UNIVERSITIES AUSTRALIA SUBMISSION

2020–21 PRE-BUDGET SUBMISSION

DECEMBER 2019

UNIVERSITIES AUSTRALIA

This work is licensed under a **Creative Commons Attribution 4.0 International Licence**.

Further inquiries should be made to the Chief Executive:

GPO Box 1142 Canberra ACT 2601
Ph: +61 (0)2 6285 8100
Fax: +61 (0)2 6285 8101
Email: contact@universitiesaustralia.edu.au

UNIVERSITIESAUSTRALIA.EDU.AU

ABN 53 008 502 930

CONTENTS

EXECUTIVE SUMMARY

Now, more than ever, it is productivity that underwrites growth and prosperity. In the 21st century, successful nations are those that maintain and accelerate productivity growth. Without it, economic growth and prosperity start to decline.

The same is true for industries, firms and individuals.

While Australia continues to avoid recession, the economy is slowing. Global economic headwinds are buffeting momentum in the Australian economy. GDP growth is at the lowest level for a decade and productivity growth has gone into reverse.

Now is the time to invest in lifting productivity to turn these concerning trends around.

University education and research are among the most effective ways to boost productivity and set Australia up for the future.

University research makes breakthroughs that lead to new industries and jobs. And while research can give the economy and society answers to big challenges we currently need to navigate, it also enables us to identify questions we hadn't yet thought to ask.

Higher education equips people to flourish in a high skills economy. It provides not just the skills for a job, but capabilities to keep learning and adapting through a changing career and life.

Maintaining investment in higher education and research is vital if Australia is to counter global economic headwinds and their impact on jobs and prosperity.

To grow the economy and seize the opportunities of highly skilled, well paid jobs for our citizens, Australia needs to ensure our people have access to high-quality education and training beyond school. Post-secondary education and training needs to be spread more widely than ever before so Australians in our regions, towns, suburbs and cities aren't left behind.

It will be difficult for us to serve this need under current policy settings.

This submission outlines some measures that Government can take to reverse declining trends and invest in Australia's prosperity. These investments will yield a return in the short term, and even more so over the longer term.

Investing in Australia's universities will help Australia, its people and its businesses to become more resilient, more innovative and better connected with the world.

Universities Australia calls on the Government to:

- Reconsider the returns on investment in a strong, vibrant university and research system.
- Provide for growth in university places to:
  - meet increasing demand due to demographic growth;
  - continue to expand opportunity to historically under-represented groups; and
  - set Australia up for future economic development which will put a priority on advanced knowledge and skills.
- Recognise the central role of research in driving innovation and prosperity in a modern economy:
  - commit to stable policy settings and increased resources to Australia's research system at a level that compares favourably with international standards;
  - commit to a long-term plan for re-investment in research and education infrastructure;
  - introduce a premium rate for business collaborations with publicly funded research organisations; and
  - introduce programs that supply direct support for business R&D, including collaborations with universities, and reduce reliance on the R&D tax incentive as a single lever.
- Improve policy frameworks and funding for vocational education and training and work with States and Territories to this end.
- Undertake a review of student income support and consider an increase in payments.
- Improve the efficiency and responsiveness of student income support administration.
- Provide funding support for university/aged-care partnerships to expand clinical placement capacity in aged-care;
- Provide pilot funding to develop university-disability service partnerships to support growth in allied health working in disability services;
- Commit to ongoing Rural Health Multidisciplinary Training (RHMT) program funding to support the rural health workforce; and
- Provide funding for universities to implement mandated health professional education requirements where these impose extra costs on universities.

1 INVESTING IN PRODUCTIVITY

To reconsider the returns on investment in a strong, vibrant university and research system.

As the economist Paul Krugman famously observed more than 20 years ago, 'productivity isn't everything, but in the long run it's nearly everything'.[1]

Especially in advanced economies like Australia, continued growth in economic activity, employment and living standards depends largely on improving productivity.

As in other advanced economies, Australia's growth in multifactor productivity (outputs for the combined total inputs, including labour, capital and other factors) has slowed in recent times. Recent ABS estimates show that Australia's multifactor productivity for the 16 industry market sectors fell 0.4 per cent in 2018–19, the first decline since 2010–11. Labour productivity growth for the market sector also fell 0.2 per cent, the first recorded negative growth since the series began in 1994–95.[2] The *2019 Productivity Commission Productivity Bulletin* linked the current weakness in labour productivity to - in part - a marked slowdown in private R&D investment, resulting in a diminished ratio of capital to labour.

Without advances in technology it will be difficult to improve (or even maintain) capital productivity. Similarly, labour productivity - especially in a 21st century knowledge economy - depends on improvements in human capital.

According to the Organisation for Economic Co-operation and Development (OECD) estimates, 50 per cent of economic growth in member countries results from innovation, and the proportion is expected to grow.[3]

At the firm level, innovation makes a clear difference. The *2019 Australian Innovation System Report* found that:

> '*Compared to Australian firms that do not innovate, a significantly larger proportion of innovation-active firms consistently report increased sales, profitability, productivity, and other growth-related performance measures. For example, innovation-active firms in 2017–18 were over seven times more likely to report improved performance in their targeted export markets compared to the previous year. The performance measures and activities with the largest reported improvements from the previous year are consistently income from sales of goods or services, profitability and productivity. Furthermore, the benefits from innovation get stronger when firms innovate more frequently. Persistent innovators significantly outgrow other firms in terms of sales, value added, employment and profit growth.'*[4]

[1] Krugman, P. 1994, *The Age of Diminished Expectations*, MIT Press, Boston.

[2] ABS 2019, *Estimates of Industry Multifactor Productivity, 2018–19*, Cat. No. 5260.0.55.002.

[3] Cited in Department of Industry 2016, *Australian Innovation System Report 2016*, p.1

[4] https://publications.industry.gov.au/publications/australianinnovationsystemmonitor/business-innovation/benefits-of-innovation/index.html

The impact is equally clear at a whole of economy level: R&D explains up to 75 per cent of multifactor productivity growth. There is a high return on investment: 10 to 30 per cent for private returns and more than 40 per cent for social returns.[5]

Innovation drives employment growth:

> *'Innovative businesses encourage a virtuous cycle for skills, employment and labour market flexibility. Innovative businesses are significantly more likely to increase employment, training and more flexible working arrangements than non-innovators. Innovative businesses, particularly small ones, are also much more likely to be profitable and productive because of innovation leading to further demand for skilled workers.'*[6]

As an earlier edition of the Australian Innovation System report observed:

> *'An educated and skilled workforce is essential for successful innovation because such a workforce is more likely to be able to generate and implement new ideas and to adapt to new technological and organisational change originating from elsewhere.'*[7]

Universities make an indispensable contribution to improve the productivity of both capital and labour. Both research and higher education drive technological improvements. New knowledge from research makes practical technological breakthroughs possible. Entrepreneurs and employees with a background in higher education – where learning is led by research – bring an open-minded and innovative approach that quickly identifies problems and opportunities for improvement, and is receptive to new and creative solutions.

When making decisions about relative priorities, Universities Australia urges the Government to adopt those measures that have the most significant and reliable return on investment.

As advanced economies move further up the value chain and knowledge-based service industries account for an even bigger slice of their economies, a greater share of their work forces will need to hold advanced, post-secondary qualifications.

Demand for highly skilled workers has grown over time. In 1986, the largest group of workers were in occupations classified as skill level 4 (roughly equivalent to a certificate II or III). Now, the largest group of workers are in the highest skill category – occupations requiring a bachelor degree or higher.[8]

International studies dating back to the 1960s show an increasing proportion of jobs require non-routine cognitive skills, such as systems analysis, originality, written expression, complex problem solving and critical thinking (see Figure 1). This coincides with increasing demand for university educated workers.[9]

---

[5] Department of Industry 2016, *Australian Innovation System Report 2016*, p.2

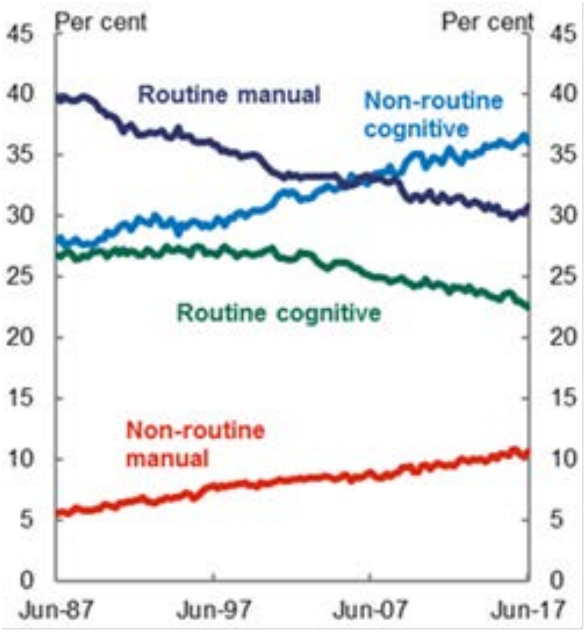
[6] Department of Industry, Innovation and Science 2012, *Australian Innovation System Report 2012*, p.4

[7] Department of Industry, Innovation and Science 2012, *Australian Innovation System Report 2012*, p.4

[8] Mason, C., Reeson, A. and Sanderson, T. 2017, *Demand for people skills is growing faster than demand for STEM skills*, The Conversation, 14 November 2017.

[9] Autor, David H., Levy, Frank and Murnane, Richard J., 'The Skill Content of Recent Technological Change: An Empirical Exploration', *The Quarterly Journal of Economics*, 118 (4), November 2003, pp 1279–1333. https://doi.org/10.1162/003355303322552801

Figure 1: Employment share by skill type



Source: The Australian Government Treasury 2017, *Analysis of Wage Growth,* November 2017, Canberra.
Note: Routine manual includes labourers, trades workers and machinery operators. Routine cognitive includes salespeople or administrative workers. Non-routine manual includes service occupations related to assisting others such as nurses and hospitality workers. Non-routine cognitive includes manager and professionals.

Routine jobs are more susceptible to displacement by technology and automation than non-routine tasks. The trend towards technological advancement and automation will continue to increase as Artificial Intelligence and robotics become more commonplace. This will be accompanied by a continued trend towards higher-skilled jobs.

A recent report commissioned by Google Australia found that most Australians are expected to change jobs multiple times over their careers. All Australian workers aged between 21 and 65 years old are expected to have changed their job at least once by 2040 and on average, every Australian will change occupations 2.4 times over the next two decades. Moreover, the report found that across all 348 occupations in the Australian economy, tasks in Australian jobs are expected to change by 18 per cent every decade on average.[10]

Investing in innovation and human capital is what Australia needs. In an age of rapid, unpredictable economic change, increasing Australia's capacity for productivity and innovation will equip individuals and firms with the tools to adapt to change, and to thrive in the new and changing world.

[10] Alphabeta 2019, *Future Skills,* A report for Google Australia, p.12 –13.

2 MEETING FUTURE DEMAND

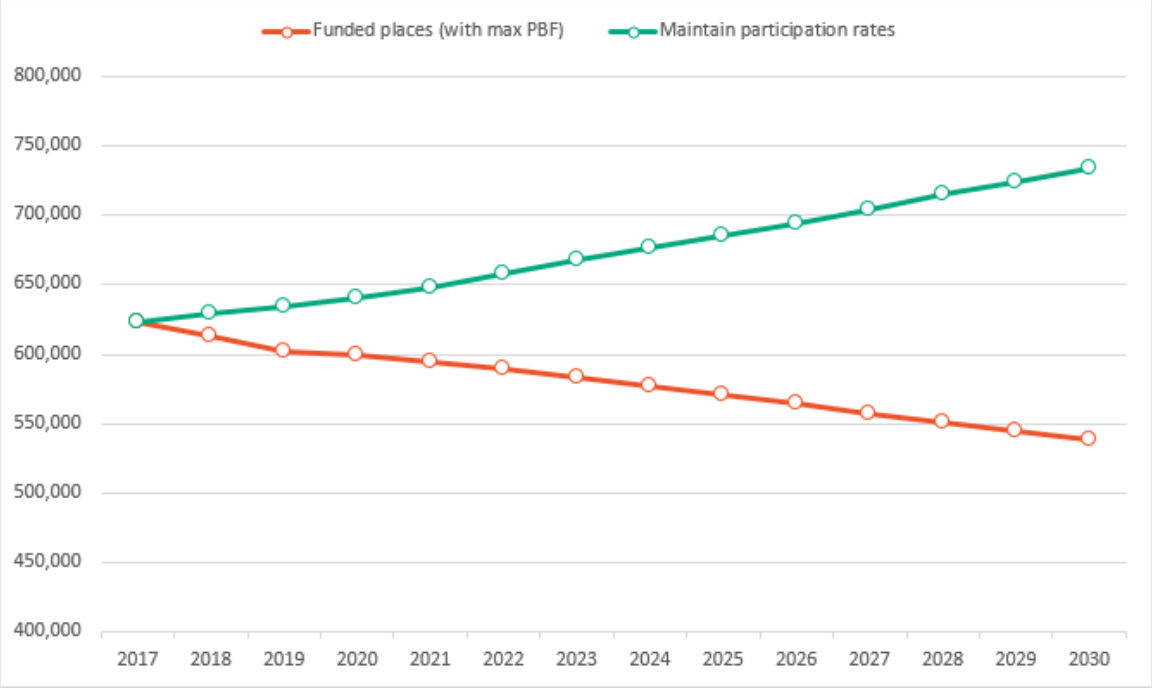
Universities Australia calls on the Government to provide for growth in university places to:

- meet increasing demand due to demographic growth;
- continue to expand opportunity to groups historically under-represented at university; and
- set Australia up for future economic development which will put a priority on advanced knowledge and skills.

In 2018 and 2019, aggregate funding for university places was at the same level as 2017. Since no allowance was made for inflation, funding has decreased in real terms over the past two years. As a result, there are fewer Commonwealth-supported places in the system now than there were three years ago.

From 2020, some additional funding will be available to universities through a new performance-based funding (PBF) scheme. An increase of 1.36 per cent in 2020, and around 1.2 per cent per year thereafter based on the population growth rate for 18 to 64 year olds. These increases, however, are less than inflation. Annual growth at less than CPI means total funding continues to decline in real terms. To maintain resourcing per student, the number of places has to fall. Commonwealth-supported places decrease by about 1 per cent – or 6000 places – per year across the decade. From 2020 to 2030, the total decrease is 60,000 or 13.5 per cent (Figure 1).

Figure 1. Number of funded university places compared with number needed to maintain 2017 participation rates



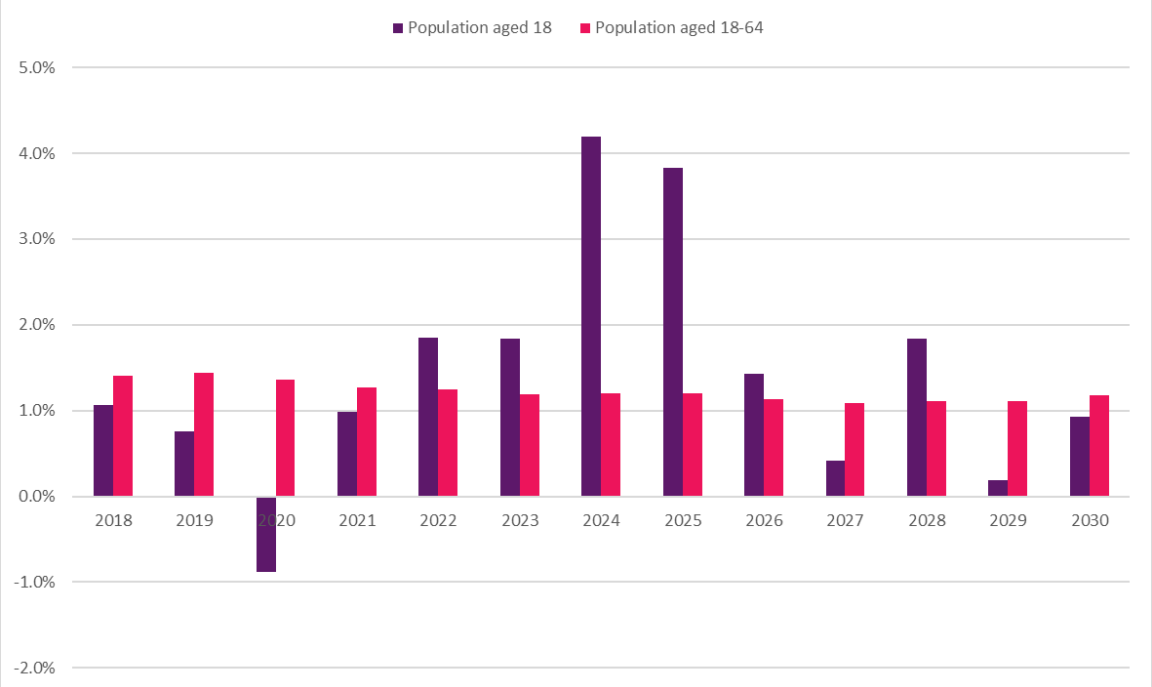
Source: UA estimates, based on ABS and Department of Education data

At the same time that the number of places is falling, the population is still growing. To maintain 2017 participation rates, the number of places would have to increase year on year. But as Figure 1 shows, falling funding means the gap keeps getting bigger. By 2030, the difference between the actual number of CSPs and the number needed to maintain participation rates will be 195,000 places.

The Minister for Education, the Hon Dan Tehan MP, has acknowledged the challenge. In particular, current policy settings do not make adequate provision for the so-called 'Costello babies' born during the baby boom of the mid 2000s.

From early in the next decade, growth in the number of 18 year olds will be strong, peaking at around 4 per cent per year in 2024 and 2025 (Figure 2). By 2030, there will be 55,000 more 18 year olds than there are now.

Figure 2. Projected annual change in population, 18 year olds and 18-64 year olds



Source: ABS

Minister Tehan has acknowledged that accommodating future demand is a shared challenge for Government and universities – especially as the youth population bulges in the first half of the coming decade.

> *'We know we have to grow the higher education sector.*
>
> *Graduates will continue to be in demand in the future.*
>
> *Projections from the Employment Department suggest that over the five years to 2023 more than half of all new jobs will be taken by those with a bachelor or higher qualification…*
>
> *A well-delivered higher education is one of the most important things we can offer Australians to help them and their children prepare for the future.*

For these reasons, our system must be open and accessible to ALL Australians.

Higher education has a hugely important role to play – in Closing the Gap, in conquering the city-country divide, in supporting people with disabilities and in lifting people out of disadvantage into a better life…

The current higher education system must evolve to meet these needs. We need a system that can support growth and respond dynamically to the needs of our economy.'[11]

UA looks forward to working with the Government to realise the Minister's vision.

Universities need additional funding to provide for the necessary growth, over and above the (nominal) growth delivered by PBF. PBF growth already provided for - while positive and welcome - will not enable universities to respond to growth in demand for places driven by demography.

In the first half of the next decade, the number of 18 year olds will grow by 13 per cent. Nominal growth in funding is less than half that - only 6.3 per cent. In real terms, funding declines by four per cent - even with PBF. This is because the PBF growth factor is less than inflation.

Using a single growth factor based on national population growth inhibits universities from responding to local population pressures, where growth can be much larger than the national average.

A university degree remains an excellent investment for individuals, as well as for the economy and society as a whole. Graduates are less likely to be unemployed. Recent ABS data shows that in May 2019, graduates unemployment rate was at 3.0 per cent compared to 7.5 per cent for those without post-school qualifications.[12]

Graduates on average earn more: over a lifetime, the median male graduate is estimated to earn nearly $800,000 more than a man with no post-school qualifications, while the average female graduate is estimated to earn nearly $600,000 more than a woman with no post-school qualifications.[13] According to the 2016 Census, university graduates earn 70 per cent more than people with no post-school qualifications and contribute substantially more to national taxation receipts.[14]

Data published by the OECD in 2019 shows the net public benefit for Australia is US$168,100 per male graduate and US$117,700 per female graduate. Public benefits included higher tax revenue and lower social security transfer payments.[15] The OECD has estimated that the Australian Government can expect to receive a return of 12 per cent every year on the investment made on tertiary education.[16]

Labour market demand for graduate skills is forecast to continue and strengthen. Projections by the Commonwealth Department of Employment show that 90 per cent of jobs growth over five years to May 2023 will be in jobs that require post-school qualifications.[17] More than 45 per cent of jobs growth will be in jobs that require a university degree.

---

[11] The Hon Dan Tehan MP, Speech at the AFR Higher Education Summit, 27 August 2019

[12] ABS 2019, *Education and Work, Australia, May 2019*, Cat. No. 6227.

[13] Grattan Institute 2018, *Mapping Australia Higher Education 2018,* p.93.

[14] ABS 2016 Census, Employment and income by qualification level – people aged 20-64 years

[15] OECD 2019, *2019 Education at a Glance*, Indicator A5.3.

[16] Ibid, Indicator A5.2.

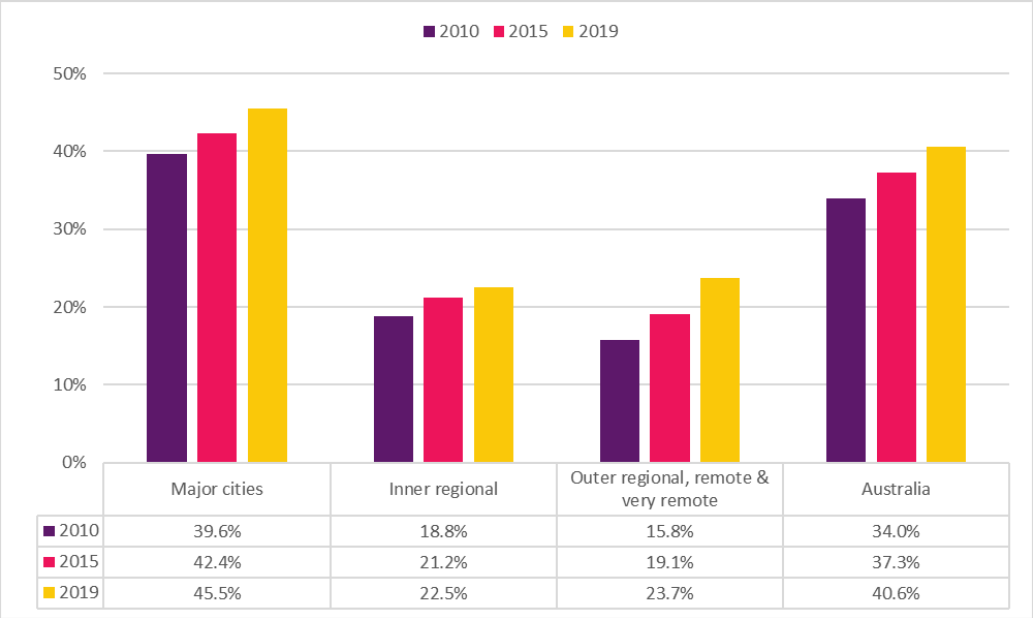
[17] Department of Jobs and Small Business 2018, *Employment Outlook to May 2023.*

Strong private returns to higher education and continuing growth in labour market demand for graduate skills will drive growth in demand for university education on top of the effects of demography. This will further widen the gap between demand and supply.

Restoring a measure of growth in the number of places is also vital to maintain social mobility. When the opportunity to access higher education is constrained, existing patterns of advantage and disadvantaged are reproduced. It is harder for universities to expand access to groups in society that remain under-represented in higher education – not through any lack of willingness or ability, but simply through an uneven distribution of educational opportunities at school and beyond.

Bachelor degree attainment has now reached the Government's 40 per cent target at the national level. Declining Government funding for Commonwealth Support Places (CSPs) in real terms year-on-year over the next decade, will make it difficult for Australia to remain at the 40 per cent attainment target and to ensure disadvantaged groups and regional Australians are not left behind. There continues to be wide variation in attainment levels across geographic areas. People in major cities are twice as likely to hold a university degree than those in regional and remote areas. In 2019, educational attainment rates at major cities were around 45 per cent compared to around half that outside the major cities.

Figure 3. Proportion of people aged 25–34 years old with a bachelor degree or higher, by degree of remoteness

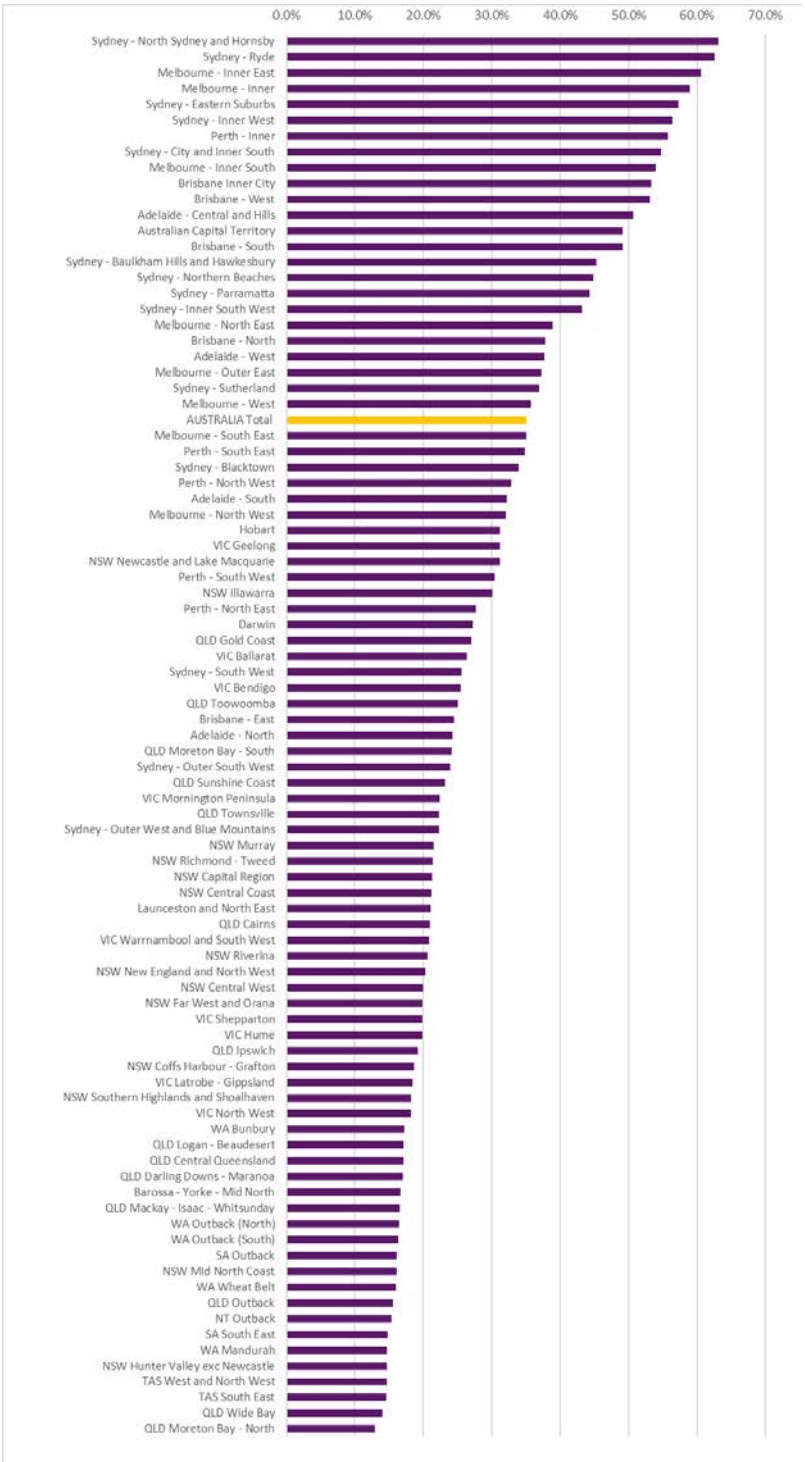


	Major cities	Inner regional	Outer regional, remote & very remote	Australia
2010	39.6%	18.8%	15.8%	34.0%
2015	42.4%	21.2%	19.1%	37.3%
2019	45.5%	22.5%	23.7%	40.6%

Source: ABS, *Education and Work, Australia*, Cat. No. 6227.0, various years.

According to the 2016 Census, university education attainment levels differ significantly depending on geographical location, ranging from more than 60 per cent in North Sydney or eastern Melbourne down to less than 15 per cent in Moreton Bay and parts of regional Tasmania. Census data shows that 63 of the 88 Statistical Area Level 4 regions had attainment levels below the nationwide average of 35 per cent in 2016.

Figure 4: Proportion of people aged 25–34 years old with a bachelor degree or higher, by SA4 area, 2016



Source: ABS, *Census of Population and Housing 2016*, TableBuilder.
Note: Data are for Statistical Area Level 4 (SA4).

3 RESEARCH – DRIVING PROSPERITY

Universities Australia calls on the Government to:

- recognise the central role of research in driving innovation and prosperity in a modern economy;
- commit to providing stable policy settings and increased resources to Australia's research system at a level that compares favourably with international standards;
- commit to a long-term plan for re-investment in research and education infrastructure.

UA urges the Government to consider its important role in the research and development investment landscape, given the forecast that government spending on R&D is forecast to plunge to a four-decade low of half a percent of gross domestic product this year.[18]

Leading world economies recognise the importance of R&D and invest accordingly. The intensity of Australia's R&D effort, at 1.79 per cent of GDP, lags behind our competitors and is now well below the OECD average of 2.37 per cent in 2017 (the latest available data). Australia's investment has been in decline for over a decade, from 2.25 per cent of GDP in 2008, and there is no sign of stabilisation.[19] This contrasts with a small but steady increase in the OECD average over the same period, from 2.28 percent to 2.37 percent.

Investing in university research and research infrastructure makes good sense. Australia's comprehensive universities are the stewards of a high-quality national research capability, recognised globally for its excellence. Australian researchers are productive: Australia produces 2.7 per cent of the world's scientific output, despite being home to only 0.33 per cent of the world's population.[20] Moreover, research is valuable; the contribution of Australian university research to the economy was estimated to be $160 billion (or 10 per cent of GDP) in 2014.[21]

In 2017-18, $33.1 billion was spent on research and development across the Australian economy. The business and higher education sectors accounted for the vast majority (87 per cent) of this expenditure.[22] Across the economy, the Australian Government funded or supported approximately one-third of this effort ($10.3 billion), predominantly through the Research and Development Tax Incentive scheme for business R&D, and competitive and block-based funding for higher education research. As total Government support in 2019-20 is estimated to be $9.6 billion, we can expect gross expenditure in research and development gross expenditure on research and development (GERD) to be potentially even lower.

Investing in R&D is a wise and productive use of public funds. In a report commissioned by the UK Department of Business, Innovation and Science, Frontier Economics noted that community-

[18] Department of Industry, Innovation and Science 2019, 2019–20 *Science, Research and Innovation Budget Tables*.

[19] ABS Cat. 8104.0, Research and Experimental Development, Business Australia, 2017-18; and OECD (2019) Main Science and Technology Indicators database.

[20] Scimago Lab, *Scimago Journal & Country Rank*, 2018, Retrieved on 26 November 2019.

[21] Deloitte Access Economics 2015, *The Importance of Universities to Australia's Prosperity*, p.84

[22] Australian Bureau of Statistics 2019, *Research and Experimental Development, Businesses, Australia, 2015-16*, cat no. 8104.0.

wide (social) returns on investment for publicly funded R&D are likely to exceed 20 per cent, based on modelling the impact of R&D on private sector productivity. It should be noted that this is likely to be understated.[23] Closer to home, the ratio of benefits to costs associated with the Australian Government's investment in the Cooperative Research Centre program was found to be around 3:1,[24] and the Productivity Commission has concluded that 'on the basis of multiple strands of evidence, the benefits of public spending [on science, research and innovation] are likely to exceed the costs.'[25]

Research and development is one of the most productive mechanisms that we have as a society to invest in the future prosperity and wellbeing of both ourselves and future generations.

Australia's investment in research, particularly research infrastructure, is falling behind.

The Government accepted most of the recommendations from the infrastructure roadmap in developing its Research Infrastructure Investment Plan. It is encouraging to see the transformational nature of cutting-edge research to the economy acknowledged, and a commitment to long term planning and investment.

However, university infrastructure needs to extend beyond large-scale research infrastructure: institutional-scale research and educational infrastructure are also in need of renewal to ensure that students and researchers have access to appropriate facilities. Funding pressures have forced universities to defer much-needed infrastructure spending, leaving them with a backlog of more than $4 billion in repairs and renewal[26] – a situation that gets worse with each passing year. Next-generation teaching and learning facilities are needed to ensure students have access to contemporary technologies and universities can keep up with changing modes of course delivery.

Funding pressures have forced universities to defer much-needed infrastructure spending, leaving them with a backlog of more than $4 billion in repairs and renewal.

A smart, agile 21st century economy requires orderly investment in cutting-edge research and educational infrastructure. With the Education Investment Fund (EIF) now abolished, universities have no alternative to funding capital from their operating margins. These are simply insufficient to fund transformative infrastructure. Outdated and dilapidated infrastructure cannot support world-class research and education – it is well beyond time to address this.

[23] Frontier Economics 2014, *Rates of return to investment in science and innovation*, Frontier Economics, London, pp. 5-6

[24] Allen Consulting Group 2012, *The economic, social and environmental impacts of the Cooperative Research Centres Program*, Canberra, p.xiii

[25] Productivity Commission 2007, *Public support for science and innovation*, Australian Government, Canberra, p.xvi

[26] Department of Education and Training 2015, *Higher Education Infrastructure Working Group Final Report*, p. 9-10.

4 REJUVENATING INDUSTRY RESEARCH AND DEVELOPMENT

Universities Australia calls on the Government to:

- introduce a premium rate for business collaborations with publicly funded research organisations;
- introduce programs that supply direct support for business R&D, including supporting collaborations with universities, and reducing reliance on the R&D tax incentive as a single lever.

In an environment where GDP growth has been the lowest in a decade and productivity declining, investment in new ideas – driven by high quality R&D – offers a plausible solution to reverse this trend.[27]

Australia's universities are powerhouses of high-quality, cutting edge research. However, Australian business innovation continues to lag world standard, with less than half of Australian businesses engaging in innovation, and only 1.2 per cent of those businesses engaged in new-to-world innovation.[28] Although successive policy interventions have encouraged universities to collaborate with businesses, it is clear that more effective incentives are needed for businesses to take advantage of the expertise available in Australian universities.

Investing in industry / university collaboration has a proven return. Modelling by Cadence Economics confirms that formal collaborations between Australian businesses and universities generate $10.6 billion a year in revenue directly for the firms who partner with universities. By the time this flows through to the economy, these collaborations are contributing $19.4 billion a year to Australia's income, and have created an estimated extra 30,000 full-time jobs across the country. There is a return on investment to companies of $4.50 for every $1 invested in collaborative university research in Australia.[29]

Recent figures from the Australia Bureau of Statistics show that Australia's gross expenditure on research and development (GERD) is in decline. From a peak of 2.25 per cent of GDP in 2008–09, expenditure on R&D in Australia has plummeted to 1.88 per cent of GDP in 2015–16 and 1.79 per cent of GDP in 2017–18.[30] There has been a substantial decline in business R&D, which fell from 1.37 per cent of GDP to just 0.94 per cent over the same period. In a time when innovation is the key to prosperity, this is a grave concern.

Policy settings for business innovation do not encourage sufficient novelty in new commercial offerings. Incentives could be better targeted to ensure that they encourage additional research and development.

---

[27] RBA 2019, *Statement on Monetary Policy*, November 2019

[28] ABS 2016, *Innovation in Australian Business, 2014–15*, Cat. No. 8158.0, Canberra.

[29] Universities Australia, *Clever Collaborations: The Strong Business Case for Partnering with Universities*, 2018, Canberra.

[30] ABS 2019, *Research and Experimental Development, Businesses, Australia*, 2017–18, Cat. No. 8104.0, Canberra.

The Government responded to some of the recommendations of the Review of the R&D Tax Incentive by increasing guidance, tightening compliance where it has been problematic, and refocussing support for larger companies towards higher intensity R&D.

The recommendation that a premium rate of the incentive for businesses that collaborate with publicly funded research organisation has not yet been addressed. UA urges Government to implement this recommendation. This would jump-start Australian business collaboration with world-leading researchers, increasing their exposure to new ideas that could lead to transformative innovations and the greatest possible benefit to the Australian economy.

In addition, UA recommends that the Government consider the mix of direct and indirect incentives to encourage business innovation, particularly for small-to-medium enterprises who may not be able to fully capitalise on the tax offset.

Most other OECD countries utilise a mix of tax incentive and direct support for business R&D. In Australia, the share of R&D tax incentive as a proportion of total government support to industry has increased from 65% in 2006 to 89% in 2015. This is the second highest level of indirect support for R&D, behind the Netherlands at 90%. By contract, UK indirect support stands at 61%, USA at 28% and Germany provides no indirect support[31].

Direct support mechanisms could reduce barriers to businesses engaging in R&D, while simultaneously improving the targeting of additional R&D activity.

[31] OECD Measuring Tax Support for R&D and Innovation http://www.oecd.org/sti/rd-tax-stats.htm)

5 A WORLD-CLASS TERTIARY SECTOR

Universities Australia calls on the Government to improve policy frameworks and funding for vocational education and training and to work with states and territories to this end.

Universities work with VET institutions to offer a broad range of pathway courses.

Six of Australia's 39 universities are dual sector providers, which means they offer both degrees and vocational courses under the same roof.

Across the country there are hundreds of links and partnerships between universities and vocational providers to allow students to move within and across the both systems.

At Charles Sturt University, one in six students came to university to build on a VET qualification.

At the University of Newcastle there are more than 200 agreements with more than 20 regional VET providers.

Changes to funding in both higher education and VET put limits on this activity. This makes it unnecessarily hard to increase the number and variety of pathways available, and to innovate to offer the new opportunities that students need.

UA has engaged with the review of the Australian Qualifications Framework (AQF) which reported to the Commonwealth Government in October 2019 to seek to improve opportunities for effective collaboration between higher education and VET. We will continue to engage in further stages of the consultative process to develop and implement changes to the AQF.

UA recognises the importance of a robust, reputable VET system for Australia's future. VET offers training and practical skills that equip Australians for entry into the workforce. Higher education offers students the academic, analytical and technical skills required for long-term professional and academic careers.

Australia's VET sector is a vital component of the nation's education system. UA acknowledges the damage that has been done to this once world-leading sector.

VET has been subject to funding cuts—especially at the state/territory level—and a range of policy experiments. These have damaged the funding of public providers and their capacity to deliver high quality VET, especially in the regions and other less advantaged areas, as well as their capacity to fulfil broader community engagement functions.

At the same time, resulting declines in quality and capacity and increases in unethical behaviour by some private providers has damaged the reputation and position of the VET sector as a whole.

The VET sector's problems—inadequate funding and poorly designed policy—can only be fixed by improvements to VET funding and policy.

Both VET and higher education are critical to Australia's economic and social wellbeing. A world-class Australian tertiary system is one that has higher education and VET working more effectively together.

Higher education and VET have different but complementary roles.

UA welcomes the Government's review of the VET sector, undertaken by the Hon Steven Joyce, and the Government's initial response. The VET Review broadly found there are pragmatic actions and building blocks that can readily be implemented to address many of the issues in VET. These actions, such as more consistent VET funding arrangements across the states and a more visible promotion of VET, would positively impact tertiary education without wholesale changes that may lead to unintended consequences.

As a starting point, both education systems should, among other things, be underpinned by:

- Stable governance and regulatory settings which consider the public benefits that TAFEs and universities offer in their capacity as longstanding not-for-profit entities.
- Policy settings that acknowledge the unique characteristics and drivers of the two sectors and diverse range of providers that operate within each sector. These settings should similarly be flexible enough for TAFEs and universities to adapt and innovative in order to meet the needs of their students, industry and professions.
- Funding arrangements that are predictable and position both sectors to be world-leaders.
- Good, readily accessible information to enable informed choices by students.

UA looks forward to continued engagement with Government and the VET sector.

6 STUDENT SUPPORT

Universities Australia:

- encourages the Government to undertake a review of student income support arrangements and consider an increase in student income support payments; and
- calls on the Government to improve the efficiency and responsiveness of student income support administration by Centrelink, especially during the peak workload period.

The *2017 Universities Australia Student Finances Survey* found that a significant proportion of students experience serious financial difficulties.[32] The 2017 Survey found that:

- One in seven undergraduates regularly go without food or necessities because they can't afford them. This rises to 18 per cent for students from low socioeconomic backgrounds and 27 per cent for Indigenous students.
- One in three domestic undergraduate students have estimated expenses that are greater than their income.
- One in ten undergraduate students deferred their studies because they could not afford to continue, while one in five students reduced their course load for financial reasons.
- More than four in five undergraduate students (82 per cent) are in paid work.

To make ends meet, 30 per cent of full-time domestic undergraduate students work more than 20 hours a week and more than 10 per cent work more than 30 hours a week. Some 41 per cent of full-time domestic undergraduate students reported that paid work had a negative impact on their studies. More than one in four full-time students reported that they regularly miss classes because they have to work.

Maximum student income support payments for single adults are lower than budget standards—the income levels required to achieve a minimally adequate standard of living.

Despite the significant growth in enrolments of undergraduate students from Indigenous and low SES backgrounds following the introduction of the demand-driven funding system, it is worrying that the share of students on income support—ABSTUDY, Austudy and Youth Allowance—has declined from 38.4 per cent in 2011 to 33.2 per cent in 2017.

Maximum student income support payments for single adults are lower than budget standards—the income levels required to achieve a minimally adequate standard of living—as calculated by the Social Policy Research Centre at UNSW and the Henderson poverty line maintained by the Melbourne Institute of Applied Economic and Social Research.

Youth Allowance/Austudy rate for students aged 18 and older—both living at or away from home—are between 36 and 69 per cent of the benchmark. ABSTUDY rates for students aged 18 to 21 living at or away from home are the same. So, if the benchmark is $100, students only receive between 36 and 69 dollars. ABSTUDY rates for students aged 22 and older and living away from home are between 44 and 81 per cent of these benchmarks, while for students living at home ABSTUDY rates are between 79 to 126 per cent of these benchmarks.

[32] https://www.universitiesaustralia.edu.au/Media-and-Events/submissions-and-reports/Students-Finances-Survey-2017

Universities have also continued to provide financial assistance to students in need. Since 2008, scholarships, grants and prizes offered by universities to their students have increased by 50 per cent in real terms from around $1.2 billion in 2008 to $1.8 billion in 2017.[33]

The central concern of universities is whether student income support is adequate and thus supports effective study. For the student and the taxpayer, it is important that finances do not inhibit study and the societal and individual benefits that result from it.

There are also critical weaknesses in the administration of student income support programs including long delays in processing time and lack clarity about decisions. Students are particularly affected by resourcing constraints in Centrelink, especially at the start of the academic year given the increased volumes of applications. This creates significant uncertainty at the start of the year and presumes that students have access to other support in the meantime.

The 2016-17 Australian National Audit Office (ANAO) independent performance audit report on administration of Youth Allowance (Student) and ABSTUDY found:

- From early 2013-14 to early 2016-17, the Department of Human Services did not meet its key performance measure for processing both Youth Allowance (Student) and ABSTUDY claims during peak workload periods.
- Between 2013-14 and 2015-16, callers to the Youth Allowance (Student) phone lines on average spent 24 to 30 minutes in the queue before their calls were answered.
- The average time callers spent in a queue on ABSTUDY lines before their calls were answered also increased from around 10 minutes to 17 minutes over the period.

[33] DET, *Financial Reports of Higher Education Providers*, various years.

7 UNIVERSITIES AND THE HEALTH WORKFORCE

UA calls on Government to invest in the health workforce:

- funding support for university/aged-care service partnerships to build learning cultures and expand clinical placement capacity in aged-care. Research supports such collaborations as key drivers for improved workforce and other aged-care outcomes;
- pilot funding to universities to develop university-disability service partnerships to support growth in allied health working in disability services;
- ongoing Rural Health Multidisciplinary Training (RHMT) program funding to support rural health workforce distribution;
- funding for universities to implement relevant health professional education requirements where these are mandated and impose significantly extra costs on universities.

An appropriately skilled and distributed health workforce is fundamental to a high functioning health system. Australian universities play a crucial role in developing entrants into this workforce.

Quality clinical education, especially clinical placements, are a critical part of entry-level health workforce development. They influence where and in what speciality graduates choose to work.[20,21] Ensuring sufficient and diverse clinical experience is essential to achieving the workforce skill mix and distribution Australia needs. However, support is required to expand clinical learning to where it is most needed: aged, disability and primary care and rural services.

Aged Care and Disability

The bulk of Australia's health challenges are best addressed outside of hospitals in the community, where most care is delivered. Aged care, primary and disability care have already forecasted an increased need for health professionals over time, especially in allied health and nursing. However, most clinical placements occur in public hospitals. Without sufficient exposure to aged, primary, disability and other ambulatory care services, the chances of students choosing, and/or their readiness, to practice in these settings is reduced. The benefits that students bring to clients and services through placements are also lost.

University-aged care partnerships that build learning cultures and expand clinical placement capacity in aged-care services are key drivers for improved workforce and aged-care outcomes. Such partnerships were previously funded by the Department of Health (DoH) through the Teaching Research Aged Care Services (TRACS) initiative. TRACS evaluations showed multiple benefits accrued to clients and services through collaborative university-aged care partnerships[34]. They also helped skill health professionals to work with older people. Appropriately skilling and growing the aged care workforce has been identified as an urgent need, including by the Royal Commission into Aged Care Quality and Safety. This workforce is needed not only as the proportion of older people in the population expands, but also to help address our current aged care issues.

[34] Many other examples are also available in UA's submissions to the Aged Care Royal Commission.

This type of partnership model could also be piloted with disability services which are facing similar workforce needs, especially for allied health. Allied health professionals play a major role in supporting functional independence in older people and people with disability. There is currently no payment mechanism for allied health student supervision in disability services under the NDIS. A university-disability service partnership pilot could explore ways to build sustainable supervision capacity in disability services and build on the work of the Boosting the Local Care Workforce initiative, for which funding ceases in March 2020.

Getting health workforce to rural Australia is a continued need. However various initiatives support better workforce distribution. The Rural Health Multidisciplinary Training (RHMT) program is one such initiative, although is currently under review. Through DoH funds, the RHMT program enables eligible universities to:

- provide rural clinical education opportunities;
- mentor students and new graduates in rural locations;
- build health professional support networks; and
- grow rural clinical and health services research.

All of these factors contribute to a sustainable rural health workforce and provide greater access to health services for rural communities.

Nurse of the Future

The recently released report of the Independent Review of Nursing Education – "Educating the Nurse of the Future" - recommends increasing Registered Nurse (RN) student clinical placement hours from 800 to 1000 as well as expanding their clinical education time in primary, mental health and community-based services. The increase is broadly supported as good practice and aims to better align Australia with student nurse placement hours in other countries. However, the increase would put universities under significant financial strain.

Universities face increasing and inequitable charges by state health services for clinical placements. Yet state governments already receive substantial Commonwealth block funds to provide teaching and training activity.[22] Requests by some state health services for universities to additionally pay for placements would put further financial pressure on universities if extended clinical placement hours are mandated for nursing students. The review also called for a costing study to be undertaken to determine the increased impost.

Digital health and future workforce preparation

The Australian Digital Health Agency is currently developing a Digital Health Workforce and Education Roadmap. The aim of the Roadmap is to support current and future health workforce confidently use digital technologies as they rapidly emerge. Digital technologies have the potential to transform health care delivery and embedding knowledge of their use in health professionals is critical. Proposed changes are likely to be incorporated into various professional accreditation course requirements. Where access to new technologies such as simulation and/or robotics are required to meet standards, additional costs incurred by universities may be considerable.

It is critical that universities are provided with sufficient funding to provide any newly mandated clinical training requirements across all disciplines as accreditation standards and technology change.