

SUBMISSION TO THE SENATE EDUCATION AND EMPLOYMENT LEGISLATION COMMITTEE ON THE AUSTRALIAN RESEARCH COUNCIL AMENDMENT (ENSURING RESEARCH INDEPENDENCE) BILL 2018

25 February 2022

Universities Australia (UA) welcomes the opportunity to make this submission to the Senate Education and Employment Legislation Committee regarding the Australian Research Council Amendment (Ensuring Research Independence) Bill 2018.

UA is the peak body for Australia's 39 comprehensive universities. Our members are spread across Australia, in both regional and metropolitan areas. They educate about 1.5 million students each year and, employ over 130,000 people.

Our members undertake all university research in Australia, adding to the country's stock of knowledge, and economic and social wellbeing.

RECOMMENDATION

Universities Australia recommends the Senate supports amending the *Australian Research Council Act 2001* to remove Ministerial decision-making on individual research applications.

Universities Australia recommends that, if the Senate decides that Ministerial decision-making on individual research applications should continue, then a predictable, transparent and informed process be in place for those decisions.

INTRODUCTION

The ARC has been crucial to the development of Australia's reputation for conducting world class and often world leading research from discovery and fundamental understanding through to applied, implementable and translatable knowledge. That reputation has been built on a commitment to excellence, peer review, transparency of process, and accountability for use of public research funding.

Ministerial intervention into the operations of the ARC threaten the integrity of the research system and Australia's capacity to continue to be a significant contributor to the global research effort. Australian governments, rightly, have and do determine the priorities of funding schemes and criteria, however, where the process of allocating research grants is through a robust peer review system built on academic

expertise, governments ought not to exercise the capacity to intervene in the outcomes of the assessment process absent of evidence of a clear and compelling reason that can be defended publicly.

AN ADVANCED ECONOMY IS BUILT ON AN ADVANCED RESEARCH SYSTEM

Australian university research changes lives. It has led to changes in the law to better support those affected by family violence. It has improved road safety, crop yields and health outcomes. It has enriched our understanding of our own country, including Indigenous Peoples and values, and our capacity to interact meaningfully and productively with others.

Australian research has underpinned our country's response to the COVID-19 pandemic: working to sequence the virus, develop vaccines and to understand, advise on and respond to its social, economic and psychological impacts.

Universities make a significant contribution to Australia's national research effort. They undertake 36 per cent of all research in Australia (the eighth highest of OECD nations), perform 42 per cent of all applied research (compared with industry's 41 per cent), and 90 per cent of all discovery (basic) research – the curiosity that creates new knowledge, which benefits us all for decades to come.

AUSTRALIAN RESEARCH OPERATES IN A HIGHLY COMPETITIVE GLOBAL MARKET

Australia needs to develop, attract and retain the best researchers with the best ideas. Researchers are one of the most globally mobile occupations and global competition is intense. To illustrate, 72 per cent of active UK researchers have trained or worked in that capacity abroad,¹ according to a 2018 study by the RAND Corporation.

In 2018, global research and development (R&D) expenditure was \$US1.934 trillion, compared to Australia's R&D expenditure of \$US21.2 billion (2017) from all sources combined – only 1.1 per cent of the world's total expenditure.²

The top three countries/regions – the US, China and the EU28 – comprised 74.6 per cent of the total expenditure. The US spent \$US551.5 billion, or 28.5 per cent; China spent \$US462.6 billion, or 22.1 per cent; the EU28 spent \$US428.5 billion, or 22.1 per cent.

Reputation for excellence and fairness keeps Australia's research system competitive in the global hunt for talent. We cannot compete with the three major research regions on size of research spending, so we must compete on reputation: on being *the* place to pursue a research career, across a range of disciplines and career pathways.

AUSTRALIA HAS A WORLD-CLASS RESEARCH SYSTEM

Australia's research system, as confirmed by the Excellence in Research Australia (ERA) assessment exercise, ranks as one of the best in the world. It is in the interest of all Australians that it remains that way.

Ninety per cent of outputs assessed in the most recent ERA assessment were judged as world standard or above. A variety of international university rankings provide further evidence of the quality of individual universities and the entire Australian system.

The Australian system is built on excellence, transparency and accountability. Researchers applying to competitive grant agencies, here and around the world, need to know they can rely on the strength and

¹ Guthrie, Susan, Catherine A. Lichten, Jennie Corbett, and Steven Wooding, International mobility is important for the UK and UK researchers. Santa Monica, CA: RAND Corporation, 2018. <https://www.rand.org/pubs/infographics/IG132-1.html>.

² Main Science and Technology Indicators database. Prices are in constant 2015 prices and PPP.

quality of their ideas when their applications are assessed. At the ARC, all project applications are subject to a robust, detailed and globally respected quality assurance process that ensures only the highest quality applications are funded.

If Australia's reputation for maintaining a strong, fair research funding system is damaged, it is Australians who will suffer the loss.

BALANCE IS ESSENTIAL

Australia needs to maintain a balance across the types of research undertaken and the disciplines supported.

Without the fundamental insights and discoveries of basic research, there is no new knowledge to translate or commercialise. This fundamental, or 'blue-sky', research does not always fit easily into accepted short-term incentive frameworks, yet history repeatedly demonstrates the central role of basic, curiosity-driven research in driving prosperity and progress.

The opportunity to undertake basic research is an important motivator for a vital group of graduates pursuing careers as researchers. Some remain in academia; others enter and enrich industry. However, without that initial motivation we should expect far fewer to join, ultimately affecting Australia's creation of new knowledge and translation of that knowledge into commercial outcomes.

Government plays a vital role supporting curiosity in Australian research, providing long-term support for excellence in innovation and new knowledge, and trusting the advice of experts to identify that excellence.

Supporting curiosity across all disciplines is where Australian universities and the ARC excel, complementing the business sector's narrower focus on disciplines where outcomes can be more quickly commercialised. Australia needs the arts, humanities and social sciences - in academia and industry - just as much as it needs science, technology, engineering and mathematics.

Further, we should not as a nation fall for simplistic categories for academic discipline. New technologies and innovations present and pose questions for society as to how we as a nation understand, incorporate and respond to changes those technologies and innovations bring. For example, the ethical implications of artificial intelligence involves the application of both scientific and humanities disciplines.

THE RETURN ON INVESTMENT – EVERY DOLLAR SPENT CREATES \$5

Taxpayer investment in university research creates very real returns to Australia's economic and social wellbeing, and makes a considerable contribution to our country's global standing and competitiveness.

Modelling by Deloitte Access Economics estimates the total economic return on investment at \$5 in GDP for every dollar invested in higher education research.³

To maintain and grow these returns, we need to invest in the best ideas and the best people. It is a widely recognised principle of advanced economies - and their innovation and research systems - that a robust quality assurance system, overseen by domain knowledge experts, is the best way to ensure research excellence and the wise allocation of scarce public resources (often referred to as the Haldane principle).

³ Deloitte Access Economics 2020, *The importance of universities to Australia's prosperity*, A report to Universities Australia, Canberra.

The UK recognised this by enshrining the Haldane Principle in the *Higher Education and Research Act* in 2017. In Australia, an absence of accountability for decision-making threatens the integrity of research processes, respect for the ARC as an institution and the outcomes of Australian research.

GOVERNMENT AND THE RESEARCH SYSTEM

Without the discovery and translation of research into a myriad of applications - from products to processes and laws - humanity would be a shadow of its present self. It is a well-established public policy principle that the private sector alone cannot adequately capture the benefits of discovery research and therefore under-invests.

It is public institutions, such as universities, that do the heavy lifting of long-term basic research that diffuses into the economy to become the innovations that propel us forward. It is government investment in research that enables this process to happen.

Through judicious public and private investment, Australia has been able to create one of the premier higher education sectors in the world, excelling in both public and applied research. Australian universities undertake 42 per cent of applied research in Australia. Next to universities, the ARC is by far the most significant funder of non-medical research in Australia, particularly in discovery research.

Government ultimately decides its level of investment and, given it is made on behalf of the public, it is reasonable for government to be involved in identifying overarching priorities and setting parameters. However, experts trained to identify excellence in applications should make the decision about funding at the individual project level to maximise the return on investment to Australians.

In his December 2021 letter of expectation, the Minister for Education details a significant change in the architecture of the ARC's research granting system.

It is in the nation's interests that Australian and international researchers, industries and communities have confidence in the awarding of Australia's nationally competitive research grants. Peer review delivers this confidence. Without this, Australian research loses credibility and therefore, competitiveness.

For these reasons, UA strongly supports extensive consultation with researchers and the university sector, to ensure we maintain confidence in Australia's granting system and that excellence underpins every decision in that system.

CONCLUSION

UA will continue to engage with Government and others to ensure the integrity and purpose of the ARC, so that Australians can have full confidence in the decisions being made to advance the nation through its research.