

SHAPING THE NATION

Australia must prepare today for tomorrow's challenges - from climate change and social well-being to technological adaptation and an evolving economy. For policymakers to do this, they must have consistent access to the best research and knowledge from the social sciences in addition to that from the humanities and arts (HASS), as well as science, technology, engineering, and maths (STEM).

Historically, Australia's policymakers have done this very successfully, using social science research in the development and implementation of some of Australia's great programs - including compulsory superannuation, HECS, parental support systems, Medicare, crime prevention, disability support, and the immigration points system. This is to name only a few social science innovations which have contributed greatly to the prosperity of the nation.

The Academy of the Social Sciences in Australia calls on the next Government of Australia to redouble its commitment to support the social science research which underpins policy development, and the connection of research with policymakers.

We have identified FIVE steps to achieve these goals.

PROPERLY INVEST IN HIGHER EDUCATION AND RESEARCH

Australia's higher education and research system performs very strongly. This is despite being underfunded relative to comparator OECD countries. Australia invests 1.88% of its GDP in research and development - by contrast, the OECD average is 2.4%, and the OECD best practice frontier is 3%.

Australia risks underinvestment in research, which is an essential foundation for economic and social progress. Enhancing overall research support has a multiplier effect on the economy, extending knowledge infrastructure, promoting technological innovation, and creating skilled jobs. Research overall currently pays a real return on investment of around 20%. Improving the university ecosystem as a whole has natural flow on positive effects for education and graduate capacity. All parts of the education network need proper support by public funds.

Increase overall research investment by committing to clear steps towards lifting Australian research and development investment from its current low rate of 1.88% of GDP to match the OECD average of 2.4% by 2025, with the longer-term specific goal of reaching the current OECD best practice frontier of 3% by 2030.

2

IMPLEMENT INNOVATIVE POLICY FOR RESEARCH FUNDING

There are limited direct linkages between government funded research and industry in Australia. The best policy ideas offer ways to address this, including through the use of income contingent loans to promote research and development. This scheme would provide loans to start-ups, requiring industry-university collaboration for funding, and ensure a return to the public purse from the investment made—not only from general economic uplift, but also from direct loan repayment, should the enterprise be commercially successful.

Linking the scheme to well-managed organisations in the form of universities ensures proper selection procedures and financial oversight. It also provides a mechanism for mentoring and assistance. This instrument could be implemented during a time of budgetary restraint, while at the same time enhancing financial sustainability for the future.

Implement an income-contingent loan scheme for universitybusiness research and development partnerships.

3

INVEST IN SOCIAL SCIENCE DATA INFRASTRUCTURE

Industry, community organisations, and government all require good quality data and research to deliver their missions. The social sciences are responsible for a large amount of this data collection and research, and this has been expanded with the integration of artificial intelligence and emerging technology. The economic value of open data in Australia is estimated to be \$64 billion.

Australian data infrastructure is desperately in need of increased support - it is insufficiently funded and does not have the capability to handle the anticipated data quantities of the future. Hand in hand with better infrastructure is the necessary training in data analysis, research ethics, and legal frameworks necessary for researchers to access and use data in an ethical way. To sustain the infrastructure underpinning this research, adequate investment is crucial.

Support and develop integrated Humanities, Arts and Social Sciences data platforms with effective and supported researcher access, and comprehensive legal and ethical research training.



STABILISE RESEARCH FUNDING

Universities require a stable and predictable policy and funding environment to flourish and produce their best research and education. Absent this stability, universities cannot be ambitious and innovative in their research, given the long-term nature of university research and training.

This stability has historically existed, and changes have been sufficiently evolutionary in the past. This led to the well-documented excellent performance of Australia's higher education and research system. However, a recent trend of ad hoc policy changes and funding cuts have had the blanket adverse unintended consequence of undermining this stability. This has eroded the confidence of researchers and institutions, and in turn undermined the preconditions for good research.

Recent cuts to the Research Support Program have kicked the ladder out from under good inquiries and threatened the most ambitious 'blue sky' research. Cuts to the Higher Education Participation and Partnerships Program (HEPPP), Australia's flagship program for low SES accessibility, have been repeatedly taken despite the program's exceptional success and popularity. Unreliable career prospects have seen only minimal increases to the number of Australian domestic doctoral candidates in recent years.

Restore all funds cut from the Research Support Program and commit to a robust long-term framework for research funding, in order to protect the university ecosystem from external disruption and enable it to focus internally on producing its best and most innovative research.

IMPROVE RESEARCH FUNDING METRICS

Good research funding policy and processes rely on the ability to measure the real effect research has in the world. Public funding is allocated on the basis of these measurements, so designing the right research and innovation metrics is crucial.

Substantial research and knowledge regarding the proper evaluation and quantification of the impact of innovation—both technical and social—is a key social science skill. The best and most advanced metrics developed out of this research are more accurate than commonly used aggregate input metrics, such as total grants received. Metrics relating input cost to simple output measures, such as cost-per-publication or cost-per-citation, fare only slightly better. Partial metrics that look to measure outcomes beyond narrow outputs, such as cost-per-patent for related sciences, provide moderately improved accuracy.

But in the last analysis, these still fail to accurately measure the true impact of research on society and fall well short of the full public value metric we wish to see used in this area. We suggest a public value metric which accounts for economic, environmental, and social impact, as well as properly accounting for distributional impacts. Such a public value metric could be applied across all the social science, humanities and arts, and science and technological fields.

Examine the best methods for demonstrating the social and economic benefits of innovation and develop a full public value metric for use in research funding administration.

ASSA's submissions on a number of these issues can be found at: https://www.assa.edu.au/category/submissions/

Read more about how the Social Sciences Shape the Nation at: https://www.assa.edu.au/publication/the-social-sciences-shape-the-nation/

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