Group of Eight (Go8) Submission to Employment White Paper

1 December 2022

Introduction

The Group of Eight (Go8) welcomes the opportunity to provide a submission to the Australian Government *Employment White Paper*.

Australian universities and the Go8 universities in particular are important drivers of full employment and productivity growth for the benefit of all Australians. The world leading research conducted at Go8 universities is a major contributor to the stock of knowledge and innovation in the economy. The teaching carried out in our universities builds a bigger, better trained and more productive workforce, boosts incomes and living standards and creates more opportunities for more Australians to participate in employment. Australian universities are also large direct employers of people in the growing services sector.

The Go8 is calling for a renewed knowledge creation and innovation agenda to boost Australia's productivity, economic growth, and full employment prospects. This agenda is centred around a new *National Research Strategy* and using the upcoming *Universities Accord* to address impediments to Australian universities further contributing to the Australian economy. A full set of recommendations from the Go8, which are also relevant to the *Employment White Paper* are contained in our submission to the Productivity Commission 5-year productivity inquiry, available on the Go8 website: https://go8.edu.au/submission-productivity-commission-5-year-productivity-inquiry

Achieving full employment and productivity growth

Secure, well-paid employment in Australia relies on sustained long-term economic growth, which is driven by long-run productivity growth. Productivity growth is critical to lifting Australian living standards, yet Australia's productivity growth rate has slowed and is at its lowest rate since the 1970s. Ultimately, reversing this damaging productivity slide will rely on prioritising innovation (i.e., doing more or better with the same inputs) and a skilled population (having the skills to turn innovative ideas and knowledge into productive changes to goods and services).

Revitalising productivity growth to lift overall economic growth and in turn provide for secure, well-paid employment requires prioritising the nation's research universities. Australian universities are crucial to achieve full employment and productivity growth. The Go8 are Australia's consistently leading research-intensive universities, carrying out 70 percent of Australia's university research and alone almost meeting the OECD average for expenditure on higher education research and development (HERD) as a percentage of GDP. There is evidence of high benefit-cost ratios to research and development by Australian higher education institutions (see **Appendix A**). This is because world leading basic and applied research conducted at Australian universities have significant productivity spillovers, contributing to Australia's economic growth.

According to the International Monetary Fund (IMF, 2021) basic scientific research is a key driver of innovation and productivity, however, the IMF concludes that basic scientific research in advanced economies is underfunded. The more successful Australian research universities are at knowledge creation and innovation, the greater the stock of ideas that can be applied across the Australian economy, including by businesses, to enhance productivity, economic growth and provide for full employment.

As a priority, **the Australian Government must develop a *National Research Strategy* that encapsulates the recently announced national target for R&D expenditure of closer to three per cent of GDP and review of the Australian Research Council (ARC).** Our proposed *National Research Strategy* should provide secure and sustainable funding to Australian university research programs, including basic research. This is because how, as a nation we reach this target, matters for productivity, economic growth, and employment in Australia.

While productivity growth is a long-term priority, full employment is also a goal. Australia has been successful in driving down the unemployment rate to levels that are close to achieving full employment. While there are debates as to what constitutes full employment, there is a risk that headwinds associated with the business cycle may see the unemployment rate rise in the next few years. As the October 2022-23 Budget forecasts show, employment growth is projected to slow and the unemployment rate edge up towards 4.5 per cent by June 2024 (Australian Government, 2022).

Achieving strong and sustained economic growth will help drive employment growth and keep the unemployment rate at historically low levels. While economic growth is necessary for full employment, it is not sufficient given the skill biased nature of technological change and trade openness (see **Appendix B**). Jobs will increasingly require people with higher skill levels, , and this is where Australian universities have a critical role.

Knowledge creation goes hand in hand with skills, and full employment will only be achieved through Australian universities teaching the advanced skills increasingly needed in jobs today and in the future.

The future of work and labour market implications of structural change

Australia, like most of the global economy, has been the subject of structural transformation and rapid technological change, particularly over the past 50 years (Chindamo & Martin, 2022). Structurally, Australia has transformed from an economy with a relatively large domestic manufacturing sector to an open and globally integrated services-based economy, resulting in significant growth in services industry jobs (see **Appendix B**).

Technological change will mean the nature of work will continue to evolve, as will the level of skills needed to remain economically competitive. For example, information technology has resulted in productivity enhancing activities including automation that has substituted for some jobs, changed the scope of others, and created demand for new tasks and occupations (such as ‘data engineers’). Emerging technologies at the intersection of information technology, computer science and physical sciences, such as advanced robotics, artificial intelligence, quantum computing and internet of things will continue to accelerate change and provide opportunities for the global and Australian economies.

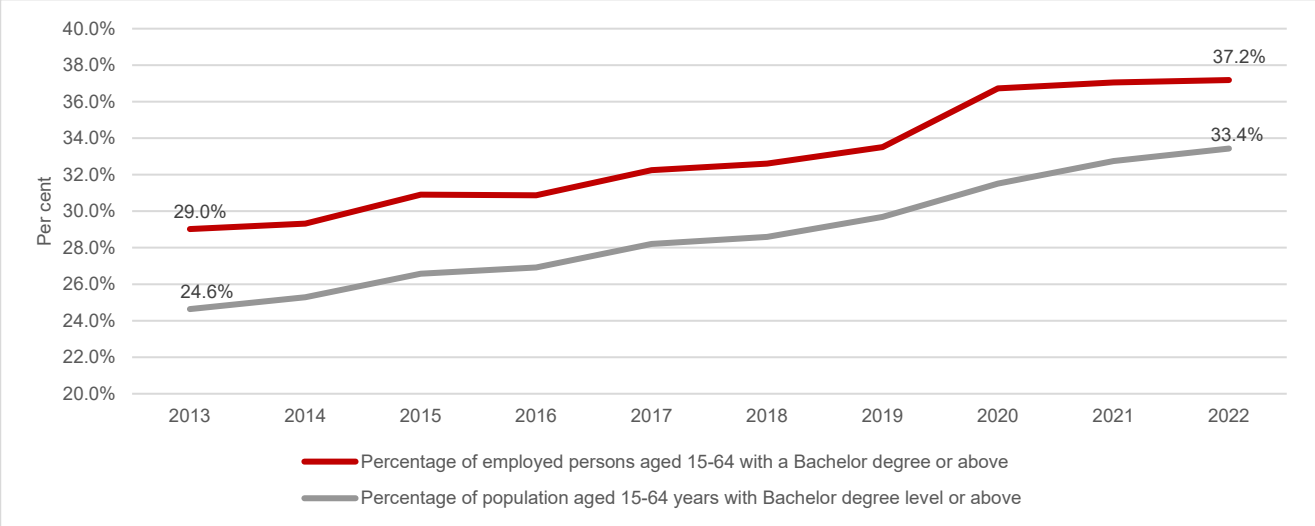
Given this structural transformation, rapid technological change and trade openness that is skill-biased, lifelong investment in education and skills is needed to enable people to participate in employment. This starts with early childhood learning, through to universities that provide teaching for students to acquire the necessary advanced skills that are increasingly becoming a prerequisite in the global economy.

There are proven high public benefit cost ratios to skill acquisition through university education in Australia (see **Appendix C**). The value of education accrues not only to an individual but to their employer, industry, and economy more generally because of human capital 'externalities' or spillovers. As Chapman & Lounkaew (2015, p. 767) note "An important point related to the complexity of the nature of higher education externalities is that the process is considered to contribute to research and development (R&D), innovation and technical change, which in turn are the major factors contributing to productivity increase and thus to the society's economic wellbeing." That is, education and training are critical to the accumulation and sharing of knowledge and ideas and can also make other (less educated) workers in the economy more productive.

The percentage of employed persons aged 15-64 in Australia with a bachelor degree or above has steadily been rising as shown in Chart 1, although it levelled off during the COVID-19 period. The chart also shows the percentage of the population aged 15-64 in Australia with a bachelor degree or above. The upward trend reflects a more skilled workforce. Employment growth in occupations requiring a bachelor degree or higher is expected to account for over half of the projected total employment growth over the five years to November 2026 (National Skills Commission, 2022). This will require additional investment in our universities as the creators of a skilled workforce required to lift Australia's productivity performance.

It is an indisputable fact that the more successful Australian universities are at teaching students, the greater the stock of human capital available across the economy, including for businesses, to turn ideas and knowledge into innovative and productive changes to the production of goods and services.

Chart 1: Percentage of employed persons aged 15-64 with a bachelor degree or above, Australia and percentage of population aged 15-64 with bachelor degree or above (a)



(a) Data is for May of each year. Sources: ABS (2022e) and ABS (2022f).

With the future of work increasingly focused on highly developed technical skills and new technologies, as a priority, the Australian Government must address the funding needs of Australian universities – both in research and teaching. This is not asking for more but a more effective allocation of funding to ensure outcomes and return on investment. The *Universities Accord* is the appropriate vehicle for the Australian Government to work with universities to redevelop an outcome focused university sector that can meet the 21st century needs of Australia.

The energy transition and tackling climate change

The energy transition and tackling climate change to achieve net zero emissions is one of the biggest global challenges and Australia will be reliant on technology and skills both from abroad and domestically.

The Go8 universities are at the forefront of research in innovative renewable energy technologies, receiving an estimated almost $700 million in ARC grants alone since the early 2000s. Go8 research covers renewable technologies in wind, solar, hydroelectricity, hydrogen, bioenergy and more recently, electric vehicles. Australia's eight research-intensive universities undertake an estimated more than 65 per cent of all university-based ARC funded research in these renewable energy technologies. Go8 research in renewables is not only leading the nation, but we can increasingly point to technologies that are leading the world.

Research and development is critical to achieve the technological advances necessary to tackle climate change. The Australian Government's commitment to achieving an overall R&D target of closer 3 per cent of GDP is a positive step. However, the reliance on cross-subsidisation of university research through international student fees is untenable and will constrain Australian universities research and development potential across many areas, including climate change. The Australian Government must address the secure and sustainable funding of university research as a priority.

The transformation associated with digitalisation and emerging technologies

Rapid technological change has resulted in the automation of tasks and occupations. With artificial intelligence and advanced robotics, there is a debate about whether automation will result in substitution of people with machines. This includes in occupations at different skill levels or whether automation may additionally create new 'human' tasks and employment opportunities not easily replicated by machines (Acemoglu & Restrepo, 2019). As Brown & Keep (2018) point out, whether automation and robots will be complementary to human capital or substitute for it, there is a need for educational reform and a greater focus on lifelong learning.

In Australia, workforce demand continues to outpace workforce supply for information technologies and computing roles (Tech Council of Australia, 2022). This is despite consistent annual growth in the number of students studying information technology. Since 2016, Go8 universities have seen an annual 19 per cent increase in commencing students in the broad field of IT compared with 12per cent for all universities. The gap between workforce demand and supply is particularly relevant to the higher skilled elements of the information and computing technologies workforce where university qualifications and training are essential – in particular, research training.

Given the current workforce shortfall, the Australian Government should as a priority, ahead of the *Universities Accord* reform process, introduce targeted funding to increase the quantum of information technology and computing related courses taught to domestic students enrolled at Australian universities. It should also fund the teaching of IT at universities at the same Commonwealth contribution rate as engineering.

Labour market outcomes and transitions

Matching skills to needs is a critical element of promoting productivity. The OECD (2022a) use ABS labour force data to compare workers' qualifications or their fields-of-study to their current job requirements and arrive at an average percentage of workers that have a qualification or field-of-study that do not match their job requirements. According to the OECD, Australia has 38.7 per cent of workers in a qualifications mismatch, slightly above the OECD average of 34.4 per cent. However, these results should not be interpreted as 'overskilling' or 'overeducation' because they may reflect transaction costs in labour market job search and matching (National Skills Commission, 2021).

In relation to higher education graduates, findings from the Australian Quality Indicators for Learning and Teaching (QILT) survey, *2022 Graduate Outcomes Survey – Longitudinal (GOS-L)*, suggests that undergraduate medium-term employment rates have remained high in the post COVID-19 lockdowns period, as illustrated in Table 1 (QILT, 2022). Further, in 2019, 86.6 percent of Australian postgraduate coursework graduates were in full-time employment four to six months after completing their course. Three years later in 2022, that proportion was 94.8 percent. Similarly, for postgraduate research graduates the proportion by 2022 had also increased.

More importantly is whether graduates are utilising their skills taught at Australian universities. The QILT (2022) survey shows that an increasing proportion of university students find work in managerial and professional occupations defined by the ABS as being commensurate with requiring bachelor level or higher qualifications. As shown in Table 1, the proportion of employed undergraduates working in the 'Managers' occupational group rose to 6.9 per cent in 2022 and the proportion working in the 'Professionals' occupation groups rose to 66.8 per cent in 2022.

Table 1: Findings of QILT 2022 Graduate Outcomes Survey – Longitudinal (GOS-L), Australia

	2019	2022
Undergraduates in full-time employment (a)	90.1	91.5
Postgraduate coursework graduates in full-time employment (a)	86.6	94.8
Postgraduate research graduates in full-time employment (a)	81.4	91.5
Percentage of employed undergraduates working in Managers occupational group	5.7	6.9
Percentage of employed undergraduates working in Professionals occupational group	54.3	66.8

(a) As a percentage of those available for full-time work. Source: QILT (2022).

Finally, in terms of measuring any underutilisation of graduate skills – the QILT survey results for 2022 indicate that for undergraduates employed full-time, 22.4 per cent indicated they were not fully using their skills or education in their current roles, three years after graduation. This is compared to 22.2 per cent in 2021 and a slightly lower figure of 22.0 per cent in 2020. Importantly, only 1.8 per cent of undergraduates employed full-time indicated having skills that are not required in their current role as the main reason for working in a role that does not fully use their skills and education. Further discussion of Australian higher education graduate outcomes and labour market transitions using the latest and earlier editions of the QILT survey is provided in **Appendix D.**

Ensuring that mismatch of skills with jobs is minimised can potentially improve productivity and opportunities for full employment. An important component in skills matching is improving graduates' transition between higher education and the labour market, with a role for universities to better assist and promote graduates' labour market skill match (including in emerging occupations related to clean energy, creative industries).

Go8 universities are already working to improve the transition of students into employment, including enabling students to have experience working with industry and government, such as through the University of Sydney's *Industry and Community Project Units* program and Monash University's *Graduate Research Industry Partnerships*. There are many other examples of these types of programs run by universities, businesses, and in collaboration, as well as programs run by peak bodies. However, what is missing from this is scale. This is an area that warrants further consideration by the Australian Government and collaboration with Australian universities.

Upskilling and reskilling through university education

Go8 supports lifelong learning. Australian universities are a place of lifelong learning, as evidenced by postgraduate enrolments and graduations, provision of executive education and community outreach programs, and more recently, offering of 'micro credentials'. The ABS (2022e) also indicates only 49 per cent of people studying a non-school qualification are aged 15-24, a drop from 54 per cent twenty years earlier.

Australia will need more and a broader range of postgraduate training options to both make the most of the workforce we have and keep people in the workforce for longer as the nature of work changes. This will range from career-switching qualifications which could require much longer periods of study (e.g., postgraduate bachelor level qualifications), to micro credentials for one-off skills acquisition. It is important for long-term productivity to assess ways to accommodate reskilling and retraining of 'mature-aged' students and the role of professional course programs offered by universities, given people will have several jobs in their careers and even change occupations.

The approach to lifelong learning will require different funding approaches, in line with the diverse types of offering. Commonwealth Supported Places may be part of the solution, but also potentially incentives for industry to partner with universities or training providers on bespoke programs, or executive training, and further tax-incentives for individuals funding self-study. The Australian Government should, as part of the *Universities Accord*, consider the role and additional funding of university micro-credentials and other short-course offerings to meet specific and changing skill needs and re-training.

Migration settings as a complement to the domestic workforce

A potential handbrake on university research capacity and therefore Australia's innovation potential is attracting and retaining academic talent, especially in emerging and high demand fields where there increasing competition, particularly among high paying industries. This includes technology/commercialisation professionals. Collaboration between business and universities should focus on retaining researchers within the higher education sector, recognising their importance in industry engagement and the translation and commercialisation pathways.

The Productivity Commission (2022) highlights that migration enables the inflow of skills, ideas and innovation, all of which contribute to productivity. Attracting and retaining researchers within Australia's university sector is essential to building a more sovereign nation. The Australian Government could achieve this in part by amending skilled migration settings to introduce a targeted high potential individual (HPI) visa open to all Australian universities to attract and retain world leading university researchers and educators, as well as enabling graduating international PhD students to remain in Australia. For example, the Productivity Commission (2022, p. 19) notes the UK has recently implemented a *High Potential Individual* visa program to attract highly skilled migrants.

Conclusion

Australia's long-term employment prospects rely on economic growth which in turn relies on long-run productivity growth as well as having a highly skilled population. Australian universities are critical to both productivity growth through research and knowledge creation, and skills, through teaching high-quality graduates.

The increasing skill intensive nature of work will continue given, the rapid technological change and emergence of new technologies such as artificial intelligence. Australians will need advanced skills to secure and retain jobs. These advanced skills are taught by Australian universities, especially the Go8 universities.

The Australian Government must address the funding needs of Australian universities – both in research and teaching – to meet changing workforce needs and lift Australia's productivity performance. This should be a priority area for the *Universities Accord*. Moreover, there is a role for the Government to address the immediate workforce supply issues in critical areas such as computing.

Transition of skilled people from universities to employment is important. In collaboration with Australian universities, the Australian Government can build scale in university graduate transition and labour matching programs. Given the need for contemporary skills, the University Accord must also address the role and additional funding of university micro-credentials and other short-course offerings to meet specific and changing skill needs and re-training.

Finally, there is merit in introducing a targeted high potential individual visa open to all Australian universities to attract and retain world leading university researchers and educators as well as enabling graduating international PhD students to remain in Australia.

Appendix A: Research and development expenditure and productivity spillovers

Secure, well-paid employment in Australia relies on sustained long-term economic growth, which in turn is driven by long-run productivity growth. R&D expenditure creates knowledge spillovers that contribute to innovation and productivity in several ways. For example, firms use external knowledge to become more productive. Second, R&D expenditure creates and raises the returns to knowledge spillovers that leads to innovation. Moreover, R&D can create new collaboration between sectors. As the IMF (2021, p. 67) notes "research increases knowledge, knowledge enhances productivity, and productivity determines how much final output is generated from real inputs."

Table 2 shows recent estimates from the Commonwealth Scientific and Industrial Research Organisation (CSIRO) on the public returns to R&D investment in Australia (CSIRO Futures, 2021). Specifically, the CSIRO quantifies the relationship between domestic gross expenditure on R&D and Australian GDP per capita growth to estimate the return on investment to innovation. These estimates assume a lag of 10-years between the research activity and the economic returns as well as allowing for R&D embodied in physical capital. The benefit-cost ratio of 3.5 suggests R&D investment has a worthwhile return to Australia.

Table 2: Estimated public returns to R&D investment in Australia

Average benefit-cost ratio	Average rate of return (per cent)
3.5	10

Source: CSIRO Futures (2021).

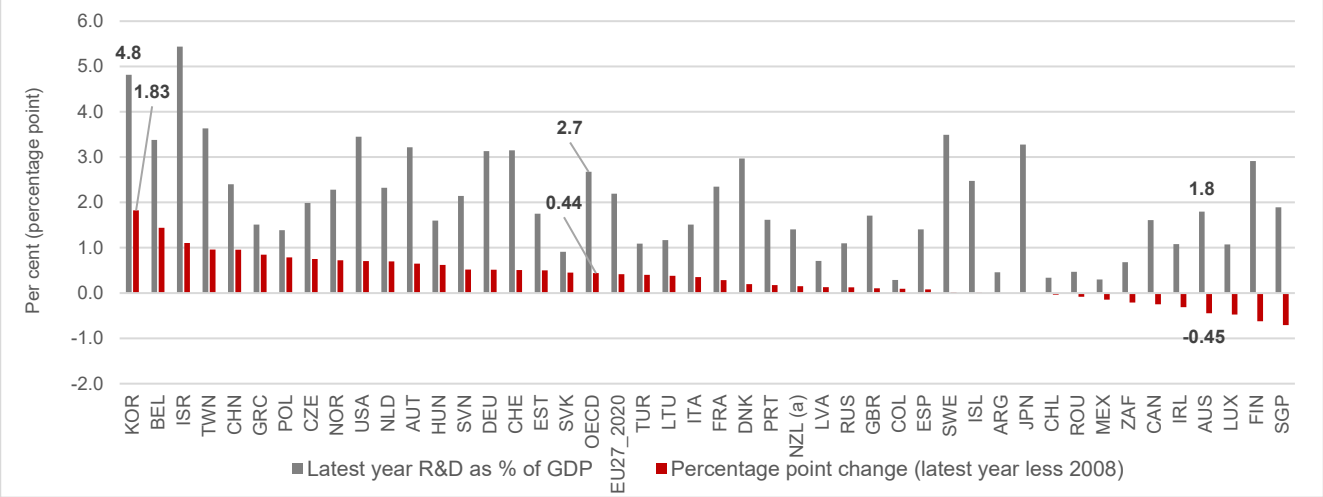
Examining specifically *the contribution of Australian universities to R&D productivity spillovers*, Australian research by Elnasri & Fox (2017) indicates strong evidence of productivity benefits from higher education R&D (HERD) amongst four classes of public funding for research and innovation. In particular, the elasticity of multifactor productivity (MFP) with respect to public funding of higher education R&D is 0.175, which means an increase of 1 percent in public funding of higher education R&D can increase MFP by 0.175 percent. Moreover, Elnasri & Fox find that there are also significant spillovers to productivity from public sector R&D spending on research agencies but no evidence of spillovers from indirect public funding for the business enterprise sector, civil sector, or defence related R&D.

What underpins these estimates is the very nature of knowledge as largely being 'non-rival' (use by one person does not preclude use by another person) which provides the basis for increasing returns to scale when used together with labour. This is a feature other traditional inputs such as physical capital do not exhibit.[1]

Australia's expenditure on R&D as a per cent of GDP has declined by 0.45 percentage points since 2008 when it stood at 2.25 per cent – in line with the then OECD average of 2.24 per cent. This is in contrast with the OECD average which increased 0.44 percentage points since 2008, and countries such as Korea where its increase in R&D expenditure as a percentage of GDP has risen 1.83 percentage points since 2008 (Chart 2).

[1] This approach to understanding economic growth is known as 'endogenous growth theory' as developed by Paul Romer for which he won a Nobel prize in Economics. See Romer (1990).

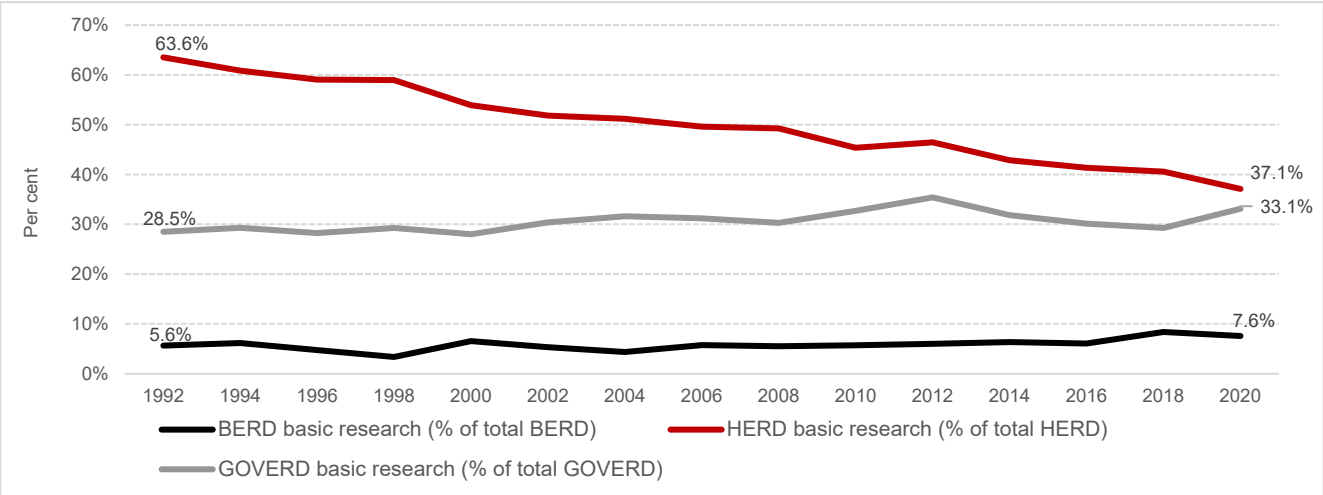
Chart 2: Gross domestic spending on total R&D, per cent of GDP, 2020 or latest available and percentage point change since 2008



(a) New Zealand (NZL) figure is for 2009. Source: OECD (2022a).

The OECD (2015) suggests *"We need to keep pushing out the global innovation frontier. This requires significantly more public investment in basic research to support the continued emergence of breakthrough innovations"*. Yet Australia's research effort is largely moving away from all-important basic research. This is evident in Chart 3 for Australia which shows the relative decline in Australia of expenditure on basic research as a percentage of total HERD, from 63.6 percent of total HERD in 1992 to 37.1 percent in 2020. The share of total government (combined Commonwealth and State/Territory) R&D expenditure (GOVERD) on basic research has risen marginally, from 28.5 per cent in the early 1990s to 33.1 per cent of total GOVERD in 2020-21. The chart shows business sector R&D expenditure (BERD) does not have much of a focus on basic research – the share of BERD on basic research hardly changed over three decades.

Chart 3: Basic research shares of total R&D expenditure by sector, Australia, per cent (a)



(a) Basic research includes pure basic research and strategic basic research as defined by the ABS. Data for BERD and GOVERD are on a financial year basis. Sources: ABS (2022a), ABS (2022b) and ABS (2022c).

Appendix B: The changing nature of the Australian economy and employment

Skill biased nature of rapid technological change and trade openness

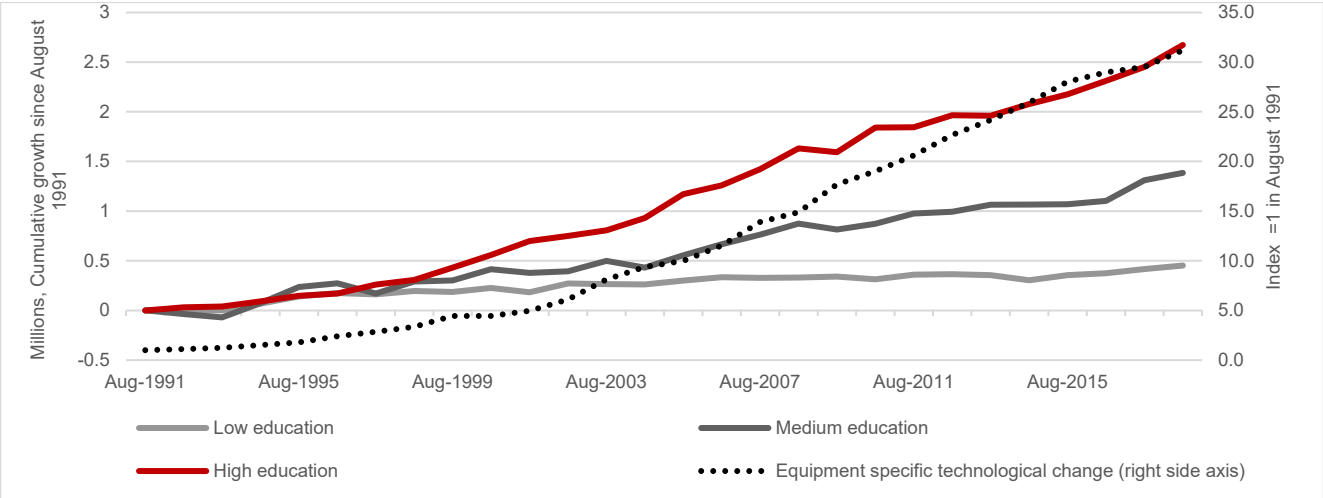
Australia, like most of the global economy, has been subject to rapid technological change over the past 50 years. Technologies (broadly defined to include any means by which inputs are used to produce outputs) have become more sophisticated, whether they are scientific knowledge, physical machinery and equipment, or increasingly 'intangible' capital (such as intellectual property, software, and research).

The nature of technological change requires people to have more formal and advanced skills to understand, use and master these technologies for productive ends. Technology-skill complementarity and trade openness are postulated as a cause of skill biased technological change (Krusell, et al., 2000; Burstein & Vogel, 2017) and in turn the existence of a skill 'wage premium' – that is, higher earnings for people with higher skills/education relative to the earnings of people that have lesser levels of education (Autor et al., 2020; Tsai et al., 2022).

New technological equipment can be more complementary to more skilled labour in several ways. For example, the relative decline in the price of computers and other advanced equipment since the 1990s has accelerated its adoption in production, and this rapid adoption has resulted in higher demand for more skilled workers and hence higher relative earnings. Alternatively, as adoption of information technologies creates a reorganisation of work tasks, skilled workers are more adept at adopting to modern technology. Finally, people with the general skills to perform non-routine tasks benefit more from the change in work induced by technological change (Violante, 2008).

Chart 4 shows for Australia the growth in technological change is associated with stronger growth in employment that requires skill levels commensurate with high levels of education. The Productivity Commission has also recognised skill biased technological change as pervasive across industries and "the existence of a technical change bias in the use of skilled workers is found regardless of existing relative labour use (i.e. skilled or less skilled intensive industries)" (Laplagne et al., 2001).

Chart 4: Equipment specific technological change (index, right axis) and growth in employment by qualification level (millions, cumulative growth since August 1991), Australia



Source: For growth in employment by education requirement - Heath (2020) and Group of Eight (2019). For equipment specific technological change – Go8 calculations using ABS (2022d) national accounts data.

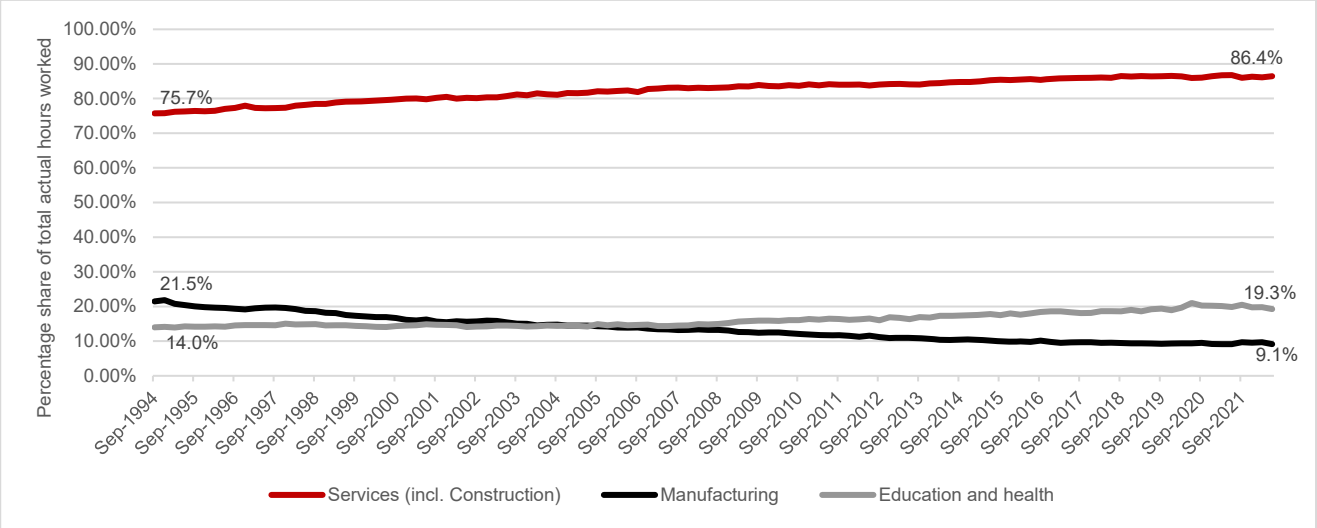
It is not only technology change that has resulted in relatively stronger demand for higher skilled people. Research by Burstein & Vogel (2017) highlight that reductions in trade costs reallocate factors of production such as labour to sectors of the economy that have a comparative advantage. This increases the skill premium in economies with a comparative advantage in skill intensive sectors as well as reallocating resources toward more productive and skill-intensive firms. Australia has undergone a long period of trade barrier reductions that has opened the economy to the forces of comparative advantage and made the economy more dynamic.

The continued relative rise of services-based jobs in Australia

Structural transformation is ultimately driven by relative price changes (which in turn is impacted by factors such a relative industry productivity) and non-uniform changes in demand associated with income growth. The relative growth of the services sector in Australia in terms of employment (total actual hours worked in the economy) has continued over recent decades as illustrated in Chart 5.

The chart shows that the services sector share of total hours worked in the Australian economy has risen from around 76 per cent in the mid-1990s to around 86 per cent in 2022. Education and health services (a subset of the overall services sector) has risen from 14 per cent to just over 19 per cent of total hours worked in the Australian economy. In contrast, over the same period, the manufacturing industry's share of total hours worked has more than halved, from around 21 per cent to just over 9 per cent.

Chart 5: The relative growth of services sector employment (hours worked) in the Australian economy (a)



(a) Total hours actually worked in all jobs. Services includes Australian and New Zealand Standard Industrial Classification (ANZSIC) industry divisions E to S. Education and health refers to ANZSIC industry divisions P and Q. Source: ABS (2022g).

Appendix C: Returns to university education in Australia

The significance of university education to individual prosperity (private returns) is evident in OECD (2022b) estimates for Australia of the relative returns to education by level of qualification (Table 3). For Australia, having a bachelor's degree or equivalent education is associated with earnings around 37 per cent higher relative to only having upper secondary school education. Having a master's, doctoral or equivalent education results in an estimated 49.6 per cent higher earnings relative to only upper secondary education.

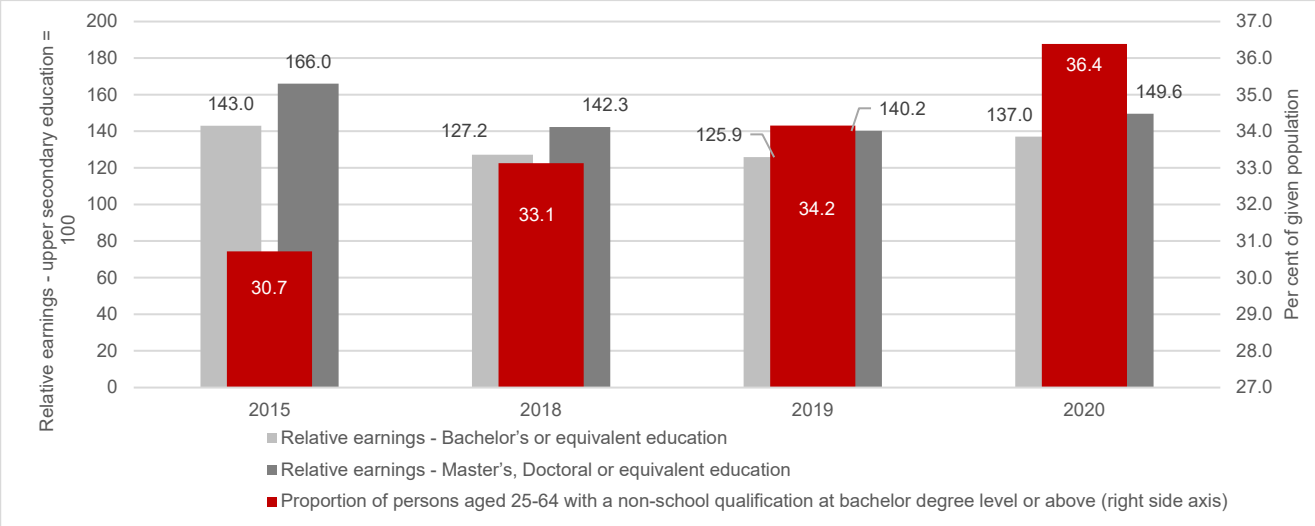
Table 3: Relative earnings – Australia (2020, 25-64 year olds, relative to upper secondary education = 100) (a)

Education level:	Relative earnings:
Bachelor's or equivalent education	137.0
Master's, Doctoral or equivalent education	149.6

(a) Full-time, full-year earners. Source: OECD (2022b).

The changes over time in relative earnings and the associated increased supply of people with a bachelor degree or above is illustrated in Chart 6.

Chart 6: Relative earnings over time Australia (25–64-year-olds, relative to upper secondary education = 100) (a) and increased supply of people with bachelor degree or above for same age group



(a) Full-time, full-year earners. Sources: OECD (2022b) and Australian Bureau of Statistics (2022e).

From a public policy perspective, what matters is the *net public returns* to additional education after accounting for subsidies provided by governments for individuals to invest in higher education. Table 4 shows the estimated public net benefits for Australia of attaining tertiary education (OECD, 2021). The figures show benefits of around 10 percent based on an internal rate of return, with benefit-cost ratios of around 4.

Table 4: Net public benefits to attaining tertiary education – Australia (2018) (a)

	Internal rate of return (per cent)	Public benefit cost ratio
Male	9.5	4.2
Female	10.5	4.0

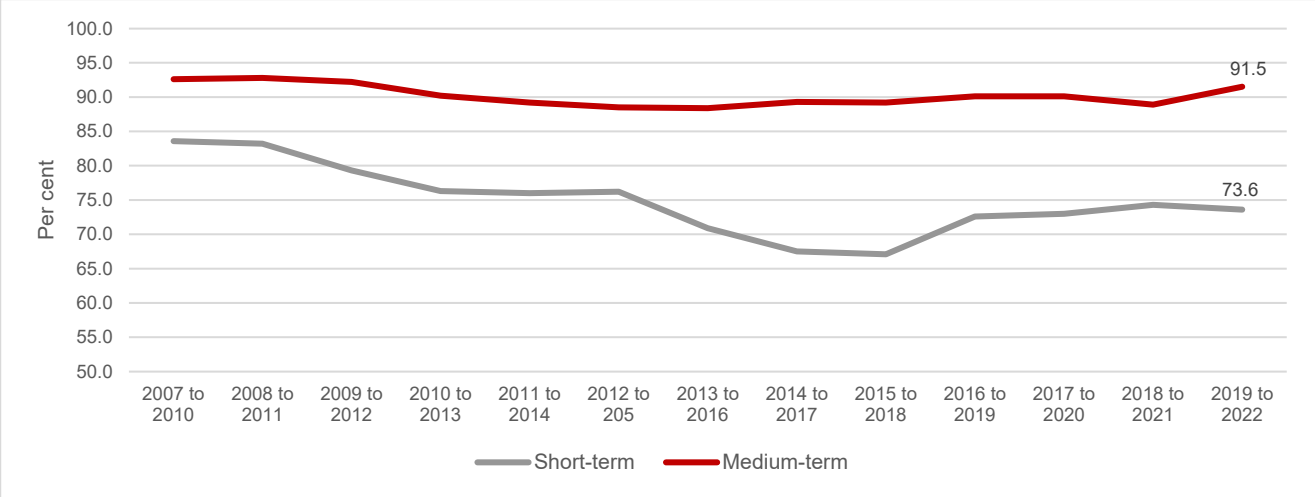
(a) As compared to a male or female attaining upper secondary education, in equivalent USD converted using PPPs for GDP; future costs and benefits are discounted at a rate of 2 per cent. Source: OECD (2021).

Appendix D: Higher education graduate outcomes and labour market transitions

The QILT *2022 Graduate Outcomes Survey – Longitudinal (GOS-L)* is a longitudinal survey of graduates from Australian higher education institutions around three years after completion of their studies. Using the 2022 and previous editions of the survey results provides insights into higher education graduate outcomes and labour market transitions for Australia.

Chart 7 drawn from the QILT surveys shows the short-term and medium-term full-time employment rates for cohorts of undergraduates from Australian higher education institutions. For the 2019 graduating cohort, 73.6 per cent were in full-time employment in the short-term, and in 2022 three years after completing their studies, 91.5 per cent were in full-time employment. This medium-term full-time employment rate remained relatively high for earlier cohorts back to 2007. In contrast, the short-term full-time employment rate for successive cohorts has declined somewhat.

Chart 7: Short-term and medium-term full-time employment rates for cohorts of undergraduates, per cent

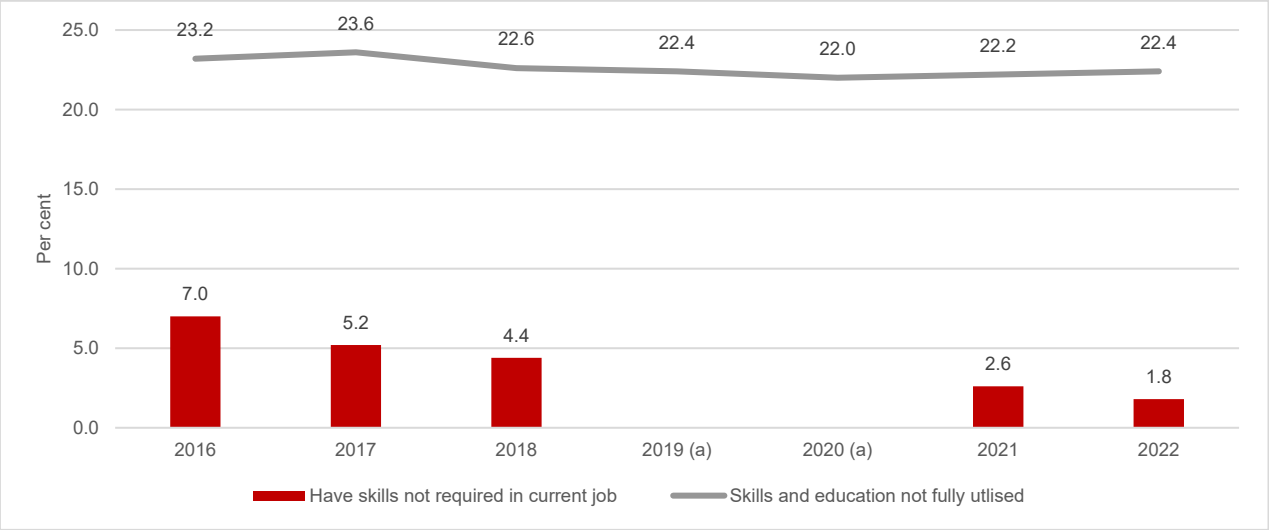


Source: Data from QILT (2022) and earlier editions of the *Graduate Outcomes Survey – Longitudinal* available at: https://www.qilt.edu.au/surveys/graduate-outcomes-survey---longitudinal-(gos-l)

Chart 8 drawn from the QILT surveys shows the percentage of undergraduates employed full-time that indicated they were not fully using their skills or education in their current roles three years after graduation (given by the line). This is compared to the percentage of graduates that indicated having skills that are not required in their current role as the main reason for working in a role that does not fully use their skills and education (given by the column).

The chart shows that for undergraduates employed full-time, the percentage that indicated they were not fully using their skills or education in their current roles three years after graduation has remained relatively steady over time. However, there has been a decline in the percentage of undergraduates employed full-time that indicated having skills that are not required in their current role as the main reason for working in a role that does not fully use their skills and education. This figure was 7 per cent in 2016 and declining to only 1.8 per cent in 2022 (figures for 2019 and 2020 were not available).

Chart 8: Non full utilisation of skills or education in current role and skills non-required as main reason, per cent, Australia



(a) Figures for 'have skills not required in current job' were not available for 2019 and 2020. Source: Data from QILT (2022) and earlier editions of the Graduate Outcomes Survey – Longitudinal available at: https://www.qilt.edu.au/surveys/graduate-outcomes-survey---longitudinal-(gos-l)

Table 5 drawn from the QILT surveys shows the labour market transitions of Australian higher education graduates as a percentage of their labour market status in the initial year. It shows that of those graduates that are initially unemployed, consistently around 50 per cent transition to be in full-time employment 3 years later. Around another 20 per cent of graduates that are initially unemployed transition to be in part-time employment 3 years later. The percentage that are unemployed 3 years after their graduation has remained in the mid to low teens. Only a very small percentage of graduates that are initially employed full-time are unemployed 3 years later, whereas the percentage of graduates that are initially employed part-time but are unemployed 3 years after is slightly higher.

Table 5: Labour market transitions of graduates as percentage of labour market category in initial year, per cent (a)

Transition years:	Unemployed to full-time employment	Unemployed to part-time employment	Unemployment to unemployment	Employed full-time to unemployed	Employed part-time to unemployed
2013 to 2016	52.0	21.8	16.8	4.0	7.8
2014 to 2017	56.0	19.8	16.1	3.7	4.2
2015 to 2018	54.9	20.7	15.4	3.6	7.0
2016 to 2019	56.0	20.6	15.2	3.2	5.9
2017 to 2020	51.1	22.5	16.6	3.2	5.5
2018 to 2021	49.1	24.4	16.4	3.9	7.5
2019 to 2022	53.2	23.6	13.5	2.9	6.0

(a) Transitions from/to not in the labour force are not included in this table. Source: Data from QILT (2022) and earlier editions of the *Graduate Outcomes Survey – Longitudinal* available at: https://www.qilt.edu.au/surveys/graduate-outcomes-survey---longitudinal-(gos-l)

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