Submission to the Strategic Examination of Research and Development (SERD) in Australia[1]

Frederik Anseel, Marc de Cure and John Piggott

Introduction The Australian economic, social, and commercial environment significantly influences the research and development (R&D) landscape. The funding structures, institutional frameworks, and commercial viability of R&D in Australia present both opportunities and constraints. Given the size and composition of Australia's economy, the role of social sciences within the R&D ecosystem is critical. International perspectives highlight how strategic investment in social sciences enhances policy formulation, economic resilience, and societal well-being.

R&D investment, especially public R&D investment, is thought to be strongly associated with productivity growth, with follow-on impacts on per capita income. The exact mechanisms are not clear and disaggregation often produces different hypothesised linkages in different countries. But the idea of a strong connection is robustly supported. Productivity growth in Australia has remained stubbornly low for more than a decade and is a major concern among policy economists.

It is convenient to begin with three observations:

- Australia's reputation in scientific research, where we clearly pull above our weight globally, is critical and enhances our reputation for cutting edge research. But research addressing issues in Australian policy and society will not be carried out *at all* unless through Australian institutions, and mostly, with Australian research support. Many of our institutions are unusual and require specific analytic attention. Migration and retirement income policy are just two examples.
- In 2024, in terms of national competitive research funding, the NHMRC committed over $512.7 million for health and medical research. The MRRF has indicatively committed $6.5 billion over the next decade. Crudely annualising this yields about $600 million for 2024. By contrast, the ARC paid out $718.1 million in grants in 2024, of which only 20% was directed to the Humanities and Social Sciences. IT, especially the rapidly growing AI sector, and Actuarial Science, provide two examples where research support in the Social Sciences could lead to R&D innovation
- Research investment supporting R&D should be aligned with its potential contribution to the economy and society more broadly. It also needs to have regard to the areas of greatest need, for instance, where there are imperfections or gaps in Australia's current research and development. These imperfections can arise due to lack of knowledge and/or experience, the distributed nature of startups, and the scarcity of available funding for high-risk early-stage startup ventures. Startups often face strong oligopolistic markets and vertical integration of larger players, and lack of access to distribution and markets.

[1] This submission was prepared with the assistance of CHATGPT.

This submission addresses key consultation questions with a focus on the social sciences and their role in advancing Australia's R&D capacity.

1. What should an integrated, sustainable, dynamic and impactful Australian R&D system look like?

A successful Australian R&D system should:

- Support a diverse and balanced research ecosystem, incorporating fundamental, applied, and translational research across disciplines, including the social sciences.
- Encourage strong linkages between universities, government, industry, and communities. We need strong two way engagement between industry and researchers to inform research direction and disseminate knowledge
- Maintain international competitiveness, with investment levels aligned with OECD counterparts.
- Provide sustainable and predictable funding mechanisms to enable long-term research planning.
- Integrate social science research to inform public policy, social innovation, and business strategies.

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2. What government, university, and business policy settings inhibit R&D and innovation, and why?

Several policy settings create barriers to effective R&D in Australia:

- **Fragmentation of funding and governance**: The current diffuse system of R&D funding, as highlighted in the SERD discussion paper, limits coherence and strategic focus.
- **Limited industry collaboration incentives**: Australian businesses lack strong incentives to invest in R&D partnerships with universities.
- **Short-term funding cycles**: The focus on immediate returns rather than long-term research impacts discourages foundational research, particularly in the social sciences.
- **Regulatory barriers**: Compliance requirements for R&D investment can be overly burdensome for small businesses and startups, limiting their ability to engage in innovation.

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3. What do we need to do to build a national culture of innovation excellence and engage the public in R&D as a national priority?

A culture of innovation can be fostered through:

- **Public awareness campaigns**: Australia could more intensively highlight success stories to build public support for R&D.

- **Stronger integration of research in education**: Encouraging research engagement at earlier stages in education, from secondary schools through to undergraduate programs.
- **Industry-university-government collaboration**: Creating national programs where industry leaders mentor students and early-career researchers.
- **Showcasing social science impact**: Demonstrating how research in economics, sociology, psychology, and political science directly benefits Australian society and business.

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4. What types of funding sources, models, or infrastructure are currently missing or should be expanded for Australian R&D?

Key areas for improvement include:

- **Expanding interdisciplinary funding**: Dedicated funding pools to support collaborations between disciplines, including between social sciences and STEM disciplines.
- **Incentivising philanthropic contributions**: The United States' model of charitable research endowments could be adapted to boost Australian research funding.
- **Enhancing social science research infrastructure**: As highlighted in the Decadal Plan for Social Science Research Infrastructure, Australia needs better access to linked data and analytical tools.
- **Supporting startup engagement in R&D**: Expanding grant programs targeted at small businesses that integrate social science research into product and service innovation.

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5. What changes are needed to enhance the role of research institutions and businesses in Australia's R&D system?

To enhance the role of these entities, Australia should:

- **Strengthen university-industry partnerships, through facilitating two way engagement to crystallise issues that will yield benefits from research, and then** encouraging co-investment models where businesses directly fund university-led research.
- **Support R&D in startups**: Creating more flexible grants and tax incentives tailored to smaller companies engaging in R&D.
- **Improve researcher mobility**: Facilitating cross-sector employment pathways to embed researchers in industry settings.

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6. How should Australia support basic or 'discovery' research?

Basic research is essential for long-term innovation. Strategies include:

- **Increasing long-term funding**: Aligning with the model used by the European Research Council, which provides stable multi-year grants for foundational research.
- **Encouraging interdisciplinary discovery research**: Supporting projects that bridge social sciences and natural sciences.
- **Protecting academic freedom**: Ensuring research funding policies do not disproportionately favour applied research at the expense of theoretical advancements.

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7. What should we do to attract, develop, and retain an R&D workforce suitable for Australia's future needs?

To build a resilient R&D workforce, Australia should:

- **Improve career stability for researchers**: Offering more long term research positions and reducing reliance on short-term contracts.
- **Expand postdoctoral funding schemes**: Providing targeted grants for early-career researchers to establish independent research programs.
- **Enhance international talent attraction**: Competitive visa policies to attract top researchers globally
- **Develop exchange programs** to allow Austrlaian based researchers to build international networks
- **Develop training programs in emerging fields**: Addressing skills gaps in data science, AI, and policy-relevant social sciences.

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8. How can First Nations knowledge and leadership be elevated throughout Australia's R&D system?

First Nations knowledge should be embedded through:

- **Dedicated funding for Indigenous-led research**: Ensuring that research led by Indigenous scholars receives adequate support.
- **Integration of Indigenous methodologies**: Recognizing and valuing Indigenous knowledge systems in research assessment frameworks.
- **Strengthening Indigenous data sovereignty**: Ensuring Indigenous communities have control over how their data is collected and used.
- **IP Control of traditional knowledge:** allowing increased autonomous control over this domain

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9. What incentives do business leaders need to recognise the value of R&D investment and build R&D activities in Australia?

Business R&D investment can be incentivized through:

- **Tax credits and subsidies**: Expanding R&D tax incentives for companies that invest in university partnerships.
- **Showcasing the ROI of research collaboration**: Demonstrating the economic benefits of research partnerships through case studies and success stories.
- **Supporting venture capital for research-driven startups**: Ensuring funding mechanisms exist for companies that commercialize research findings.

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10. What should be measured to assess the value and impact of R&D investments?

Metrics should go beyond economic returns and include:

- **Social impact indicators**: Evaluating contributions to policy, education, and workforce development.
- **International competitiveness benchmarks**: Measuring Australia's research outputs against global leaders.
- **Industry engagement metrics**: Tracking research commercialization and business collaboration levels.
- **Longitudinal studies on R&D outcomes**: Assessing the long-term benefits of research investments.

Conclusion

Australia's R&D system must embrace a more integrated and holistic approach, ensuring that social sciences play a pivotal role in shaping research priorities and informing innovation. Learning from international models, strengthening funding mechanisms, and investing in research infrastructure will enable a more dynamic and responsive R&D landscape. By aligning research efforts with societal needs, Australia can enhance its global competitiveness while addressing pressing national challenges.

Author bios:

Frederik Anseel is the Dean of UNSW Business School. He is also a Professor of Management and has held several senior leadership positions at UNSW Business School. Previously, Frederik was Vice Dean at King's College London, Head of Department at Ghent University (Belgium) and held visiting positions at ESSEC Business School (France), Bocconi University (Italy) and University of Groningen (The Netherlands). He is an elected Fellow of the Academy of Social Sciences in Australia, the Society for Industrial and Organizational Psychology, and the International Association of Applied Psychology. He also served as the President of the European Association of Work and Organizational Psychology for five years.

Frederik studies how people and organizations learn and adapt to change. His research has been published in leading journals such as Journal of Applied Psychology, Journal of Management, American Psychologist, and Psychological Science. His work has also been featured in media such as Harvard Business Review, Science, Nature, the Financial Times, the Australian Financial Review, and The Guardian.

Frederik has several years of industry experience by founding and managing a university spin-off, The Vigor Unit. Through keynotes, executive education and consultancy, he contributed to leadership development initiatives in a variety of industries such as banking, healthcare, consulting, government, energy management, and manufacturing and he has worked with executives in these industries in some of the leading business capitals in the world. Since 2021, Frederik has been recognized by LinkedIn as one of the "Top Voices" to follow on their platform for insights on Work & Careers.

Marc de Cure is uniquely placed to comment on business strategy and investment practises and research and development within the university context. During his career as a professional services partner with Coopers & Lybrand /PwC advising clients on M & A, capital raising, business strategy and performance improvement. He has held. Senior executive roles Including executive general manager AMP Diversified Businesses, Chief Financial Officer AMP group, executive vice president and CFO AIA group and non-executive roles an independent director of the Zurich Australia Financial Services group and MQA infrastructure investment group. He has been an Adjunct Professor at the Business School, University of NSW since 2015, Chair of CEPAR's Advisory Board since 2010 and a member of the UNSW Business School's Business Advisory Council since 2001. Marc was instrumental in establishing CEPAR, being a champion of its highly successful 2-way engagement model and translation of research to drive impact. He has advised Deans and the CEPAR's Director on business practices, branding, and strategy.

John Piggott is Director of the Centre for Population Ageing Research (CEPAR) at the University of New South Wales, where he is Scientia Professor of Economics. A former Australian Professorial Fellow, he has published widely on issues in retirement and pension economics and finance, and in public finance more generally; his research has appeared in the leading international economics and actuarial academic journals. He is currently Associate Editor of the Journal of the Economics of Ageing.

John worked with the Japanese government for nearly a decade from 1999 on pension and population ageing issues. He has undertaken consultancies and contract research for a range of foreign governments and international organisations, including Russia, Indonesia, the World Bank, the Asian Development Bank, and UNESCAP. From 2008-2010 he was Visiting Scholar at

the Wharton School of Business, and in 2018, was awarded a Rockefeller Residency to undertake research into ageing and inequality in Asia.

In 2019, he was appointed co-chair of the Think20 (T20) Task Force on Aging Population during Japan's G20 Presidency, and from 2019 to 2022 was a Commissioner on the US National Academy of Medicine's International Commission on Healthy Longevity. He jointly led the establishment of the International Pension Research Association (IPRA) which was launched at the OECD in Paris in 2019. At a national level, he was a member of both the Henry Tax Review (2008-9) and the Australian Ministerial Superannuation Advisory Committee for 5 years from 2007. Professor Piggott is appointed an Officer of the Order of Australia (AO) in the 2020 Australia Day Honours List for his distinguished service to education, to population ageing research and to public finance policy development.