ISSUES PAPER: Incentivising business investment in R&D

July 2025

The Australian Academy of Science is calling for an urgent national conversation on R&D investment in Australia.

Australia's persistent underinvestment in R&D threatens our productivity, limits wage growth, threatens our standard of living, and weakens our ability to respond to global volatility. These threats have consequences for every member of society.

This issues paper makes the case for investment in the underpinnings of an Australian future that is flourishing, fair and secure.

A boost in government investment in R&D is an essential part of the solution to Australia's productivity decline. However, government R&D investment alone is not enough. Persistent and long-term underinvestment in R&D by the business sector needs to be addressed.

We propose incentivising large business R&D investment by applying either a 0.25% or 0.5% R&D levy to businesses with annual revenue of $100 million or more that can be discounted if businesses invest in R&D. We propose that the levy revenue be invested as a Research Future Fund and its returns invested in research.

The measure rewards those businesses that invest in R&D, incentivises those that don't, and grows the pool of funds available for investment in research to maintain the wellspring of innovation needed to keep the R&D system – including businesses – healthy, productive, and delivering for all Australians.

The fact sheet (page 10) provides independent economic analysis of the measure and outlines its impact.

Why invest in research?

Without knowledge no nation can govern its economy, manage its environment, sustain its public health, produce goods or services, understand its own history, or enable its citizens to understand the circumstances in which they live.[1]

Thirty-five years ago, Prime Minister Hawke declared we should be a 'clever country' and reduce our reliance on imported technology and borrowed research.[2]

In June, the Federal Treasurer noted that our economy is not dynamic or innovative enough.

Australia ranks 105th on Harvard's Economic Complexity Index - a key indicator of economic resilience and performance. We are much less differentiated than other advanced countries.[3] We rely on too few industries to sustain our economy.

Today, research – and the technologies it produces – is a source of intense global competition and power. Without it, no nation can remain safe or prosperous.

[1] American Association of University Professors, In Defence of Knowledge and Higher Education, January 2020
[2] Bob Hawke, Election speech, 8 March 1990
[3] Harvard Growth Lab, 2023, Country & Product Complexity Rankings

As cited in a 2025 NSF Secure Analytics report[4]:

"If traditional scientific research is likened to 'single-soldier combat,' then 'organized scientific research' is more like an elite force—with clear goals, division of labour and cooperation, and concentrated efforts to 'fight hard battles,' aimed at national strategic needs and the world's scientific and technological frontiers."

For many nations, science and technology is considered an indispensable strategic national asset.

Not in Australia: our record of R&D spending by government and business shows a sustained pattern of decline.

Compared to our OECD partners, Australia has been consistently underinvesting in homegrown R&D for many years. On the current trajectory – falling approximately 0.1% of GDP annually – we risk dropping to the bottom of OECD countries within five years.

In 2023, the Productivity Commission[5] concluded that Australian businesses are not keeping pace with the frontier of innovation and may not be aware of how far they lag behind.

Analysis by the International Monetary Fund indicates that a 10 per cent increase in domestic research can increase productivity by 0.3 per cent.[6] Productivity gains like this accumulate over time, leading to higher wages, more goods and services, and improved standards of living.

As a nation we want technologies like AI to boost our productivity, we want new medicines to keep us healthy, and the most advanced defence capabilities to keep our island nation safe.

But we aren't willing to invest sufficiently in the discoveries that create them.

Some even disparage researchers who provide the wellspring of knowledge creation, claiming their work is elite, abstract or disconnected. The impacts of their work are not immediately tangible to policymakers and investors who seek to prioritise advanced research projects with lower risk and quicker returns.

Investing 'patient capital' for research is a responsibility of government, but the discovery timeframes do not meet the demands of the electoral cycle.

We take for granted the often decades of research behind every major discovery that improves our lives – each begins with curiosity, eventually and unpredictably ending with products.

One of many contemporary examples is the revolutionary treatment of obesity – a healthcare crisis in many parts of the world. In the 1970s, Danish researchers began looking for hormones released when people eat. They were interested in pancreatic hormones. The pancreas of the Anglerfish was used to establish the structure of the hormone. Many more fundamental breakthroughs occurred, including in the study of the venom from the Gila monster reptile, before this discovery could translate into therapeutic use. About forty years later the research led to a weight loss drug that has resulted in the company having a bigger market capitalisation than the entire Danish economy – Ozempic.

As the G7 science academies noted: "*It is a paradox of science that the road to revolutionary breakthrough is often an indirect, inquiry-driven approach that yields increased understanding of the natural world and ourselves, and enables transformative discoveries for real-world challenges*."[7]

New innovations, products, processes and services do not appear fully grown. They start as ideas. Tested and developed scientifically by an expert workforce using increasingly advanced technologies.

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[4] NSF Secure Analytics, China refocuses its science and technology ecosystem on innovation and security, June 2025
[5] Productivity Commission, 5-year Productivity Inquiry: Innovation for the 98%, February 2023
[6] International Monetary Fund, Why basic science matters for economic growth, October 2021
[7] G-Science Academies Statement 2020, Basic Research, May 2020

There is no D without R

R&D policies focus on ways to extract commercial products and economic returns from research faster and more frequently. This recognises that research *does* drives economic returns but do not recognise there are diminishing avenues to recycle those economic benefits back into research, which is critical to keep the wellspring of knowledge creation and innovation flowing.

Commercialising research, and the programs designed to stimulate research translation, are critically important – but the revenue from commercial activity does not pay for research unless government and industries deliberately return some of that revenue back to researchers. Their propensity to do so has been in freefall for more than a decade.

No researcher ever applied for a research grant to invent Wi-Fi or the smart phone or AI or gene editing.

Researchers create knowledge by studying mathematics, physics, chemistry and biology and the many subdisciplines that stem from them.

Defence capability, domestic food supplies, energy, medicines, health care, weather prediction and biosecurity all started as research that developed into national capabilities over time. Research, if nurtured, will enable these capabilities to evolve and to adapt to a rapidly changing world. When we create knowledge that others do not have, we can lead and partner with allies in that technological race.

Investment in research – whether that is basic, applied or experimental development[8] – is a sovereign, long-term investment in Australia's security, in productivity that enables us to do more with less, in better living standards so we create a better future for the next generation than the one we inherited, in prosperity, and in independence, especially as geopolitical certainties waver.

For these reasons, developed, developing and wealthy countries have chosen to increase investment in knowledge generation: research.

Australia has not.

[8] The OECD categorises R&D into 3 types of activity:

Basic research: experimental or theoretical work to understand the underlying principles of phenomena and observable facts, without aiming for a specific application or use in mind.

Applied research: original investigation undertaken to acquire new knowledge. It is, however, directed primarily towards a specific, practical aim or objective.

Experimental development: systematic work, drawing on knowledge gained from research and practical experience and producing extra knowledge. This is directed to producing new products or processes or to improving existing products or processes.

The role of R&D in securing sovereign capability and keeping us safe in a volatile world.

Sovereign capability – minimising the risk of over-dependence on others

Without developing Australian research and skills, we place our national sovereignty at risk. In this world, there is no safe space for a nation that leaves itself dependent on where other countries choose to invest. Nor is there a place that doesn't nurture local talent to identify, adapt to our own priorities, efficiently adopt and sustain research done elsewhere but used here.

Developing sovereign R&D capability gives us the tools we need to be self-reliant, makes us more resilient to external shocks, and turbo charges productivity and economic growth. It's an investment in ourselves rather than a reliance on others who are motivated to advance themselves, not us.

China's *Made in China 2025* plan – a strategic industrial policy designed to move China up the value chain of manufacturing and advance the country's innovative capabilities by 2025 – has increased its self-reliance and competitiveness. From 2012 to 2023, China's gross domestic expenditure on R&D increased by 224%.. Its deliberate actions to have its workforce trained in the best tradition of global science and with standards of excellence achieved at leading institutions – including Australian universities – has resulted in 70% of the departmental leaders in China's Ministry of Science and Technology and 81% of the academicians promoted to the Chinese Academy of Sciences and the Chinese Academy of Engineering in 2023 having studied abroad.

China owes its success in part to razor-sharp focus and determination, massive investments in human capital and infrastructure, and strategic use of international collaboration. Australia cannot compete at the same scale, but we can and must compete on designing and implementing policies that are focused, sustained and strategic, and that extend beyond the 3-year electoral cycle.

Securing Australian sovereign capability will require sustained investment in research and people. These elements will give us knowledge, tools and capability to steer our own destiny and an ability to adapt knowledge that is created elsewhere.

When we do need to access knowledge created by other nations, we can minimise overreliance on any single country by diversifying the geographic footprint of Australia's international research collaborations and partnering in ways that are strategic and that recognise that any country or institution can be a collaborator, a competitor or a rival at any given time.

Keeping Australians safe and secure in a volatile world

Australia's National Defence Strategy[9] requires Australia's research and innovation sector to support defence and security priorities and accelerate technology maturity to deliver next-generation capabilities to the Australian Defence Force. Government investment in the Advanced Strategic Capabilities Accelerator (ASCA) is designed to translate asymmetric technologies into defence capability. This is essential. But our future defence technologies need investment in research today. Research that will generate knowledge that will provide as yet unimagined technologies tomorrow.

Just one example is that of early studies in mathematical sciences enabling cryptography – the practice of securing information by using codes. Cryptography allows the encryption of sensitive data, digital signatures, secure connections between banks, and data integrity. Modern banking relies on it, and so does anyone who confidently makes purchases online and seamlessly taps a card to pay for anything. Decades of publicly funded research was in involved in developing the critical algorithms underpinning cryptography

[9] Australian Government, 2024 National Defence Strategy

and our banking industry. But the job isn't done yet – it will never be done. Quantum technology will challenge our banking and data systems. Today, publicly funded research is developing quantum-resistant algorithms, so tomorrow our communities can transact with confidence and our banks can continue to profit and support economic growth.

Why do research in Australia?

Australia produces 3% of the world's research output from 0.3% of the world's population. More significantly, Australia's share of top-cited publications is 4.5%, fifth in the world. Yes, Australian research is of exceptional quality and our researchers are productive. This does not change the fact that we need to access 97% of the knowledge generated elsewhere.

There are four reasons why research in Australia is important to Australians:

1. Given 97% of the world's knowledge is generated elsewhere, sustaining domestic research capability is essential to interrogate, select and adapt knowledge generated outside Australia, before we adopt it in our country.
2. There are Australian issues that we cannot expect others to research for us – the driest inhabited continent and an island cannot do without deep and detailed knowledge of its own environment and cultural diversity.
3. Quality contributions to the global stock of knowledge by virtue of Australian researchers collaborating internationally and via global mobility, leverages investments made by other nations and earns Australia a seat at the table where far-reaching decisions are made.
4. It builds a deep reservoir of expertise in research organisations which, with appropriate incentives, can be drawn on by those with an interest in commercialising knowledge from any source.

Assessments of public sentiment show that a growing proportion of the Australian population, including millennials and Gen Z, are craving measures that boost national resilience, and that are fair and innovative. Asian cultures and their diasporas who call Australia home place high aspirational value on education and investment in science and technology. Our brightest young researchers will follow their passion and vocation to places where they and their research are valued and supported.

And yet our political leaders do not prioritise investment in this area of the economy. They frequently acknowledge Australia's strong research base, particularly given our population size, yet underinvest and underutilise this national resource.

The fact is Australian research is so valuable that it is developed into globally transformational technologies – usually by other countries.

The old approach – waiting on other nations to turn our ideas and discoveries into products and services that we then buy back at higher cost – is not the path we want or need.

Countries that cannot rely on raw materials and mining made a conscious decision to make sustained and long-term investments in R&D many decades ago. We have much to learn from them. It is not too late for Australia to learn and leapfrog, especially when emerging technologies like AI, genomics and quantum technologies can materially change our future for the better.

Between just 1 and 2% of Australian businesses innovate in ways that are new to the world[10]. We can't expect any different until we *do* different.

[10] Productivity Commission, 2023, 5-year Productivity Inquiry: Innovation for the 98% Inquiry report – volume 5

The structure of Australia's industry sector is one factor that impedes our ability to scale innovation. Relying on SMEs is unlikely to bring the investment needed to grow industries at scale. Australia is not helped by low investment in machinery and equipment which embeds new knowledge, nor by its reliance on primary industries and an immature manufacturing sector, all of which drive R&D in other countries.

The Australian Government's *Future Made in Australia* initiative is therefore important, but the contribution of large business – far better equipped to drive innovation though severely underperforming to date – can no longer be overlooked.

The magnitude of the challenge

Public investment in R&D is at an historic low: 0.17% of GDP by government, the OECD average is 0.23%, a difference of A$1.8 billion. Australian business investment is 0.89% of GDP; the OECD average is 1.99% - a gap of A$32.5 billion.

Higher education investment in R&D is greater than the OECD average but is over reliant on foreign student income, which is unsustainable.

There is a growing reliance on SMEs to drive business expenditure on R&D in Australia, which contrasts with other advanced economies where large companies primarily lead. SMEs make up 55% of business expenditure on R&D in Australia.

Large Australian companies – those best positioned to invest, innovate and profit – contribute less despite significantly benefiting from publicly funded research and tax incentives.

While a boost to government investment in R&D is essential, government investment alone is not enough.

Even if government R&D expenditure doubled, Australia would still fall short of the OECD average.

Measures are required to stimulate investment in R&D by large businesses.

To advance our nation and its people, we need to work in partnership – government, industry, higher education and philanthropy – and reverse the decline in R&D investment in Australia.

It starts by addressing the persistent and long-term underinvestment in R&D by the business sector, by incentivising business investment in R&D.

And it includes getting the broader R&D ecosystem humming too.

Policy settings to stimulate R&D investment

The Academy's proposal to incentivise R&D investment by large businesses is one measure that should be looked at through the lens of wider policy reform to create the best possible environment for the R&D system to thrive.

Below is a high-level outline of policy settings and the R&D environment in which Australian businesses operate, and some shortcomings and misaligned policies letting Australia down.

The Academy's proposal should also be considered within the broader context of national tax reform, including how an R&D levy would interact with corporate tax rates in Australia. Treasury may wish to cost options that apply the R&D levy to all large businesses and discount the company tax rate for R&D-intensive businesses.

Whatever alternative policies are examined, the key policy objective of growing long-term research funding must be preserved.

R&D Tax Incentive

Why is business investment in R&D in Australia so low, especially when incentivised via the R&D Tax Incentive (RDTI) since 1985? In 2024–25, of the $14.4 billion total government investment in R&D, the Australian Government RDTI cost the Australian Government $4.34 billion, equal to 30% of the total R&D spend.

Often considered a blunt instrument, the RDTI is a volume-based tax instrument that supports the activities a company would have done anyway, limiting the additional R&D that can be achieved using the tax system. A tax incentive ought not subsidise the R&D that would have taken place anyway but should focus on additionality to incentivise increased private R&D investment.

Studies in 2016[11] and 2021[12] of the RDTI estimate that between 10 and 20% of the total R&D spent would not have taken place in the absence of the program. Put differently, 80 to 90% would have taken place anyway.

It is argued that the expenditure threshold caps limit the scope for additionality from large R&D-intensive companies, however, legislated increases to the RDTI expenditure threshold caps from $100 million to $200 million[13] have not changed large business investment trends.

Research–industry collaboration

Most OECD countries use tax incentives as part of their public support for R&D; however, Australia is unusual in having a tax measure as the principal form of support. Finland, Germany and Sweden are examples of countries that have not relied on tax incentives; rather they support business R&D through direct measures such as competitive grants. These are not absent in Australia; cooperative research centres, research block grants, industry growth centres, rural R&D corporations and aspects of the ARC and NHMRC granting schemes are all designed to enable research and business sectors to work together.

Despite these measures, R&D collaboration levels remain low in Australia compared to the OECD. In 2021 in Australia, 3.5% of large businesses collaborated with publicly funded research organisations compared with the OECD average of 35%[14].

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[11] Centre for International Economics, 2016, R&D Tax Incentive Programme Review

[12] Holt, J, Skali, A and Thomson, R. 2021, The additionality of R&D tax policy: Quasi-experimental evidence, Technovation, 107, p 102293, https://doi.org/10.1016/j.technovation.2021.102293

[13] *Treasury Laws Amendment (A Tax Plan for the COVID-19 Economic Recovery) Bill 2020*

[14] Organisation for Economic Cooperation and Development (OECD), 2021, Business innovation statistics and indicators.

This is not for want of interest by universities to engage with industry. The high proportion of applied research investment by Australian universities reflects their efforts to translate their research output. However, industry needs to meet this investment to seize commercialisation opportunities across all parts of the R&D ecosystem.

Measures to incentivise collaboration between researchers and industry have primarily targeted research organisations, not industry. This needs to change to encourage both collaborators to come to the table.

Policies that provide benefit to R&D-intensive companies and to those who collaborate with researchers could achieve greater additionality per dollar of forgone tax revenue. A higher RDTI rebate could be offered to companies that collaborate with research organisations. The tax system could be structured to incentivise more collaboration, neither subsidising existing R&D investment or trapping research in labs.

Availability of early-stage financing

There is ample evidence that finance availability is a factor inhibiting collaborative R&D in Australia. This is especially the case in the early stages of commercialisation. Often referred to as the 'valley of death', this is the place where high-quality research becomes trapped, failing to scale up and convert to deep tech or life science projects. Investors tend to have a lower risk appetite and prefer later stage development where they have greater confidence in the technology development process.

US government programs such as the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) schemes allow early-stage technology funding for small businesses and harnesses the power of public procurement to provide seed capital and scale that leads to R&D maturity, new industries, and jobs. Complex challenges like decarbonisation and supply chain security require us to find ways to translate knowledge into innovation at pace and scale.

Importantly, high-quality practitioners are required at every stage of the innovation process. A healthy research ecosystem will have first-rate scientists doing the research and first-rate translators commercialising it. Expecting researchers to be commercially active and vice versa is rarely a recipe for success.

Terms of collaboration and cultural misalignment

Financial barriers are exacerbated by overly complex and inconsistent commercialisation terms across research organisations, regulatory hurdles, and prohibitive intellectual property (IP) arrangements. Research organisations focused on knowledge discovery and education usually operate on a different cadence to commercial endeavours.

This could be different. Interface in Scotland has harmonised legal agreements, IP and governance arrangements across its research organisations, removing bureaucratic hurdles and saving time.[15] It also helps businesses identify research partners to initiate collaborations and remains a neutral broker in the relationship, allowing alignment of academic and commercial outcomes and timeframes.

[15] Interface, https://interface-online.org.uk/

Workforce agility

In 2019–20, 45% of Australia's R&D workforce was in the business sector compared to an OECD average of 68%. Researchers in Australia tend to stay in research organisations. Mobility in and out of industry is neither encouraged or rewarded. Few if any measures boost new entrants into research, minimising the opportunity for researchers to learn the language and skills of the business sector and of commercialisation.

We do not make use of all the available talent, reflected in low diversity in the R&D workforce where 15% of the STEM workforce are women, and less than 1% of Indigenous Australians hold a university STEM qualification.[16]

The bottom line

If Australia wants to create knowledge by doing research, it must pay for it.

If it doesn't, we must accept that we will rely on and pay for research done by competitor countries, fully developed with its value already added. We will give away our human capital, gifting our brilliant and emerging researchers and research translators to other countries and buying back their efforts as they make their careers, wealth and reputations abroad. We will limit our sovereign capability, becoming ever more reliant on others, and we will lose the capability to generate new knowledge that allows us to spawn industries that diversify and stabilise our economy.

In a technologically advanced and volatile world, there is no more time to talk about nice-to-haves. Now is the time to act.

For these reasons the Australian Academy of Science is calling for an urgent national conversation on R&D investment in Australia.

To start this critical conversation, we propose one solution: incentivising large business R&D investment by applying 0.25% or 0.5% R&D levy to businesses with revenue of $100 million or more, that can be discounted if businesses invest in R&D. We propose that the levy revenue must be invested in research and form part of the uplift needed to maintain national competitiveness.

Under our proposal, the measure rewards those businesses that invest in R&D, incentivises those that don't, and grows the pool of funds available for investment in research to maintain the wellspring of innovation needed to keep the R&D system healthy and productive.

It is our hope that there will be additional measures proposed. We encourage proposals and a discussion on their merits.

Whatever alternative options are examined, the key policy objective of growing long-term research funding must be preserved.

[16] Australian Government, 2024, Pathways to Diversity in STEM Review

FACT SHEET: Incentivising business investment in R&D

The challenge

When compared to our OECD partners, Australia has been consistently underinvesting in homegrown R&D for many years. Worse, on the current trajectory — falling approximately 0.1% of GDP annually — we risk dropping to the bottom of OECD countries within five years.

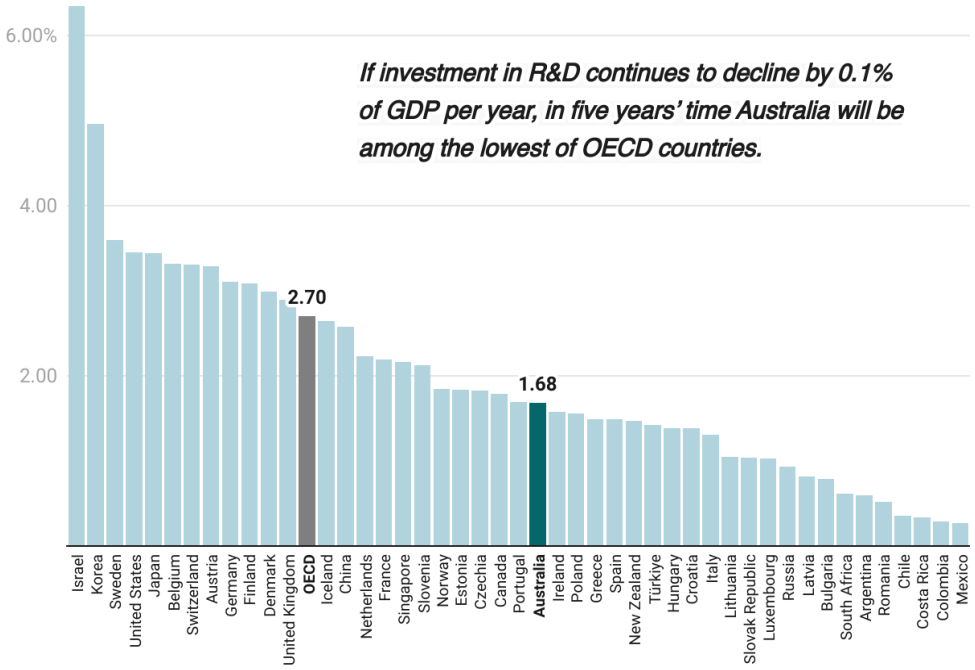


Figure 1: OECD nations' investment in R&D as a percentage of GDP. ***Source: OECD Main Science and Technology Indicators***

Public (government) investment in R&D is historically low. In dollar terms, government underinvests in R&D by $1.8 billion per annum compared to the OECD.

Higher education sector investment in R&D is higher than the OECD average, but over-reliant on foreign student income. This research investment is sourced by universities from outside their public funding, then used to enable research that benefits the public and industry.

Business investment in R&D is strikingly low. Currently, Australian business R&D investment stands at just 0.89% of GDP, less than half the OECD average of 1.99%. In dollar terms, businesses underinvest in R&D by $32.5 billion compared to the OECD.

There is a growing reliance on SMEs to drive business expenditure on R&D (BERD) in Australia, which contrasts with other advanced economies where large companies primarily lead BERD. In Australia, SMEs make up 55% of business expenditure on R&D.

Large Australian companies – those best positioned to invest and innovate – contribute less despite benefiting the most from publicly funded research.

Research provides the business sector with the knowledge and tools to develop new products, industries and technologies. Innovative businesses increase their competitiveness profits and access to new markets.

Australia's persistent underinvestment in R&D threatens our productivity, limits wage growth, threatens our standard of living, and weakens our ability to respond to global shocks and structural challenges. These threats have consequences for every member of society.

We can't sufficiently boost productivity without solving the R&D investment crisis.

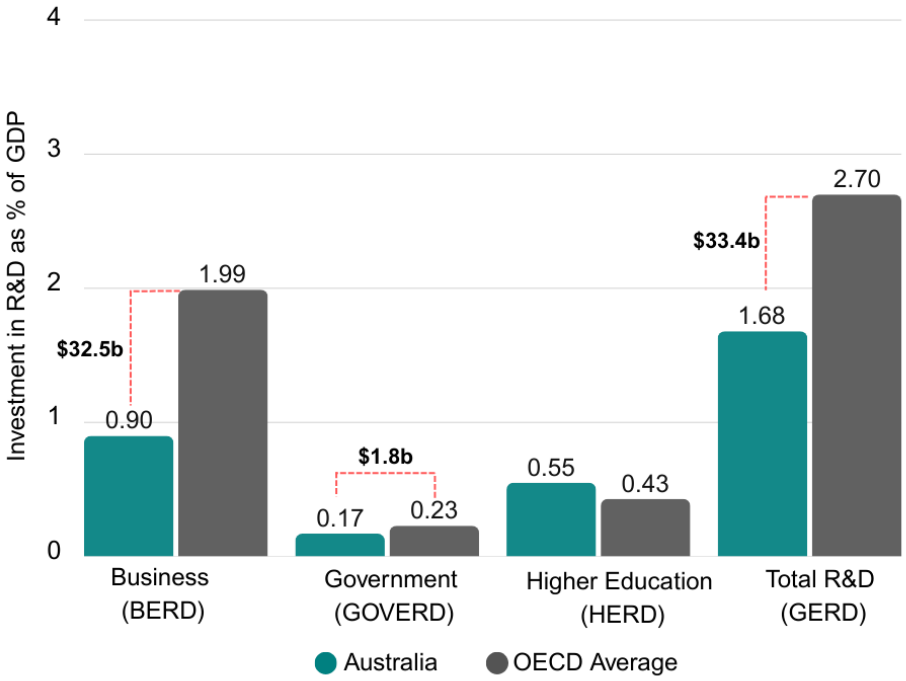
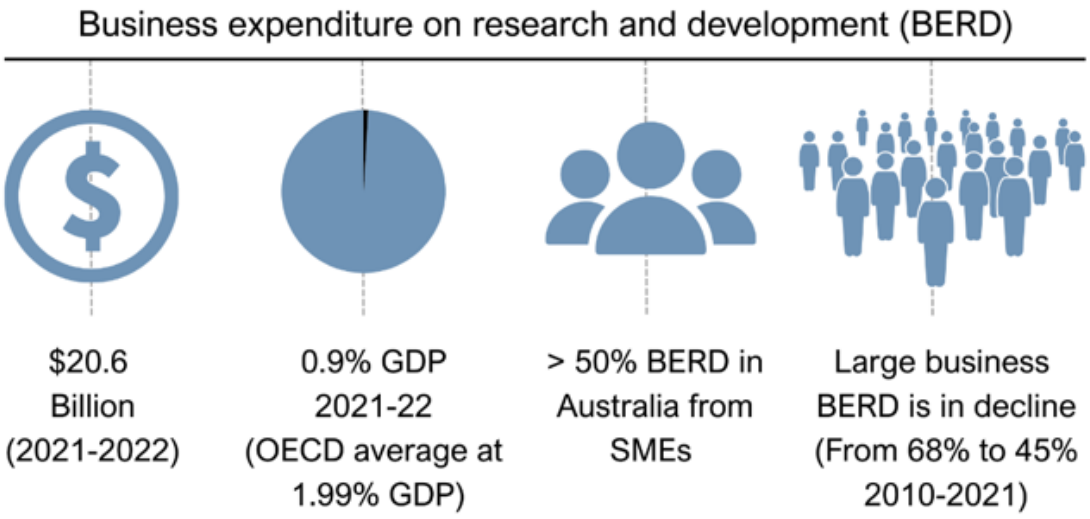


Figure 2: Australia's investment in R&D as a percentage of GDP compared to the OECD average. Dollar values indicate R&D investment needed to reach the OECD average (as a percentage of GDP). Based on 2023 GDP in A$. Based on most recently reported data, private non-profit organisations expenditure on R&D included in Total R&D (GERD). Source: OECD Main Science and Technology Indicators; Australian Bureau of Statistics



In a technologically advanced world, there is no more time to talk about nice-to-haves. Now is the time to act.

While a boost to government investment in R&D is an essential part of the solution to Australia's productivity decline, government R&D investment alone is not enough.

Even if government R&D expenditure doubled, Australia would still fall short of the OECD average for R&D investment.

Measures are required to stimulate investment in R&D by large businesses.

To advance our nation and its people, we need to work in partnership – government, industry, higher education and philanthropy – and reverse the decline in R&D investment in Australia.

A solution

The Australian Academy of Science is calling for an urgent national conversation on R&D investment in Australia.

We propose incentivising large business R&D investment by applying either a 0.25% or 0.5% R&D levy to businesses with annual revenue of $100 million or more that can be discounted if businesses invest in R&D. We propose that the levy revenue be invested as a Research Future Fund and its returns invested in research, without which the R&D ecosystem will wither.

Under our proposal, the measure rewards those businesses that invest in R&D, incentivises those that don't, and grows the pool of funds available for investment in research to continue driving the R&D cycle.

R&D levies are commonly applied across our economy. For example, the Australian meat and livestock industry applies several levies, primarily on the sale of livestock. These levies fund various activities, including R&D, marketing, and animal health programs.

Similarly, the Australian Government applies agricultural levies. For example, levies are used on some grain crops to fund biosecurity and R&D.

It is our hope that others will also propose measures to stimulate R&D investment. We encourage proposals and a discussion on their merits. Whatever alternative measures are examined, the key policy objective of growing long-term research funding must be protected.

Independent economic analysis of the proposed business R&D investment incentive

The Academy commissioned independent economic modelling based on publicly available data from the Australian Taxation Office (ATO). We modelled the application of a 0.25% and 0.5% levy applied to companies that have revenue of $100 million or more annually.

We also modelled a 50% and 100% levy discount based on reported R&D expenditure for 201 companies (where publicly available data on RDTI recipients is available). Results have been extrapolated to all companies, which assumes that the matched sample is representative of the population of companies.

The parameters are designed to raise sufficient revenue to fund annual basic research at a 0.2% share of GDP.

Based on ATO 2021–22 data, and the selection of the levy rate and discount rate, a levy could raise between $2.14 billion and $12.84 billion annually (Table 1).

Consideration was given to applying the R&D levy to taxable income; however, this was excluded given issues of base erosion and profit shifting.

The levy revenue collected must be legislated, governed and protected to support research in areas of national significance.

A discount would be applied to the R&D levy for businesses that invest in R&D, such as those that receive the R&D Tax Incentive (RDTI) or demonstrate that they invest in R&D in another way. In some scenarios, R&D-intensive companies may have their R&D levy discounted to zero. Those businesses who choose not to invest in R&D become incentivised to do so. Regardless of their levy contribution, all Australian companies continue to benefit from publicly funded research which enables their businesses to prosper.

Table 1: Annual levy revenue on companies with annual revenue of $100m or more.

Levy rate applied to revenue*	R&D levy discount	Annual levy revenue from 201 company sample ($ billions p.a.)	Annual levy revenue scaled levy (sample extrapolated to all companies, $ billion p.a.)
0.25%	0%	0.99	6.43
0.25%	50%	0.52	3.34
0.25%	100%	0.33	2.14
0.5%	0%	1.99	12.87
0.5%	50%	1.37	8.84
0.5%	100%	1.04	6.71

*Based on company income (ATO 2021–22 data) of $398.92 billion p.a. (total income of 201 companies used in analysis).

How could an R&D levy be implemented?

There are two potential options for consideration to implement the R&D levy (Table 2).

Table 2: Options for a R&D levy

Feature	Option 1: Pay-as-you-go	Option 2: Research Future Fund
What?	Ongoing levy on business revenue used directly each year to support research.	Temporary levy to build a long-term, sustainable, interest-generating fund.
Who does it apply to?	Companies whose revenue is $100 million or more annually.	Companies whose revenue is $100 million or more annually.
How much needs to be raised?	We have set a target to raise 20% of public funding directed to research. This target is 0.2% of GDP. Best estimates show that current expenditure on research is around $1.5 billion – around 10% of total government R&D support ($14.4 billion). To double public expenditure on basic research, the levy needs to raise an additional $1.5 billion annually (in nominal terms).	We suggest the fund be structured to enable distribution of 0.2% of GDP annually (around $3 billion adjusted over time). We suggest a fund target be set to $75 billion. At maturity, we have assumed a 4% annual payout, and fund growth of 2% a year (assuming an average real return on invested funds of 6% p.a.). It would take approximately 10 years for the fund to reach maturity, depending on the levy rate, discount and investment performance. This option does not address low investment in basic research today. This could be achieved by adjusting the levy rate that is applied or by making an annual payout of less than 4% while the fund matures, noting this will extend the time the fund will take to reach its maturity targe
How would it be used?	Direct annual expenditure on basic research, distributed via the ARC and NHMRC in areas of national significance on a competitive basis. Revenue generated by the levy would add to existing annual expenditure on basic research.	Establish a capitalised research endowment, similar to the Medical Research Future Fund. Invested to generate steady income. Like option 1, the levy funds would be distributed via the ARC and NHMRC in areas of national significance on a competitive basis. Revenue generated by the levy would add to existing annual expenditure on research.

Feature	Option 1: Pay-as-you-go	Option 2: Research Future Fund
How long will it be applied for?	Ongoing	Levy applies until fund target is met. Fund sustains long-term research beyond levy period.
How would it interact with the R&D Tax Incentive (RDTI)?	Those companies that invest in R&D (and therefore receive the RDTI, or demonstrate that they invest in R&D in another way) would have a discount applied to the levy. Consideration could be given to levy discounts that replace the current non-refundable component of the RDTI (which applies to companies earning over $100 million) to simplify and improve incentives. Detailed analysis by Treasury with the full spectrum of data will inform the most favourable arrangement.	As per option 1, replace or offset levy with R&D expenditure discounts.
Economic assumptions	Levy rate will remain stable if the levy base grows in line with GDP. This ensures the target of 0.2% of GDP for basic research expenditure is maintained.	4% payout with 2% annual growth (assuming 6% real return on capital).

Summary

Research is the wellspring for a healthy and productive R&D ecosystem. Without it, the system withers and dies.

Rebalancing investment in R&D is essential to securing Australia's long-term productivity and economic resilience.

Our future in a technologically advanced and volatile world is bleak without it.

While a boost to government investment in R&D is a necessary part of the solution to Australia's productivity decline, government investment alone is not enough.

Even if government R&D expenditure doubled, Australia would still fall short of the OECD average.

SMEs already make up 55% of business expenditure on R&D.

Measures are required to stimulate investment in R&D by large businesses.

A partnership approach is required to boost R&D expenditure in Australia.

As one solution for discussion, we propose implementing a 0.25% or 0.5% R&D levy on businesses with revenue of $100 million or more per annum to support research that creates the stock of knowledge businesses rely on to innovate, compete and to boost their profits.

The application of a levy discount for those businesses that invest in R&D further incentivises large business R&D investment whose current rate of investment is well below global trends, despite benefiting from public investment in research and existing incentives.

Depending on the levy rate and discount applied, we estimate that an R&D levy could raise between $2.14 billion and $12.84 billion annually.

The levy revenue collected must be legislated, governed and protected to support research in areas of national significance through existing agencies and mechanisms.

The Academy welcomes discussion on this and alternative proposals to stimulate R&D investment in Australia.

FAQ

How these figures were calculated

The Academy's independent economic modelling was based on:

- 2021–22 publicly reported data of company income and taxable income from the Australian Taxation Office.
- Research and Development tax incentive - 2021-22 Report of data about Research and Development tax incentive entities - data.gov.au – This report contains the total research and development (R&D) expenditure and amended total R&D expenditure for over 11,500 R&D entities for the 2021-22 year.
- Corporate Tax Transparency - 2022-23 Report of Entity Tax Information - data.gov.au – This report contains the name, ABN, total income, taxable income and tax payable for corporate tax entities with a total income of $100 million or more. This includes Australian public and foreign-owned corporate tax entities and Australian-owned resident private companies.
- Formula used: Levy revenue = $\sum_{\text{Company}}(\text{Income} \times \text{Levy Rate} - \text{Discount Rate} \times \text{R\&D Expenditure})$

Limitations of the analysis

The modelling was based on a sample of 201 companies for which ATO RDTI claims and ATO company tax data could be matched. Results were scaled, which is approximate as it assumes that the sample is representative.

The modelling is based on publicly available income data, which has missing data and slightly different reporting periods and definitions. The 2021–22 ATO data set used would reflect the effects of COVID-19 on income and profits. This proposal requires further detailed analysis by the Australian Treasury.

What is the estimated amount the levy could raise per year?

Economic modelling commissioned by the Academy suggests that the levy could raise between $2.14 billion and $12.84 billion annually to invest in research if applied to companies with $100 million or more in annual revenue.

To offer perspective, total government R&D expenditure in 2024–25 was $14.4 billion. Of this:

- expenditure on basic research is estimated to be 10% of this at $1.5 billion
- the Australian Government spent $4.3 billion in 2024–25 on the RDTI (includes the refundable and non-refundable component) which is equivalent to 30% of total government R&D expenditure in that year.[17]

How would the proposed R&D levy impact SMEs?

The levy would not apply to businesses with less than $100 million annual revenue. SMEs that invest in R&D would continue to benefit from the R&D Tax Incentive.

[17] Department of Industry, Science and Resources, 2024, Science, Research and Innovation (SRI) budget tables

How would the proposed R&D levy impact big companies?

It is proposed that the levy be discounted to further incentivise business investment in R&D. The more a business invests in R&D activities, the lower the R&D levy payable. R&D-intensive industries are impacted the least by this measure.

The estimates in Table 3 assume a **0.25% levy on revenue and shows the effect of a 50% and 100% discount** (based on 2021–22 ATO data).

Table 3: Impact of levy with discounts applied to a sample of individual companies with annual revenue of $100 million or more, including impact on annual profits.

Company	Revenue (billion)	R&D spend (million)	% revenue spent on R&D	Levy cost (million)	Net effect 50% R&D discount (million)	Net effect 100% R&D discount (million)	Annual company profit (million)	Undiscounted levy cost as a % of annual company profit (%) – worst case scenario if levy was undiscounted (this does not apply to R&D-intensive firms)
Atlassian*	$3.56	$200.46	5.63%	$8.90	0	0	$702.8	1.27%
Fortescue	$21.61	$77.89	0.36%	$54.03	$15.08	0	$11,925.4	0.45%
CSL Ltd*	$3.56	$129.24	3.63%	$8.90	0	0	$88.27	10.08%
Wesfarmers	$35.3	$34.99	0.10%	$88.3	$70.76	$53.27	$3055.69	2.89%
Breville*	$0.50	$22.04	4.4%	$1.25	0	0	$134.10	0.93%

*R&D-intensive firms

How do companies currently benefit from investment in R&D?

The Australian Government, via the RDTI, pays more than $0.40 in every dollar to businesses that invest in R&D.

In 2024–25, the Australian Government spent $4.3 billion on the RDTI (includes the refundable and non-refundable component) which is equivalent to 30% of total government R&D expenditure in that year.[18]

This existing incentive has been insufficient in stimulating business R&D expenditure, especially among large businesses. Increases to the RDTI expenditure threshold caps from $100 million to $200 million have not changed large business investment trends.

Some companies also benefit from the receipt of government grants.

Does this replace the R&D Tax Incentive (RDTI)?

Those companies that invest in R&D (and therefore receive the RDTI or demonstrate that they invest in R&D in another way) would have a discount applied to the levy.

[18] Department of Industry, Science and Resources, 2024, Science, Research and Innovation (SRI) budget tables

Consideration could be given to levy discounts that replace the current non-refundable component of the RDTI (which applies to companies earning over $100 million) to simplify and improve incentives. Detailed analysis by Treasury with the full spectrum of data will inform the most favourable arrangement.

Should some businesses be exempt from the R&D levy as a result of application of a discount?

The Academy's proposal seeks to reward investment in R&D via application of a discount.

However, Treasury should consider the option of applying a levy to all companies with more than $100 million in revenue, with a discount that reduces the levy but does not completely offset it. This would ensure all large businesses contribute to research that benefits all. This principle applies to the Medicare levy, where investment in private health insurance reduces the levy but does not avoid it entirely.

Treasury may also wish to consider costing the impact on businesses with an annual revenue of more than $50 million, reducing the levy percentage and thereby spreading the application of levy.

What about companies that already pay an R&D levy, such as agricultural R&D levies?

Agricultural R&D levies are imposed on agricultural goods and are proposed by primary industry representative bodies. These levies fund R&D activities. Further analysis is required to determine whether a discount on the proposed research levy could be applied for industries that already pay levies that go towards R&D activities.

How does the R&D levy intersect with the company tax rate?

As illustrated in Table 3, the R&D levy does not have a significant impact on annual company profits.

Those companies that invest in R&D benefit from the innovation, efficiency and productivity that R&D provide.

This can improve profits which can further assist in offsetting the levy.

There is an opportunity to consider the proposed R&D levy as part of wider tax reform, including possible intersections with the company tax rate. For example, consideration may be given to company tax rate discounts for large companies that are R&D-intensive.

How will the levy revenue be distributed?

The levy revenue collected must be legislated, governed and protected to support research in areas of national significance through existing agencies and mechanisms.