SUBMISSION ON RESEARCH BLOCK GRANT REFORM – UNIVERSITY AND INDUSTRY COLLABORATION

31 May 2022

Universities Australia (UA) welcomes the opportunity to make a submission to the Department of Education, Skills and Employment consultation on proposed reforms to the Research Block Grant (RBG) funding framework.

UA is the peak body for Australia's 39 comprehensive universities. Our member universities are spread across Australia in both regional and metropolitan areas. They educate more than a million students each year, undertake all of the university research in Australia and engage globally to add to the country's stock of knowledge, as well as Australia's economic and social wellbeing.

RECOMMENDATIONS

Universities Australia recommends that:

1. the proposed change to the research block grant not proceed;
2. government work with the university sector to identify how best to support and provide incentives for research commercialisation without diluting the crucial functions of the research block grant, in particular support for basic research and the indirect costs of research;
3. research translation that does not have a commercial outcome also be considered as part of the discussion, without again diluting the core functions of the research block grant; and
4. government urgently review public support for business R&D, and consider increased strategic focus for this spending, with a rebalance away from indirect to direct support.

PROCESS

This consultation affects the distribution of $2B annually, and has a flow-on effect to national competitive grant projects, students undertaking higher degrees by research and the capacity of universities to support the indirect costs of research. UA strongly supports a thoughtful and consultative policy development process.

THE PURPOSE OF THE RESEARCH BLOCK GRANT

The research block grant is divided into the Research Support Program and the Research Training Program. Each is designed for a specific purpose, whilst providing flexibility for universities in how those purposes are achieved.

The Research Training Program (RTP) provides stipends to postgraduate research students at Masters and PhD level, and provides funds with which universities support the activities of research students.

The purpose of the Research Support Program (RSP) is outlined in the University Research Commercialisation Action Plan as well as a range of other documents:

> "The RSP supports the systemic costs of research at Australian universities that are not supported directly through competitive and other grants, such as libraries, laboratories, consumables, computing centres and the salaries of support and technical staff. RBG funding ensures that universities receive support for basic research, feeding high-quality and innovative research into the research pipeline."[1]

The Action Plan goes on to say:

> "Because RBG funding is flexible, it can be invested in the translational and commercialisation phases of R&D." [2]

The flexibility built into the research block grant program should not be used to dilute its core function. The question we should be asking is not can the funding be diverted, but should it be, and would such a change serve the policy intent? The funding and capacities are finite. A diversion of scarce resources from their purpose of support and training risks undermining not only the core functions but any other policy objectives.

Supporting the indirect costs of research is one crucial function of government. Introducing and supporting policy priorities such as research translation and research commercialisation is another. It is not possible to serve both ends from the same set of resources.

Universities Australia agrees that research translation and commercialisation are important activities. The Government has been clear about their policy priorities and the value it would like these activities to bring to Australia. Given this, UA submits that the policy needs to be appropriately resourced to support its ambitions.

FUNDING FOR UNIVERSITY RESEARCH AND DEVELOPMENT

Australian universities are a critical actor in the Australian research landscape. Despite the pressures of the pandemic, higher education expenditure on research and development (HERD) increased 4 per cent, from $12.2 billion in 2018 to $12.7 billion in 2020.

However, this was the slowest biennial growth since 2004. HERD as a proportion of GDP decreased from 0.62 per cent in 2018 to 0.61 per cent in 2020.

In 2020, 53.1 per cent of university spending on research and development (R&D) was funded from internal university resourcing, down from 56.1 per cent in 2018. Australian Government grants accounted for 30.7 per cent of spending. The remaining 16.1 per cent of HERD was funded from other funding sources, including state and local governments, business, donations and other domestic and international sources.

[1] University Research Commercialisation Action Plan, p. 75

[2] Ibid.

Universities now perform 90.1 per cent of pure basic research and 45.3 per cent of all applied research in Australia while businesses perform 38.9 per cent of all applied research.

Australian universities are pulling their weight in the Australian research landscape, ensuring the start of the innovation pipeline is primed through basic research, and undertaking a higher proportion of applied research than businesses.

But the most recent R&D expenditure figures show that internal university resourcing is under pressure. Furthermore, in the broader context, under the Job-ready Graduate reforms, research is no longer an eligible activity to be funded from the Commonwealth Grants Scheme.

An understanding of this context, one of already shrinking resources and increasing pressures on university revenues, makes it clear that putting additional pressure on the research block grant is not sustainable.

RESEARCH SUPPORT PROGRAM FUNDING SINCE 2001

The change in policy and formula is founded on an assumption that the research block grant is sufficient to support the indirect costs of research and research commercialisation.

This is clearly not the case. In 2001, the RSP (or its predecessors) provided 71c for each dollar of Australian Government Competitive Grant Program (NCGP) funding that a university won. In 2020 that had dropped to the RSP providing 47c for each dollar of NCGP funding.

In 2001, the RSP (or its predecessors) provided 54c for each dollar of public sector funding. In 2020 that had dropped to the RSP providing 33c for each dollar of NCGP funding.

These figures demonstrate that universities are digging deeper into General University Funds to meet the cost of supporting research grants.

RBG funding has not kept up with the increase in the costs of supporting research. These funds cannot be stretched further without further negative impacts on the nation's research capacity and research workforce.

RESEARCH BLOCK GRANT FUNDING AND NATIONAL COMPETITIVE GRANTS

The RBG is a key pillar of our research funding system, working in concert with the three major granting agencies, the Australian Research Council, the National Health and Medical Research Council, and the Medical Research Future Fund. The three granting agencies rely on universities having the financial capacity to underpin the costs of their research programs using the RBG and university resources.

UA notes that the University Research Commercialisation Action Plan allocated $296 million over 10 years for 1,800 Industry PhDs and over 800 industry fellowships. The Industry Fellowships (administered by the ARC) and additional higher degree by research students will require indirect (and perhaps direct) support from universities– support that the research block grant is designed to provide, placing yet more demands on those limited funds.

In 2020 dollar terms, while National Competitive Grants Program funding increased 163 per cent between 2001 and 2020, over the same period the total research block grant increased 33.2 per cent, and the RSP component increased 72.5 percent. This further demonstrates the pressure on the research block grant to support the costs involved when a university wins funding through national competitive grant programs.

Even with a slowing down in the growth of NCGP in the decade 2010-2020, in 2020 dollar terms the NCGP increased 26.5 per cent, while the total block grant increased 13.6 per cent, and the RSP component increased 20.8 per cent in that time.

While universities have stepped in to fund this gap, there are diminishing incentives to seek NCGP funding if it cannot be matched by universities from other sources. This means fewer research proposals can be supported, shrinking the supply of ideas that fuels the system.

EFFECTS OF RECENT POLICY INITIATIVES

A number of changes have been made to the research block grant formulae in recent years, and data strongly suggest these have led to increased collaboration between industry and universities – the intended effect.

The Watt Review recommendations that aimed to simplify arrangements for research support and increase incentives for business and other research-end user engagement have only recently been fully implemented, following the transition phase and adjustments during the first year of the pandemic.

The added weighting for Higher Degree by Research completions that include an industry internship is only just being introduced.

Businesses are increasingly valuing the research undertaken in universities. It is notable that funding from business for university research and development rose 15.5 per cent in two years, from $522M in 2018 to $603M from in 2020.

This increased funding for research flowing into universities from business strongly suggests that these incentives to increase collaboration are having an effect.

Australian universities sourced 5.49 per cent of their funding for R&D from industry, placing them 15th in the OECD in 2019. This compares to the US at 5.49 per cent (similar to Australia), the UK at 3.99 per cent, Canada at 7.99 per cent and Israel at 5.62 per cent.[3] Countries with strong manufacturing sectors generally have a higher share, with South Korea at 14.33 per cent (first) and Germany at 13.56 per cent (second).[4]

However, there has been no formal review of the impact of changes already made to research block grant formulae, particularly whether they are increasing the pressure on the ability of the research block grant to support indirect costs of research and research training. It would be good practice understand the impact of changes already introduced, that have a similar policy intent as the next raft of proposed changes, to see whether further adjustments are in fact warranted.

PUBLIC GOOD AND EXCELLENCE NEED TO BE VALUED

UA holds concerns for public good research under the changes outlined in the paper. The paper outlines a reduction in the RBG earned from research funding received from government, whether through competitive or other programs. From agriculture to defence, from social services to health – universities are at the forefront of research that needs to be done in the public interest. The outcomes of this research save governments and taxpayers billions each year through non-commercial applications of knowledge. This research is as important as research that leads to cash returns.

Public good research changes people's lives and, often, assists Government in saving resources by changing behaviours. From learning to place babies on their backs to sleep reducing the incidence of SIDS, to working with communities to accept mask wearing as a key control measure during the COVID-19 pandemic, public good research has not only saved lives, but has provided the evidence for advice that reduces pressure on public resources.

[3] OECD 2022, Main Science and Technology Indicators database, accessed 10 May 2022. The Australia data is 2020 as the previous release was 2018, whilst the other countries are 2019. Most OECD countries have not reported 2020 data.

[4] Note - this measure is not appropriate as a measure of industry collaboration as it effectively penalises success in other sources of funding (e.g., international student income).

THE UNIVERSITY RESEARCH COMMERCIALISATION ACTION PLAN PACKAGE

The University Research Commercialisation Action Plan contained a large number of policy changes all designed to increase industry and university collaborations and the commercialisation of university research. These include:

- establishing Australia's Economic Accelerator;
- expanding the Main Sequence Venture Fund;
- introducing the Trailblazer Universities Program;
- making changes to university research block grant formula;
- changing the Australian Research Council's programs;
- changing the National Collaborative Research Infrastructure Strategy;
- revising incentives for university researchers;
- addressing intellectual property management; and
- building workforce capacity within universities.

Universities Australia welcomes the investment through Australia's Economic Accelerator, the Main Sequence Venture Fund and the Trailblazer Universities Program. However, UA is concerned that an over-emphasis on adjusting policy settings to encourage research commercialisation, particularly through further changes to the research block grant, will lead to outcomes that are not good for Australia's medium and long-term economic and social development.

As noted above, the Government acknowledges that the "RBG funding ensures that universities receive support for basic research, feeding high-quality and innovative research into the research pipeline."

Australian universities undertake 90 per cent of Australia's fundamental research. However, the 2020 ABS Higher Education Research and Development data show that, while applied research increased by 14 per cent in comparison to 2018, and strategic basic research increased by 4 percent, pure basic research recorded a decrease of 11 per cent.

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.

Without an Australian pipeline of basic research, we become ever more reliant on overseas sources just as Australia is focussing heavily on our sovereign capabilities due to the nation's changing strategic circumstances.

It would be unhelpful if there is so much policy focus on one aspect of the research and development pipeline that the pipeline becomes unbalanced. National competitive grants and the research block grant are important supports for basic and applied research. While the consultation paper says government values basic and applied research, it is contradictory to then recommend diluting the research block grant funding available the indirect costs of research.

UA agrees that research collaboration with industry, and research commercialisation are important activities, but they are part of an ecosystem. We are concerned that too many policy levers are being pulled all at once, in the service of one part of the system, to the detriment of the national R&D effort and benefits it delivers to the communities we all serve.

A FOCUS ON BUSINESS

As UA notes in its submission to the Productivity Commission, when the research system works at its best, the key research performing entities of industry, government, higher education and the private non-profit sectors both complement and mutually reinforce each other.

The R&D Tax Incentive (RDTI) scheme has been promoted as the flagship operation of Australian Government innovation efforts for many decades, aiming to promote business innovation through the offering of a tax offset[5] for eligible companies. In 2019–2020, Government provided $2.7 billion[6] of support to industry through the Research and Development Tax Incentive (RDTI).

UA contends that it is time for Government to apply a much higher level of attention to the taxpayer support provided for business R&D in order to provide policy coherence across the research landscape.

With 86 per cent of Australia's current innovation-focussed investment filtered through the R&D Tax Incentive mechanism, Australia sits apart from peer nations in its singular focus on tax incentives as a mode of stimulating R&D.[7]

In its submission to the University Research Commercialisation taskforce, Universities Australia highlighted multiple direct R&D funding initiatives that the Government could adopt or scale up, to boost Australia's innovation and productivity, and strongly recommends that these be considered in the Australian R&D landscape, including:[8]

- Consider the strategic balance approach to investment articulated in Industry, Innovation and Science Australia's advice to Government.
- Adopt a nationally cohesive approach that leverages state-based R&D and innovation initiatives.
- Focus on demand-side incentives for business as it may be more effective in stimulating research commercialisation.
- Investigate the scaling and optimisation of the current Business Research and Innovation Initiative (BRII) program.
- Investigate the introduction of a Small Business Technology Transfer (STTR)-like program.
- Enhance the matching of R&D supply and demand in SMEs by introducing a technology vouchers scheme like that practiced in NSW.
- Mission-driven activity should be appropriately linked to demand, including existing and emerging Australian industry. Connecting mission-based activity to the Modern Manufacturing Strategy should be investigated. Mission oriented innovation policy involves the selection of a societal challenge on which to focus effort. The clustering of research and industry towards shared goals is an effective way of linking research with demand. A recent example of this is the Australian Government's Clean Hydrogen Mission, announced in June 2021.
- Investigate the introduction of a technology transfer network like the German Steinbeis system, in addition to conducting a scan of the system of Australian technology transfer.
- Reinstate the robust measurement by Government of research commercialisation across the entire research sector to provide accurate, quality data on a policy objective of this importance.

[5] Set at a 43.5 per cent refundable and 38.5 per cent non-refundable tax offset for businesses with aggregated annual turnovers below and above $20 million AUD respectively.

[6] Australian Government, Science, Research and Innovation (SRI) Budget Tables, 2021-2022.

[7] Direct government funding and government tax support for business R&D, 2018 and 2006, OECD R&D Tax Incentive Database, http://oe.cd/rdtax, December 2020.

[8] UA submission can be accessed at: https://www.universitiesaustralia.edu.au/wp-content/uploads/2021/04/UA-Submission-Uni-research-commercialisation.pdf

CONCLUSION

Given the important role that the research block grant has in Australia's research landscape, the quantum of funding involved, and the number of policy initiatives already in place or being proposed, UA does not support the changes proposed in the consultation paper.

UA would welcome a more thorough examination of potential policies to support universities in developing further their research commercialisation capabilities, whilst also supporting the essential public good translation that also contributes directly and indirectly to Australia's economic development.