of the benefits they receive.
- This foundational principle of Australia's higher education funding system is crucial to universities continuing to provide value to the nation.
- Australian universities are part of a national postsecondary education ecosystem, but each one is also an autonomous, self-accrediting organisation with unique circumstances and differing operational approaches.
- Universities are rightly subject to regulation to meet the expectations of the community, students, staff and governments. However, over-regulation stifles innovation and wastes resources that could otherwise be used for important teaching, research and community service. There is an important balance to be struck between maintaining community standards and removing inefficient red tape.

# University-government partnership agreements

### **Recommendation 1**

Establish partnership agreements between universities and government, based on the locations and specific institutional visions of each university, with a flexible funding envelope that includes a minimum basic grant amount for university operational activities based on an appropriate funding measure (such as student load combined with other factors).

This should be combined with financing for additional, vision-based and place-based program delivery of national and university priorities in teaching and learning, research, access and equity, community engagement and innovation. It should align to a five-year cycle to ensure program implementation, completion and evaluation, alongside other regulatory requirements.

Combined with an annual accountability and compliance mechanism for reporting against agreed targets, government and universities can deliver the programs needed to respond to Australia's education future.

This recommendation addresses questions 33 and 47.

- Universities need autonomy to determine how their services are delivered, but government must remain accountable for the use of public funds. Government funding for universities should, therefore, balance flexibility with accountability and compliance mechanisms.
- Under the current division of funding grants and programs, universities are not incentivised to pursue differentiation or respond to their unique community needs and opportunities.
- A flexible funding envelope, based on vision- and place-based partnership agreements, would allow universities to effectively target the needs of their students while also focusing on their areas of specialty.
- These partnerships would combine a minimum basic grant, based on the formula-driven system.
- This flexible envelope would bring together the many different government funding sources including, for example, the Commonwealth Grants Scheme, the Indigenous, Regional and Low SES Attainment Fund, Higher Education Participation

and Partnerships Program, National Priorities and Industry Linkage Fund, the Indigenous Student Success Program, Higher Education Disability Support Program, and other grants.

- The extent to which the envelope would or should incorporate research and research training funding would depend on the response and support for other research-related recommendations.
- The current three-year funding cycle is too short a period to achieve sustainable program implementation, particularly amongst regulatory constraints. Furthermore, the prescriptive dividends of funds across a range of activities often conflict with each other and regulatory timeframes and prevent university innovation in key national priority areas.
- Together with an annual process of reporting on progress towards key targets throughout the five-year period, government could maintain its accountability of public funds as universities deliver programs designed to the specific and unique needs of their students, key stakeholders and business models.

## Replacing the Job-ready Graduates package

#### **Recommendation 2**

Replace the Job-ready Graduates package with a new funding model for teaching and learning based on principles that ensure:

- student contributions do not deter students from undertaking higher education, nor influence student choice
- any changes to the Higher Education Loan Program preserve the fundamental policy intent of the scheme – that graduates contribute to the cost of their higher education when they can do so, and
- funding settings maximise access to university (e.g., extending demand-driven funding to all Indigenous students, regardless of where they live).

### **Recommendation 3**

Changes to funding arrangements should include a transitional funding provision to ensure certainty of funding without negative consequences for all institutions across the entirety of the transitional period.

These recommendations address questions 12, 47, 48 and 49.

The Job-ready Graduates package (JRG), introduced in 2020, significantly altered the policy architecture for funding university places. While some of the changes have had a positive impact, the package has, ultimately, failed to achieve its aim of driving more university graduates into areas of skills needs.

### Why JRG needs to be replaced

#### **Reduced funding for more places**

- While JRG created additional university places ostensibly, it did not provide any additional funding for these places. Instead, universities are expected to provide 39,000 extra places within the existing funding envelope.
- There are significant reductions in overall funding per place in most of the disciplines where student contributions were lowered, including in mathematics (down 17 per cent), science (down 16 per cent), nursing (down eight per cent) and education (down six per cent). The impact on combined resourcing per place – Commonwealth Grant Scheme (CGS) contribution plus student contribution – is a reduction of six per cent on average across all fields.
- While domestic demand for higher education has softened, largely due to low unemployment rates, demographic growth over the next five years will drive an increase in demand for university places. At the same time, the nation is facing a shortage of skilled workers. In this environment, policy settings should not force universities to do more with less.
- According to the Centre for Population, there will be 70,000 more 18-year-olds in 2030 than in 2021, increasing from 289,076 to 359,500 over that period. It is also evident that there will be a significant jump in 18-year-olds in 2024 and 2025, rising from 11,000 now to more than 15,000 (the so-called 'Costello babies').
- To meet this expected demand and continue educating the skilled workers our nation requires to grow, universities need adequate Commonwealth supported places (CSPs). Without them, young Australians will miss out on the opportunities a university education brings and older Australians won't have the chance to retrain for jobs in demand.

### Price signalling and student contribution amounts

 JRG has vastly widened the range of student contribution amounts (SCAs). The restructured SCAs were intended to influence student choices when picking courses. By providing incentives to study some courses over others, more students were expected to take up courses which the government viewed as national priorities.

- Price signalling as a driver of student choice in degrees does not work. Students' interests and career aspirations have a far greater impact on their choice of degree. Policy should, therefore, be focused on promoting the value and quality of degrees, rather than relying on pricing strategies to attract students into certain areas of study.
- Focusing on price signalling also ignores the role of higher education in providing students with a solid foundation for lifelong learning. One of the goals of higher education should be to provide students with the knowledge, skills and experiences they need to thrive in their career and contribute positively to the advancement of our nation, regardless of the course they choose to study.

#### Ineffective measures to drive completion – the punitive 50 per cent pass rule

- Universities Australia does not support the controversial 50 per cent pass rule that strips students of their CSP for failing half of their units. This punitive measure is widely regarded as being unnecessarily harsh.
- Universities are reporting that the students most likely to fall afoul of the 50 per cent pass rule are first year students from low socio-economic status backgrounds. Universities have a wide range of measures in place to support students at risk of failure. The 50 per cent pass rule is, therefore, not only ineffectual, but also at odds with the equity goals shared by government and universities.

### What has worked under JRG?

#### Indexation and growth funding

- A key initiative of JRG was indexation of maximum basic grant amounts (MBGA)s by the indexation factor set out in the *Higher Education Support Act 2003* (HESA). However, provision for indexation and real growth are not legislated in HESA.
- Commonwealth Grant Scheme guidelines specify a single minimum MBGA for each university over a four-year transition period (2021 to 2024 inclusive), but there is no legal obligation to go above this. Actual MBGAs for three years are set out in each university's funding agreement. After 2024, an MBGA must be at least the amount the university received in the previous year – but again, there is no legal obligation to go above this.
- As a relief measure during the COVID-19 pandemic, the government agreed to index MBGAs during the JRG transition period (2022 and 2023) at pre-COVID consumer price index (CPI) levels. Our submission in response to the exposure draft bill for

12

JRG recommended legislative drafting for legislation of indexation and growth factors.<sup>1</sup>

- In addition to CPI indexation, JRG allowed for real growth in funding to accommodate some growth each year in commencing student numbers. Growth factors are based on regionality, which, while important, do not allow for the flexibility and responsiveness of the different universities. To support the contextual and regional responsiveness of universities, growth factors that include an indexation component within a funding envelope will have a more positive effect on university interoperability as part of their commitment to their communities.
- Under JRG, growth factors did not support universities to grow their sub-bachelor or postgraduate places. Any growth component under a future model should apply to the full funding envelope, not just bachelor places.

### Demand-driven places for regional Indigenous students

- JRG also included demand-driven places for regional and remote Indigenous students, which was a positive policy measure. We have consistently argued that this should be extended to all Indigenous students, regardless of where they live. Data shows that 37.4 per cent of Australia's Indigenous population live in major cities and are not eligible.
- While Indigenous people in major cities are much more likely to have a degree than those from regional areas, they are much less likely to have a degree than non-Indigenous people in the cities. The attainment rate for Indigenous people aged 20–64 in major urban areas is only 14 per cent

   one third of the figure for the non-Indigenous population (41 per cent). Extending demand-driven places to Indigenous people living in cities would go a long way to correcting this.
- Achieving university education attainment parity in major urban areas between Indigenous and non-Indigenous labor force participants could add \$1.5 billion to the economy annually, according to Universities Australia's estimates. These estimates also suggest that federal government revenue could increase by about \$400 million each year.<sup>2</sup>

#### **Transitional Funding Arrangements**

- JRG has transitional arrangements, including a Transition Fund Loading (TFL), which compensates universities for any negative impacts of changes to cluster funding. The TFL was designed so universities would not be disadvantaged under the new Commonwealth and student contributions funding arrangement; however, the arrangement put in place under JRG meant that TFL declined from \$250.4 million to \$19.3 million in 2023-24. This arrangement will effectively reduce total CGS funding for universities from \$7.6 billion in 2021 to \$7.3 billion in 2024.
- Transitional funding arrangements should ensure no university is worse off over a transitional funding period by keeping the real CGS value provided to universities from the beginning of the TFL period.
- If we don't do this, it will leave universities dealing with two major sets of changes – or two different funding systems – in as many years: the end of the TFL and full implementation of JRG cluster funding in 2024, and any changes made by government.
- Universities would face an unreasonable administrative burden in having to adjust their systems – as well as their institutional budgets – twice. This would be counter-productive and the opposite of the stable policy environment that the government seeks to establish for the higher education sector.

# Financing higher education infrastructure

### **Recommendation 4**

Develop a new infrastructure financing facility to ensure every university student and researcher in Australia has access to high-quality teaching and research facilities.

This recommendation addresses questions 35 and 46.

- Universities need world-class facilities and resources to undertake the teaching and research activities our nation relies on, but current levels of government funding do not cover the costs of infrastructure works.
- Base funding for university places includes a notional amount for maintenance of facilities and the Research Support Program provides some support for costs of equipment, but there is no longer a dedicated fund for university infrastructure works.

- The Research Infrastructure Review Final Report, released in September 2015, emphasised the role of government in providing essential infrastructure for Australian universities: "Public investment is necessary to provide the 'truly patient' capital needed to create an environment for the inspired risk taking that is essential to technological discovery. Only governments have the capacity to invest this patient capital into the long timeframes that must apply to research and to research infrastructure."
- Despite this, the Education Infrastructure Fund, established in 2009 to provide dedicated funding for tertiary education and research infrastructure, was dismantled in 2016.
- The critical work our universities undertake on behalf of the nation is at risk if we don't have adequate facilities.
- A funding mechanism to support university infrastructure must be developed and it should have an equity focus, recognising that some universities, by virtue of their location (in regional or outer metropolitan areas) or operating context, will be more reliant on government funding to support infrastructure projects.
- Current higher than expected export commodity earnings present a possible source of one-off support for such a facility. Government could apportion some of this additional revenue to inject funding into higher education infrastructure projects, particularly those that will support Australia's decarbonisation goals.

# Continued support for national research infrastructure

### **Recommendation 5**

Continue support for national research infrastructure.

This recommendation addresses question 46.

- Ongoing government funding for the National Collaborative Research Infrastructure Strategy (NCRIS) is essential to protect this significant range of national assets. NCRIS has kept Australia in the global research game, guiding world-class research in the national interest.
- To our knowledge, NCRIS is the only program to provide the 'patient capital' for national-level infrastructure for basic research in Australia.

However, there are continuing policy and operational matters for discussion, including the balance between basic, applied and translational research infrastructure supported through the program, support for the humanities, arts and social science disciplines and the composition of the expert advisory group that supports decisions on national research infrastructure.

## Striking the balance between innovation and regulation

#### **Recommendation 6**

Initiate a detailed regulatory stock and flow analysis to determine areas of overlap, inefficiency and red tape across tertiary education.

This recommendation addresses questions 5, 19, 36, and 37.

- Australian universities must meet a range of reporting and compliance obligations under both Commonwealth and state and territory legislation, as well as report to an increasing number of government departments and agencies. This is essential to ensuring our sector is meeting the expectations of government, stakeholders and the community.
- However, these regulations and expectations come from an expanding list of Commonwealth departments and agencies, and this sometimes leads to contradiction or misalignment:
  - TEQSA
  - ° State/Territory regulations and regulatory bodies
  - Professional accreditation requirements
  - Department of Education
  - <sup>o</sup> Department of Home Affairs
  - Department of Defence
  - ° Attorney-General's Department
  - Department of Foreign Affairs and Trade
  - Department of the Prime Minister and Cabinet
  - Australian Research Council

- Universities take these responsibilities seriously, but the current system is over-regulated and not serving the interests of government or our institutions. Overregulation stifles innovation and wastes resources that could otherwise be used for important teaching, research and community service.
- Failure to remove this red tape ultimately costs the nation – through the loss or reduction of universitydriven education and research activities.
- Undertaking a detailed stock and flow analysis of the overlap in reporting requirements would identify problem areas and pave the way for more effective university-government discussions.
- In addition to existing legislation and regulations, there has been an increase in recent years of quasiregulation that has imposed additional regulatory compliance activities.
- Regulation should support our universities to build Australia's productivity through innovation and safeguard our global reputation for high-quality education and research. Together, universities and government can strike a balance of regulation that will re-energise Australia's productivity.

# Access, equity and student experience

**THE CHALLENGE:** To ensure all Australians, regardless of their background, can attend university if they wish to.

**COST TO THE NATION:** We are currently failing to recognise the skills and talents of our diverse population, which is holding back individuals and the nation more broadly.

**THE OPPORTUNITY:** Remove financial and structural barriers to higher education for all Australians.

**EXPECTED BENEFIT:** Keep pace with the economy's growing demand for university-educated workers and ensure we have the skills and expertise to meet future challenges and take advantage of opportunities.

### The big picture

- A university education is one of the most powerful tools a person can have, setting them up for a fulfilling and rewarding future while delivering broader benefits to the entire nation.
- Unfortunately, some Australians are missing out on the opportunity to go to university, while others who get there are not finishing their qualification. This is particularly true among Indigenous Australians, lowincome families and people living in regional and remote areas.
- Cost-of-living pressures are hurting all students, but Indigenous Australians and equity groups are disproportionately affected. This is not only due to the cost of their degree, but also because they are struggling to make ends meet while they study.
- We must ensure that every Australian who wants to can access higher education, regardless of their location, background or financial position.
- To make that happen, additional support is needed to enable individuals to not only enrol at university, but to go on and graduate.
- Equity issues exist across the spectrum of awards offered by universities, from undergraduates to postdoctoral candidates. Measures to address equity must not be targeted solely at undergraduate level.
- Equity issues will become an even bigger, and somewhat different issue, as we move towards a lifelong learning approach to education. It is critical that any new initiatives encouraging this approach have equity baked in from the outset.

### Ensuring no Australian is left behind

### **Recommendation 7**

16

Review the unmet and partially met access and equity recommendations set out in the Bradley review (see **APPENDIX 1)**, and progress and implement those that apply.

This recommendation addresses questions 3, 28, 30 and 33.

 Some of the access and equity targets set in the Bradley review have not been met or have only partially been met. While this is a national issue, rates of success are disproportionately lower in regional and outer metropolitan areas.

- Considering changes to Australia's makeup since the Bradley review, government and tertiary education providers must consider how they can best work together to break down barriers to university.
- The numerical targets for higher education attainment by 2040 outlined in the Bradley review are useful, but focus should be on ensuring every Australian can access a university education if they wish to, regardless of background, personal circumstances, including their financial position, and whether they live in a city centre, an outer metropolitan area or in our regions.
- The discrepancy between attainment in the regions and lower socioeconomic status areas compared to inner city areas is stark. The Bradley target for higher education attainment has now been met, with the Australian average of higher education attainment in the 2021 census sitting at 40 per cent. However, in the outer metropolitan area of Elizabeth in South Australia, higher education attainment sits at 7.1 per cent, while in Camperdown-Darlington in Inner Sydney, it's 72.3 per cent.
- To achieve this, there needs to be a concerted effort to address existing disparities and create a more equitable tertiary system. This will require a multi-faceted approach that addresses financial, geographic and work-based barriers to access.
- While Australia has a relatively high rate of participation in higher education compared to many other countries, we can and must do more to address the significant disparities in access to higher education across the country. This is particularly true for Indigenous Australians, individuals from low-income families or those who live in remote or regional areas.
- Policy settings that maximise opportunity for all students is the first requirement to continue ensuring success and completion of students from under-represented groups. Access, participation and success at university will be enhanced and better respond to the needs of different students, wherever universities can ascribe funding and develop programs and opportunities unique to their community's needs.
- We have made recommendations throughout this submission that would assist with updating the Bradley recommendations. See **APPENDIX 1** for the mapping of our 2023 recommendations to the Bradley recommendations.

# Considering students in cost-of-living policies

### **Recommendation 8**

In the spirit of the Bradley review, consider postsecondary students in policies and programs to address cost-of-living issues.

This recommendation addresses questions 3, 28, 30, 33 and 39.

- Australia benefits from training people to be more productive.
- Access to higher education is the major path forward to lifelong prosperity and away from disadvantage.
- For many students, their years of study are economically marginal, with some failing to complete studies due to financial hardship. This has been brought into sharp focus in the current cost-ofliving crisis.
- There are currently a range of government programs aimed at financially supporting students and young people. However, these are disparate, provided across multiple portfolios, and many students are ineligible. As student profiles shift, particularly with the need for lifelong learning, appropriate and consistent support measures should be implemented.<sup>3</sup>
- The Bradley review suggested a package of reforms to the student income support system. While some of these targets are no longer appropriate in numerical terms, the principles underpinning these recommendations remain salient: "It is vitally important to change the higher education student income support system to ensure that financial barriers to participation of students from low socioeconomic backgrounds and Indigenous students are removed. The system has become ineffective and not sufficiently targeted due to lack of attention to the impact of particular indexation decisions and the absence of regular review since its introduction in the current form in 1998." <sup>4</sup>
- As the government finalises consideration of the 2023-24 federal budget, any programs to address cost-of-living issues should consider post-secondary students.

# Impact of changes to HECS on women and equity groups

### **Recommendation 9**

Ensure HECS-HELP policy settings are fit-forpurpose and are serving the original policy intent to remove financial barriers to education.

This recommendation addresses questions 3, 28, 30, 33 and 47.

- Australia's world-class, publicly funded university education system has enabled millions of people to attend university who would otherwise have been denied that opportunity.
- HECS-HELP is a primary mechanism to both remove financial barriers to access and settle on a fair, shared model of university funding with taxpayers and individuals contributing. This reflects the public and private good a university education offers.
- However, some aspects of the system have had a negative impact on women, in particular, but also on Indigenous Australians, mature-age students, regional students and students from low socioeconomic status backgrounds.
- Statistics show that women carry most of the student debt in Australia (58.2 per cent), with teachers and nurses, both female-dominated professions, making the largest repayments.
- Lowering the compulsory payment threshold at which repayments begin (in 2021) has also impacted women more than men, with females making up just under two thirds of graduates who were newly required to start repaying their debts in 2021.<sup>5</sup>
- The original rationale behind the Income Contingent Loan (ICL) system for higher education was that while society benefits from having a highly educated workforce, individuals also reap benefits in the form of higher incomes throughout their life cycle, and therefore it is reasonable that the cost of higher education should be shared between both governments and individuals.<sup>6</sup>
- While the Job-ready Graduates package included some beneficial equity measures, in other ways it has been detrimental for equity goals, leaving low socioeconomic and other equity students in the more expensive disciplines, such as the humanities, with much higher HECS debts.
- Reviewing HECS-HELP policy settings is essential to ensure past and future changes to the system do not risk the original policy intent, which is to remove barriers to a university education.

### Policy settings to support Indigenous students

### **Recommendation 10**

Set the higher education attainment target for Indigenous graduates in line with non-Indigenous graduates and align new attainment targets with the targets in Closing the Gap.

### **Recommendation 11**

Remove barriers to Indigenous participation by providing uncapped Commonwealth supported places for all Indigenous Australians, regardless of their postcode.

These recommendations address questions 3, 28, 29, 30 and 47.

- In recent years, progress has been made in improving access to higher education for Indigenous Australians, with Indigenous student enrolments more than doubling between 2008 and 2020.
- However, there are still significant gaps between Indigenous and non-Indigenous people in all parts of the tertiary education system, with far less Indigenous people having a university education than their non-Indigenous peers. Those individuals as well as the economy are worse off because of this.
- In 2020, the government set a Closing the Gap target to increase the proportion of Indigenous people aged 25-34 years who have completed a tertiary qualification (Certificate III and above) to 70 per cent by 2031.<sup>7</sup>
- Subsequently, the government uncapped places for Indigenous students living in regional and remote areas (omitting those living in major cities) with the expectation that more than 1,700 Indigenous students would attend university by 2024.<sup>8</sup>

- Extending uncapped places to all Indigenous Australians, including the 37.4 per cent of whom live in major cities, could have grown Indigenous participation rates significantly right across the country.
- Before demand-driven funding, the number of Indigenous students commencing their studies was growing by only three per cent per year. Under demand-driven funding, the number of Indigenous students commencing their studies grew by 8.2 per cent per year.
- To realise the full potential of this initiative, and to achieve parity in attainment, barriers to Indigenous access such as capped places should be removed and uncapped funding should be extended to all Indigenous peoples, regardless of where they live.
- Increasing Indigenous students' participation and the inclusion of Indigenous knowledges and perspectives in the New Colombo Plan should also be a priority for the government. It would be timely to conduct a review of the New Colombo Plan, with a view to considering the merits of expanding the program to include a broader range of countries with significant Indigenous populations. Consideration could also be given to providing targeted opportunities for specific cohorts of students, including a dedicated program for Indigenous students.

# Knowledge and skills for our future

**THE CHALLENGE:** To prepare Australia and Australians to adapt to a rapidly changing industrial, technological and geopolitical environment over and beyond the next three decades.

**COST TO THE NATION:** Australia is left behind its global peers, unprepared for what's to come, because we don't have the knowledge and skills we need to respond and adapt.

**THE OPPORTUNITY:** To develop an ecosystem that reflects the full spectrum of post-secondary education by enabling individuals to seamlessly transition between different types of education and education providers.

**EXPECTED BENEFIT:** Further growth in living standards for Australian consumers, who gain access to more and better goods and services, delivered by a highly productive and capable workforce.

### The big picture

- Australia's demand for skills and knowledge is growing all the time, with more than half of the one million jobs expected to be created in the coming years requiring a university degree.<sup>9</sup>
- We need to ensure our university system is set up to facilitate the education and training of more students to meet our workforce demands.
- National Skills Commission modelling shows the demand for people with a Bachelor degree or higher is growing by around 144,000 people each year.<sup>10</sup>
- Universities are adding around 150,000 domestic graduates with at least Bachelor attainment to the workforce each year, but retirements and deaths suggest our net addition likely falls short of what is required. When the productivity of experienced workers leaving the workforce is considered relative to the productivity of new workers, the potential shortfall gets worse.
- Preparing universities to deliver the future workforce means increasing the focus on work integrated learning (WIL) opportunities. Universities often struggle to find WIL opportunities for their students, due to a range of industry-driven factors, and it is particularly acute in teaching and health disciplines, where long-term placements are compulsory components of professional accreditation upon graduation.
- Embedding WIL into the university experience will ensure graduates are industry-ready when they graduate, which is good for them, their employer and our nation which benefits from higher productivity.
- Looking longer term, a university degree is just the first step in a journey of lifelong learning. The National Skills Commission found that Australians are expected to spend 33 per cent more time on education and training across their lifetime by 2040 than they do today, if they are to adequately adapt to the changes predicted in the labour market.<sup>11</sup>
- Universities have worked hard to introduce microcredentials so that Australians can quickly upskill and reskill as part of their lifelong learning journey, but there is still work to do.
- It is obviously not enough to be thinking only about the future workforce. This is why WIL has become such a crucial component of an Australian university education.

### Facilitating lifelong learning

### **Recommendation 12**

Develop a National Lifelong Learning Strategy that provides a vision for Australia's education future and a foundation for recognising individuals' lifelong learning experiences, skills and interests as they align with skills needs.

As part of this strategy, increase funding for higher education to enable life-long learning through attainment of microcredentials and the extension of Income Contingent Loans to such offerings.

### **Recommendation 13**

Establish a Lifelong Learning Trust that provides an equity-based funding arrangement for people to access ongoing skills development for work or interest in support of their career life.

### **Recommendation 14**

Develop a nationally consistent, transparent and accessible Recognition of Prior Learning framework that would enable a post-school education ecosystem to support student skills and knowledge needs at different life stages.

### **Recommendation 15**

In support of a Recognition of Prior Learning framework, create a unit within Jobs and Skills Australia dedicated to skills mapping to tertiary education curricula could be established to help inform admissions practices, the application of Recognition of Prior Learning assessment and assessment review.

These recommendations address questions 8, 9, 10, 13, 15, 16, 17, 20 and 44.

• Universities and other tertiary education providers have worked closely with the Department of Education to develop the National Microcredentials Framework and implement the Microcredentials Pilot. This is a good start, but to create an ecosystem that supports microcredentials, meets Australia's future skills challenges and takes a whole-of-education focus, a more comprehensive approach is needed.

- A National Lifelong Learning Strategy should be developed and outline a vision and principles to underpin Australia's approach to educating Australians at all ages and stages of life. It should include the educational opportunities to be made available (like microcredentials) as well as policy frameworks and initiatives that will best motivate Australians to continue learning throughout their life.
- The Lifelong Learning Trust program should link a trust account to every Australian's Unique Student Identifier, provided at birth to recognise their need for lifelong participation in Australia's education system. The program should offer an initial fund for continuous education, co-financed by governments, industries and individuals, to encourage lifelong learning without accumulating education debts.
- This Trust should have equity principles at its core, and we suggest that the initial payment should be adjusted to a person's socioeconomic status and regional considerations at birth.
- To future-proof our tertiary education system, Australia's Recognition of Prior Learning (RPL) system needs to be updated to give individuals confidence their prior learning will be recognised.<sup>12</sup>
- An impact analysis should also be undertaken to ensure any changes to the Australian Qualifications Framework (AQF) enable it to meet the needs of Australia's labour market.
- We recommend this in recognition of the costs of reform on the VET sector and implications for industrial relations and incorporating any revisions into a national framework to enable consistent RPL as part of a National Lifelong Learning Strategy.
- Breaking down barriers between vocational education and higher education and promoting collaboration and innovation can improve access to knowledge and skills at different life stages. More flexibility in the delivery of AQF level 4-6 qualifications between VET and higher education will help achieve this and is supported by dual sector universities which partner with VET and TAFE providers, but more can be done.
- A final consideration for a National Lifelong Learning Strategy could be the establishment of an RPL Unit within Jobs and Skills Australia. The work of this unit would facilitate nationally consistent and transparent advancement of Australia's skills recognition that would enable both domestic and international student recognition of skills as part of their lifelong engagement with learning, making it easier and quicker for them to retrain or upskill.

# Work integrated learning and placements

### **Recommendation 16**

Work with universities, industry, representative and accrediting bodies to support the implementation of the National Work Integrated Learning Strategy, with a focus on creating a learning ecosystem that enables engagement between all stakeholders.

### **Recommendation 17**

Federal and state governments should work closely together, and with universities and industry, to develop a framework to support and resource compulsory placements for health and education students across Australia.

These recommendations address questions 8, 9, 10 and 14.

- There are two kinds of WIL: compulsory and noncompulsory. Compulsory WIL refers primarily to health and education disciplines where a placement is necessary for professional accreditation as a health or education practitioner. Non-compulsory WIL, while critical for a student's employability, is not required by professional accreditation bodies in order for students to graduate.
- There are not currently enough work placements to meet student demand in areas of critical workforce need, including in health and teaching disciplines, which is delaying the flow of workers.
- This is a serious concern because placements are a mandatory requirement for accreditation in particular disciplines. Additionally, they enhance a students' employment prospects.
- State governments have a primary role to play in this space by working with the federal government and industries to provide the placements necessary for universities to deliver the skilled workforce Australia desperately needs.
- A 2022 survey showed that 81.3 per cent of undergraduate students whose course included a WIL component secured full-time work, compared to 75.1 per cent of students who did not participate in WIL.<sup>13</sup>
- This data shows that WIL equips students with the specialist and professional skills necessary to hit the ground running in their career.

- Under the Job-ready Graduates package, the National Productivity and Industry Linkage Fund attempted to grow collaborations between universities and industry, particularly through WIL. However, the model proposed was overly prescriptive and disallowed for the range of activities and linkages necessary for a fully-functioning, adaptive and supportive WIL ecosystem.
- Enabling closer alignment between theory and practice – a concept common across both VET and higher education – is a necessary component for instilling confidence in students and businesses.
- Work-based WIL experiences provide students with the opportunity to apply their theoretical knowledge in a practical setting, improving their understanding and confidence. These experiences also offer businesses access to innovative ideas from university students, as well as a potential pool of skilled graduates.
- A national working group of experts, led by Universities Australia, are currently renewing Australia's National Work Integrated Learning Strategy and have made several recommendations in this to make the national WIL ecosystem fit for purpose. See **APPENDIX 2** for recommendations jointly developed by this working group.
- See **APPENDIX 3** for an overview of WIL programs in other countries.

### A migration system to support Australia's skills needs

### **Recommendation 18**

Replace the genuine temporary entrant visa requirement with a genuine student visa requirement that focuses on a student's academic record.

### **Recommendation 19**

Automatically grant temporary graduate visas to all international students who meet the course requirements for graduation and relevant character conditions.

### **Recommendation 20**

Establish a unit within Jobs and Skills Australia that provides advice on migration-related issues, ranging from the suitability of visa types to fill occupations through to differences in regional and state-based skilled occupation lists.

These recommendations address questions 43 and 44.

- Australia's universities educate hundreds of thousands of international students each year and we need more of them to remain in Australia after they graduate to complement the skills and talents of our homegrown workforce.
- Our international competitors do a better job at this than us. Only 28 per cent of the international students we educate use their education in Australia, while only 16 per cent go on to become permanent residents.<sup>14</sup> In the face of crippling skill shortages, we are worse off for this brain drain.
- Australia's migration system is largely to blame. In its current state, it is overly complex and not fit for purpose. It deters rather than encourages the talented and diverse people we need, slowing the flow of skilled workers and researchers who drive our economy and progress.
- Clear migration settings to support international graduates to become skilled migrants not only incentivises students to choose Australia as their study destination, but it also provides immense benefits to Australian society and our economy.
- Modelling conducted prior to the COVID-19 pandemic suggested that by 2050, migration would have contributed around \$1.6 trillion to the Australian economy, growing the economy by 40 per cent.<sup>15</sup> International students are also well-adjusted to Australia by the time they graduate, having made a considerable social contribution as well as economic.
- The genuine temporary entrant visa requirement requires potential students to prove that they do not intend to remain in Australia permanently after their study. Government should consider implementing a genuine student visa requirement, to ensure that the student visa is not used by non-genuine students to enter the country, without putting any emphasis on what they intend to do once they graduate.
- Under the current visa assessment conditions, international students are required to apply for a temporary graduate visa (subclass 485), with wait times sometimes extending to more than 10 months. During this period of uncertainty, many students give up and go home or to another country.
- Given the number of checks students go through to get a student visa, and the need to satisfy a range of requirements to maintain a student visa, the temporary graduate visa should be applied automatically for students upon completion of their course of study.
- These small changes will help to support an international education system that enables skilled graduates to remain in Australia and help drive our economic and social growth.

# Research

**THE CHALLENGE:** Australia's sovereign research capability is at risk from economic shocks given its reliance on revenue from international student fees.

**COST TO THE NATION:** Without adequate funding for university research, universities will struggle to continue undertaking the bulk of Australia's research which we rely on so heavily, especially as we seek to develop our sovereign capabilities.

**THE OPPORTUNITY:** To value research as a significant national investment and fund it to at least the level of the OECD average.

**EXPECTED BENEFIT:** A secure and sustainable sovereign research capacity that enables universities to fulfill diverse missions and provides capacity for Australia to meet current and future challenges in areas of national priority.

### The big picture

- Australia's university system has evolved to fulfil a range of functions, which individually and collectively help to drive social progress and national prosperity. This makes it a vital endeavour for the nation.
- The economic potential of further investment in research is also significant a one per cent funding boost for research could create additional economic activity of \$24 billion over 10 years.
- Research develops new ideas and is an inexhaustible source of economic growth and competitiveness, yet Australia's research system serves multiple functions that are broader than the economic outcomes of innovation and commercialisation. Universities are a key plank of Australia's ability to rapidly deploy capabilities to mitigate the effects of external and internal shocks (such as climate change and geopolitical uncertainties). They are deeply integrated into global knowledge flows and the research universities undertake not only informs university teaching, but this nexus creates an environment where new ideas can flourish.
- There are a range of challenges facing the sustainability of our nation's research efforts. Firstly, undertaking research has become increasingly more expensive with increased complexity, compliance and the disproportionate impact of the global cost of equipment and supplies of specialist equipment and reagents.<sup>16</sup> Secondly, competitive research grants do not cover the full amount applied for, and block grant funding to support the indirect cost of research has not kept pace with the increase in competitive grant funding. This is leading universities to draw from internal sources – often international student fees – to fund their research activities.
- The reliance on revenue from international education to support our national research effort presents a serious risk to our future sovereign research capacity. It has reduced the effectiveness of policy initiatives aimed at providing rational incentives for universities and academics to engage in research with industry.
- This is because competitiveness in international student (and staff) recruitment is driven by three major international ranking systems that rely heavily on academic reputation and publication data and metrics. Industry and applied research with an Australian focus often has limited impact on these international rankings.
- Australia has a world-class research system, which is why it is critical that we get the policy settings right to continue to support universities in their research efforts.

# Increasing research funding to at least the OECD average

### **Recommendation 21**

Increase Australia's level of research and development investment to be at least equal to the OECD average by 2030.

This recommendation addresses question 24, 25 and 27.

- Universities undertake 36 per cent of all research in Australia, perform 45 per cent of all applied research (more than industry's 39 per cent) and undertake around 87 per cent of all discovery (basic) research.
- Investment in research in Australia is in decline relative to the economy. In 2008, gross expenditure in research and development (GERD) – which consists of activity across all researchers wherever they are located within the economy – as a percentage of gross domestic product (GDP) was 2.25 per cent.<sup>17</sup> Since then, it has fallen to 1.8 per cent of GDP (2019-20)<sup>18</sup> while OECD expenditure on research and development sat at 2.68 per cent in 2020.<sup>19</sup>
- While universities have increased their investment in research and development relative to GDP, both business and government investment has declined.
- To realise the full potential of Australia's research efforts and capacity, investment in research and development must be lifted to meet the average of our international competitors.

# Supporting the full economic cost of research

### **Recommendation 22**

Work towards funding the full cost of research by 2030.

### **Recommendation 23**

Implement a target for indirect cost of research at 50 cents to the dollar by 2025, funded across the whole of government.

These recommendations address questions 24, 25 and 47.

- Research grants do not cover the full cost of conducting important research for the benefit of our nation.
- Under the current system, universities can apply for competitive grants and funding from industry and philanthropists to support their work. The federal government contributes to the systemic costs of research through research block grants (RBG).
- According to the government's calculation of the Research Support Program (one component of the RBG), 47 per cent of its allocations provides support for competitive grant funding. This amounts to \$442.2 million in 2020. For the same year, the Australian Government Competitive Grant Program was \$2 billion, leaving only \$0.22 of support funding for every dollar of competitive grant funding won.
- This is unsustainable. Modelling suggests that governments need to provide at least \$0.50 of support funding for every \$1 of competitive grant funding for the system to be sustainable.<sup>20</sup>
- To cover the shortfall, Australian universities are funding more than half the cost (53.2 per cent or \$6.735 billion in 2020) of their research and development activities, largely using revenue from international student fees.<sup>21</sup>
- Revenue from international student fees can fluctuate wildly and is driven by factors that can overwhelm other policy drivers.
- To avoid the sovereign risk to our research activity inherent in relying on international student fees to fund Australia's research efforts, we suggest a whole-of-government commitment to funding the full cost of research at a set target across portfolios

   i.e., funding for health-related research comes from the health budget, funding for climate changerelated research is funded by the department with

responsibility for climate change. The Department of Education should not be solely responsible for funding the cost of research.

• Commitment to funding the full cost of research is a critical starting point and has the potential to provide a solution to the precarious nature of our university research workforce.

# Building the research workforce

### **Recommendation 24**

Ensure Australia has the correct policy settings and level of funding to be competitive in training a future research workforce that will support the nation's needs and endeavours.

As part of this, lift the rate of PhD stipends without impacting the number of higher degree by research places or stipends offered, to maintain an attractive pathway for the higher degree students who will be required for the nation's future.

### **Recommendation 25**

Align Australian migration policy with higher education policy to better enable engagement of the global academic workforce.

These recommendations address questions 27 and 47.

- Universities and other research agencies such as CSIRO, the Defence Science and Technology Group and the many private research institutes that employ research graduates from Australian universities

   cannot function effectively without an adequate research workforce.
- Investment in our home-grown researchers and investing in attracting and retaining the best academic talent from around the world will ensure that Australia has this workforce, and the research and development gains the nation needs.
- In times of crisis or changes in priorities or technology, researchers step up or adapt to the changes ahead of them. Governments and businesses draw on academic expertise to solve complex problems. This is possible due to decades of research training, building a highly capable, flexible pipeline of researchers across disciplines.
- The best researchers will not stay in a system that is not supporting their ability to continue to be the best in the world.

- One way we can do that is by paying our higher degree by research (HDR) student researchers at a more realistic rate. The minimum Research Training Program (RTP) stipend rate is below the national minimum wage, meaning HDR students are living below the poverty line and are increasingly working extra jobs to make ends meet. This takes time away from their research and, as a result, impacts the students' ability to complete their degree on time.
- As HDR students make a significant contribution to universities' research output (they make up 55 per cent of the university research workforce), supporting them to focus on their research will have a positive impact on the scale and quality of research.
- Additionally, undertaking a higher degree teaches the student intrinsically valuable skills, making them analytical, creative and driven individuals critical to the broader workforce and not just within academia.<sup>22</sup>
- Allocation of funding for research training is based on a weighted formula of HDR completions for previous years. Lifting the stipend without changing the current formula would mean there would be fewer scholarships available and ultimately fewer completions. Reviewing the current formula is important. Lifting the stipend should not impact universities' ability to offer PhDs at a level that will sustain Australia's research needs.

# Indigenous knowledge holders and knowledge systems

### **Recommendation 26**

Prioritise funding for university programs that value Indigenous knowledge systems in universities, support and elevate Indigenous research and Indigenous academics, and promote Indigenous agency and autonomy.

This recommendation addresses questions 3, 28, 29, 30 and 47.

 Indigenous knowledge and value systems is an area where Australian universities can grow their understanding and better reflect the history and nature of our country. However, it is critical that universities work carefully with Indigenous knowledge holders to do this appropriately. Knowing what knowledges can be shared and by whom is essential to protecting Indigenous knowledges and customary practices.<sup>23</sup>

- Australia's 39 comprehensive universities report annually on their progress against the commitments they have made under Universities Australia's Indigenous Strategy. There is always more to be done and many internal mechanisms are being considered by universities to improve outcomes across a range of areas.
- Universities are working to build their respective pipelines of Indigenous academics. In 2021, only 1.11 per cent of total staff employed in teaching or research roles in Australian universities were Indigenous. To at least reach population parity of 3.1 per cent, an additional 1,071 Indigenous academic staff are needed.
- To boost Indigenous employment numbers, universities need to build and support a pipeline of high performing Indigenous undergraduate, postgraduate and HDR students who can be encouraged to pursue academic careers. Universities have mechanisms in place, but support is needed from governments to ensure these mechanisms are appropriately and sustainably funded to meet government and university targets in this area. Funding through the Indigenous Student Success Program alone is not sufficient to support Indigenous research and researchers.
- Raising the PhD stipend to a liveable level will attract more Indigenous students to undertake a PhD. Indigenous undergraduates experience strong employment outcomes with 81.5 per cent of Indigenous undergraduates in full-time employment four to six months after completion, outperforming non-Indigenous undergraduates (78.5 per cent). This makes undertaking a PhD on an income below minimum wage less desirable. This also applies to candidates who wish to undertake a PhD later in life while juggling a mortgage and dependents.
- With a healthy pipeline of Indigenous academics in place, universities will be better able to work with a wide range of their Indigenous colleagues in developing appropriate practices and programs, without over-burdening their Indigenous workforce through constant consultation.
- These practices and programs will, in turn, better incorporate and value Indigenous knowledge and value systems into university structures at all levels.

# Innovation and industry cooperation

**THE CHALLENGE:** To diversify and strengthen the national economy by incentivising the development of new ideas through collaboration and curiosity-driven research.

**COST TO THE NATION:** If international policy and markets shift against Australia's established strengths, this puts our high standard of living at risk.

**THE OPPORTUNITY:** Incentivise all players in the economy to discover and implement new ideas, via collaboration, to drive new ways of growing our productivity and economy.

**EXPECTED BENEFIT:** A broader export mix and new markets to help build sovereign capability and enhance our position as a leading global economy.

### The big picture

- Australia is a major exporter of resources because the world places a high value on our ability to supply in-demand commodities efficiently and reliably. This has helped drive Australia's economic success.
- As demand for products change, Australia must quickly diversify its export mix to remain competitive. Our global competitors are already doing this, supporting their own high standards of living by continually changing and innovating to create and open new markets and ways of earning money.
- Universities and industry in Australia need to be supported to innovate in the same way, on behalf of the nation, otherwise we risk falling behind our international peers and continuing to languish in the ranks of economic complexity (Australia is currently ranked 91st in Harvard's Atlas of Economic Complexity).
- Long-term investment is needed to drive a change in culture where industry can more easily reach university researchers and vice versa.
- Universities are key players in both basic and applied research. This involves researchers pushing new ideas into the innovation ecosystem, and industry pulling through ideas by creating demand for solutions, and further commercialising them, often by driving down cost and creating new business models.
- We have ground to make up and there is no time to waste.

### Stimulating business investment in research and development

### **Recommendation 27**

Implement and augment Recommendation Two from the 2016 Review of the R&D Tax Incentive, to introduce a premium rate to the Research & Development Tax Incentive for businesses collaborating with universities, especially in the small and medium enterprise sector.

### **Recommendation 28**

Build capacity in the small and medium enterprise sector to be able to better absorb research and development.

These recommendations address question 26.

- Australia (1.80 per cent of GDP in 2019) spends considerably less on research and development than its OECD counterparts (2.52 per cent in 2019). Our investment has been in decline relative to GDP for over a decade.
- The decline relative to GDP has been driven primarily by businesses and governments reducing expenditure on research and development.
- The Australian business landscape is dominated by small and medium enterprises (SMEs), yet SMEs face barriers to collaborating with universities, as they have limited capacity for innovation due to lack of financing and shortage of skilled labour.
- As of 30 June 2022, 99.8 per cent of Australian businesses had fewer than 200 employees.<sup>24</sup> Most businesses with fewer than 200 employees spend less than \$25,000 per year on innovation.<sup>25</sup>
- Currently, larger businesses are responsible for a large portion of collaboration between universities and enterprises. This is a missed opportunity.
- Accepting and implementing recommendation two from the Review of the R&D Tax Incentive,<sup>26</sup> and introducing a premium rate to the Research & Development Tax Incentive (RDTI) for businesses that collaborate with universities and publicly funded research agencies.
- Such a collaboration premium would encourage business to access expertise and resources inside these institutions, which would have the effect of significantly increasing the spill overs associated with both public-sector and business research and development.

### Shifting the funding mix towards direct investment in business R&D

### **Recommendation 29**

Increase emphasis on direct investment in business research and development.

This recommendation addresses questions 26 and 27.

- Unlike our international peers, government support for business-driven research and development is primarily delivered through indirect funding. Eightytwo per cent of the federal government's total innovation investment in businesses flows through the RDTI. This is the fourth highest level of indirect support for research and development across OECD nations.
- Despite this investment over the years through indirect incentives, business investment in research has declined relative to GDP. To lift gross domestic expenditure on research and development (GERD) to at least OECD average, business needs to increase their research and development investments, and government has a role to play in incentivising this.
- It is essential that the government examine its business research and development investment alongside policy principles of additionality, efficacy and whether it induces absorptive capacity.
- We acknowledge and welcome initiatives which foster research collaboration, including Trailblazer, the Economic Accelerator program and the National Reconstruction Fund.
- Additionally, we note and welcome recent policies, such as the Department of Education's National Industry PhD Program and the Australian Research Council's Industry Fellowships Programs, which make it easier for researchers to move between academia and industry and transfer knowledge and increase collaborations between the two.

### Conclusion

As universities gear up for the next few decades, they are well-positioned to tackle some of the most pressing challenges facing Australia's economy. With a focus on solutions, universities are ready to work with government to implement policies that will keep the country's higher education system strong. This means not only addressing immediate concerns such as funding and access to higher education, but also looking to the future and identifying emerging trends and opportunities.

Australia's universities are already at the forefront of cutting-edge research and education. Maintaining and building on this position will require ongoing collaboration between universities, industry, and government, as well as a commitment to long-term thinking and planning.

Universities must also work together with government to identify and address systemic barriers to access and opportunity, and to create a more level playing field for all Australians. By doing so, they can help build a stronger, more equitable and more prosperous Australia.

### Appendices

### APPENDIX 1 – Access and equity recommendations from the Bradley review not implemented or partially implemented by government

Bradley recommendation	Status	UA's 2023 recommendation
4. That the Australian Government set a national target that, by 2020, 20 per cent of higher education enrolments at undergraduate level are people from low socio-economic status backgrounds.	Partially adopted	Rec 7: Review the unmet and partially met access and equity recommendations set out in the Bradley review and progress and implement those that apply.
15. That the Australian Government liaise with states and territories to ensure consistent policies for school-fee waivers for the dependants of international research students in government-subsidised places and examine its visa arrangements to improve the conditions for spouse work visas	Partially adopted	No recommendation. Currently, spouses of HDR students have access to full work rights in Australia.
16. That, after further consideration of current problems with regional provisions, the Australian Government provide an additional \$80 million per year from 2012 in funding for sustainable higher education provision in regional areas to replace the existing regional loading. This should include funding to develop innovative local solutions through a range of flexible and collaborative delivery arrangements in partnership with other providers such as TAFE	Partially adopted	Rec 4: Develop a new infrastructure financing facility to ensure every university student and researcher in Australia has access to high quality teaching and research facilities.

Bradley recommendation	Status	UA's 2023 recommendation
26. That the Australian Government increase the base funding for teaching and learning in higher education by 10 per cent from 2010.	Not addressed	Rec 1: Establish mission-based and place-based partnership agreements between universities and government,
28. That the Australian Government commission an independent triennial review of the base funding levels for learning and teaching in higher education to ensure that funding levels remain internationally competitive and appropriate for the sector.	Partially adopted	with a flexible funding envelope that includes a minimum basic grant amount for university operational activities, combined with financing for additional program delivery. Review on a 5-year cycle.
30. That the Australian Government increase the funding for the access and participation of under-represented groups of students to a level equivalent to 4 per cent of the total grants for teaching. This would be allocated through a new program for outreach activities and a loading paid to institutions enrolling students from low socio-economic backgrounds. Funding for the Disability Support Program would be increased to \$20 million per year.	Partially adopted	
31. That the Australian Government quarantine 2.5 per cent of the total government funding for teaching and learning for each provider to be allocated on the basis of achievement against a set of institutional performance targets which would be negotiated annually.	Partially adopted	
37. Increase the loan fee for FEE-HELP for fee-paying undergraduate students to 25 per cent and remove the loan fee on OS-HELP loans to encourage more Australian students to undertake part of their studies overseas.	Partially addressed	Rec 9: Ensure HECS-HELP policy settings are fit-for-purpose and are serving the original policy intent to remove financial barriers to education.

Bradley recommendation	Status	UA's 2023 recommendation
<ul> <li>44. That the Australian Government negotiate with the states and territories to introduce a tertiary entitlement funding model across higher education and vocational education and training (VET) commencing with the upper levels of VET (diplomas and advanced diplomas) and progressing to the other levels as soon as practicable.</li> <li>45. That the Australian Government negotiate with the states and territories to extend income contingent loans to students enrolled in VET diplomas and advanced diplomas.</li> </ul>	Partially adopted	Rec 12: Develop a National Lifelong Learning Strategy that provides a vision for Australia's education future and a foundation for recognising individuals' lifelong learning experiences, skills and interests as they align with skills needs. As part of this strategy, increase funding for higher education to enable life-long learning through attainment of microcredentials and the extension of Income Contingent Loans to such offerings.
46. That the Australian Government and the governments of the states and territories agree to (establish a single ministerial council with responsibility for all tertiary education and training; improve the scope and coordination of labour market intelligence so that it covers the whole tertiary sector and supports a more responsive and dynamic role for both vocational education and training and higher education; expand the purpose and role of the National Centre for Vocational Education Research so that it covers the whole tertiary sector).	Not addressed	Rec 15: In support of an Recognition of Prior Learning framework, create a unit within Jobs and Skills Australia dedicated to skills mapping to post-secondary education curricula could be established to help inform admissions practices, the application of Recognition of Prior Learning assessment and assessment review.

# APPENDIX 2 – National Work Integrated Learning Strategy – provisional recommendations

Through a partnership between Universities Australia, the Australian Collaborative Education Network (ACEN), the Australian Chamber of Commerce and Industry (ACCI), the Australian Industry Group (AiG), the Business Council of Australia (BCA) and university experts, a cross-sector National Work Integrated Learning Strategy is being developed to provide guidance across universities, industry and government on the implementation of WIL for higher education. Building on a 2015 Strategy (which was also developed by the same partners), this strategy seeks to provide targeted guidance and respond to a changing education and workplace environment. Under development, key aspects of the strategy emphasise the need for a coordinated, integrated and holistically supported strategy to meet the knowledge and skills needs of Australia's future.

This strategy will highlight several solutions that universities, industry and government can apply to ensure a sustainable WIL setting. These reforms include:

### Universities

- Make WIL a core component of university curricula across all courses; ensuring that WIL is embedded through a scaffolded model that builds on knowledge developed over the length of a student's program.
- Build from current good practice in universities and peak bodies (ACEN, industry groups).
- Development of sector-wide measures/advice on high-quality WIL, including options for benchmarking (e.g., WIL standards checklist) and effective industry partnership models for different types of businesses, including large businesses and SMEs. These measures should correlate with national data reporting through the QILT GOS, SES, ESS, and GOS-L annual surveys for domestic and international students.
- Working with industry, provide different forms of WIL to enable student access into WIL programs – inclusive of individuals' circumstances – and ensure programs meet student learning outcomes and business needs irrespective of type of WIL program.
- Promote innovative forms of WIL to adapt to changing work practice and include diverse employers and students.
- Foster the development of WIL within universities including growth in staff capability and industry relationships and their management.

### Industry

- Make university-industry partnerships a priority for all stakeholders.
- Work collaboratively with industry and industry sector peak bodies to promote and support WIL.
- Foster creation and sharing of WIL solutions for SMEs, not-for-profit organisations and regional/ remote businesses that are fit-for-purpose.
- Create advice on effective options to broker and manage WIL through third party arrangements.
- Develop methodologies to gather data and feedback to monitor industry participation and experience of WIL.

### Government

- Introduce sector-wide measures and reporting to monitor progress, value and quality including data gathering through national surveys (e.g., GOS, SES, ESS).
- Review funding for national priority skill development including the cost of placement in health professions and direct payment to student for time spent in training.
  - Provide funding assistance to different student cohorts to enable access to certain types of WIL. For example, different scholarships to support people from regional, rural or remote Australia, students with disability or students with financial needs.
- Review regulatory requirements to shift the focus from mandatory placements, identified through outdated measures in CRICOS, to all forms of WIL, whether core or elective.
  - Shift the focus from the NPILF metrics, which were limited to STEM-based disciplines, required overly prescriptive indicators that did not capture the vast array of WIL experiences, put the onus of collaboration singularly on universities to create, maintain and expand, and limited the innovative potential of WIL through prescriptive indicators.
  - Exclude elective WIL from the working limit condition in the international student visa.
  - Improve the international education experience in Australia by applying the fortnightly limit on international student working hours to paid work only.

- Funding for supporting infrastructure such as innovation hubs or brokering centres.
- Ensure regulatory and policy settings provide for a distinction between WIL as a learning activity from work, which has a primary focus on tangible outcomes.
  - For example, WIL should not feature in the calculation of international students 48-hour fortnightly work cap.

### Funding

A key driver of a successful WIL strategy and delivering the necessary linkages, collaborations and skilled workforce of the future is investment from multiple stakeholders, including government.

Ensuring the sustainability of WIL, federal and state government could consider options that encourage and support WIL engagement across the nation. These include:

- Funding for industry:
  - Incentive schemes to encourage participation in WIL activities, particularly for SMEs, such as tax incentives, and opt-in programs.
  - Wage subsidies and/or training supplements into a Lifelong Learning Trust to encourage payment for students undertaking work-based WIL.
  - Support for infrastructure designed to facilitate and grow WIL.
  - Priority schemes for SMEs and regional businesses where participation is costly.
  - Priority schemes for industries with acute skill gaps and talent shortages.

- Funding for universities:
  - Support for researching, developing, implementing and evaluating innovative and flexible WIL programs that favour co-creation and meet work demands.
  - Priority support for collaboration with SMEs and regional businesses.
  - Support for teaching that supports at-scale and transdisciplinary WIL.
  - Support for infrastructure such as innovation hubs.
- Funding for students:
  - Bursaries and/or stipends to support participation in WIL with priority schemes aligned to national skill development needs and equity student groups.
  - Accommodation and travel subsidies for individual student circumstances.
  - Direct payments for mandatory training in health and teaching professions.

# APPENDIX 3: International case studies of work integrated learning programs

### Canada

- Work-based WIL was traditionally undertaken as cooperative education.
- Nine types of WIL have been established (e.g., consulting, transdisciplinary projects, start-up collaborations) in HE, all in-curricula and all must align to their national quality WIL framework.
- Wage subsidies to employers to incentivize hiring of students for cooperative education terms. Federal funding (\$800 million Canadian) which targeted industries with greatest skill deficiencies / talent shortages.
- State funding to HE institutions to help them develop and implement WIL programs (varies by state).
- Funds students directly to enable them to engage in WIL. Federal funding administered by Co-operative Education and Work-Integrated Learning Canada (CEWIL the equivalent of ACEN) as part of iHUB program and goes directly to students to participate in 'other' types of WIL (not cooperative education). Institutions apply to CEWIL's iHUB program, receive funds and administer to their students.

Note: federal funding only available to domestic students (they're trying to rectify this).

### United Kingdom

36

- Work-based WIL traditionally undertaken as a sandwich degree (two years of university, one year paid work, one year university). Universities are typically 'hands off' during this year in industry.
- ACET (UK equivalent of ACEN) promotes the requirement to fund all work-based WIL over four weeks. Students are employed and paid at least the UK national minimum wage for the duration.
- Increasing interest in diversifying into other forms of WIL in curriculum.
- Introduction of degree apprenticeships where students work full-time and complete their degree over a three-to-six-year period via free part-time study. Targets school leavers and largely used by SMEs.
- Funding of the Degree Apprenticeships through Apprenticeship Levy scheme (0.5 per cent of monthly payroll paid by employers with a wage bill exceeding £3 million).

- Turing Scheme funds internships for both international and domestic students enrolled in a UK HE institution for a 1–12-month traineeship (internship, placement) abroad. Equivalent to Erasmus scheme (turing-scheme.org.uk).
- Uniteplus is funded by the EU Regional Development Fund for SMEs engage students in placements. Collaboration between ERDF, two Lancashire universities, Lancashire's Business Growth Hub and Northern Powerhouse (UK government funded think tank to promote collaboration and economic growth in Northern England). Available for students and graduates of UK universities and must be eligible to work in the UK (<u>uniteplus.co.uk)</u>.
- Knowledge Transfer Partnerships which link graduates, academics and UK businesses to deliver innovation/strategic management projects. Has funded 12000 organisations innovate for growth to date. Funded by UK Research and Innovation, public body sponsored by UK government (ktp-uk.org).

### Europe

 ERASMUS+ is a European body that funds traineeships (work placements, internships) of 2-12 months length abroad for students enrolled in HE institutions in Programme Countries at Bachelor, Masters and Doctoral level, also for recent graduates. Must be relevant to degree study and ideally integrated into degree program. The European Commission provides €26 billion for this program (erasmus-plus.ec.europa.eu).

### Endnotes

- 1 See: <u>universitiesaustralia.edu.au/submission/</u> <u>submission-to-the-senate-education-and-employment-</u> <u>committee-job-ready-graduates-legislation</u>
- 2 Deloitte Access Economics has previously provided analysis on the relationship between education attainment and the size of economy (see: <u>2015 report</u>, and <u>2020 report</u>); UA has used these reports to estimate the impact of boosting Indigenous attainment.
- 3 Department of Education, unpublished HEIMS data.
- 4 Bradley, Denise, Peter Noonan, Helen Nugent, and Bill Scales. 2008. "Review of Higher Education -Final Report." Canberra: Department of Education, Employment and Workplace Relations. <u>apo.org.au/</u><u>node/15776</u> (p. 66).
- 5 Warburton, 2023. <u>Occasional-paper-series</u> (p. 5).
- 6 Chapman, B. 1996. "The Rationale for the Higher Education Contribution Scheme." The Australian Universities' Review 39 (1): 43–50. <u>files.eric.ed.gov/</u> <u>fulltext/EJ527928.pdf</u>
- 7 pc.gov.au/closing-the-gap-data/dashboard/ socioeconomic/outcome-area6
- 8 education.gov.au/aboriginal-and-torres-strait-islanderhigher-education
- 9 Becker G. S. 1993, Human Capital A theoretical and empirical analysis with specific reference to education 3rd Edition, The University of Chicago Press, The National Bureau of Economic Research, 3rd Edition, published 1993, pp. 299-307.
- 10 The NSC modelling suggests demand for employed people with a Bachelor's degree is growing by 124,000 people each year. The 2021 Census suggests the employment rate of people with a Bachelor's degree or higher, aged 20-64 is 86 per cent.
- 11 <u>nationalskillscommission.gov.au/reports/stateaustralias-skills-2021-now-and-future/chapter-8-skillsand-jobs-future (p. 151).</u>
- 12 Exploring the recognition of prior learning in Australian VET (ncver.edu.au)
- 13 Legislative Assembly Economy and Infrastructure Committee. 2022. "Inquiry into Victorian Universities' Investment in Skills." Victoria, Australia: Parliament of Victoria. <u>new.</u> <u>parliament.vic.gov.au/492ccc/contentassets/</u> d216b90f4b454b25b066757a7467abd7/laeic-59-04vic-universities-investment-in-skills-final-report.pdf
- 14 Treasury and Home Affairs 2018, Shaping a Nation (p. 21).
- 15 Migration Council Australia. "The Economic Impact of Migration", Canberra: Migration Council Australia, April 2021. <u>migrationcouncil.org.au/wp-content/</u> <u>uploads/2021/04/The-Economic-Impact-of-Migration.pdf</u>

- For a recent reference to increases costs of research see Woolston, Chris. 2023. "Facing Inflation: Lab Heads Tighten Supplies Budgets." Nature 613 (7944): 601–2. doi.org/10.1038/d41586-023-00088-z
- 17 Main Science and Technology Indicators (OECD), 2022.
- 18 Australian Bureau of Statistics (ABS) 2022, Research and Experimental Development, Businesses, Australia website. Visited 27 March 2023.
- 19 Another statistic in this space could come from OECD Science, Technology and Innovation Scoreboard. Visited 27 March 2023. <u>oecd.org/sti/scoreboard.</u> <u>htm?i=G\_XGDP&v=1&t=2020&s=AUS</u>
- 20 The Allen Consulting Group. 2009. "The indirect cost associated with university research funded through Australian Competitive Grants". Report to the Department of Innovation, Industry, Science and Research.
- 21 ABS Cat 8111.0 Table 1, see: <u>abs.gov.au/statistics/</u> industry/technology-and-innovation/researchand-experimental-development-higher-educationorganisations-australia/latest-release
- 22 Chubb, Ian. 2013. "Productivity, industry engagement and PhD workforce." <u>chiefscientist.gov.au/2013/02/</u> <u>productivity-industry-engagement-and-the-phd-</u> <u>workforce</u>
- 23 Cawthorne, Renee. 2022. "Indigenising the Australian University Science Curriculum." New South Wales: Macquarie University. <u>figshare.mq.edu.au/articles/</u><u>thesis/Indigenising\_the\_Australian\_University\_</u><u>Science\_Curriculum/21928488/1/files/38899641.pdf</u>
- 24 ABS Cat. 8165.0.
- 25 AlphaBeta Advisors. 2020. "Australian business investment in innovation: levels, trends and drivers." Office of Innovation & Science Australia. <u>industry.gov.</u> <u>au/sites/default/files/2020-02/australian-business-</u> <u>investment-in-innovation-levels-trends-and-drivers.pdf</u> (p. 26).
- 26 Ferris, Bill, Alan Finkel, and John Fraser. 2016. "Review of the R&D Tax Incentive." Australia. <u>industry.gov.au/</u> <u>publications/2016-review-rd-tax-incentive</u>

Universities Australia 1 Geils Court, Deakin ACT 2600 P +61 2 6285 8100 E contact@universitiesaustralia.edu.au universitiesaustralia.edu.au

