



UNIVERSITIES  
AUSTRALIA

DISCOVER LEARN LEAD

Submission to the Review of the  
R&D Tax Incentive

February 2016



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## Executive Summary

Australia is experiencing significant economic and social change. We are entering a new era in which skills, knowledge and ideas will become our most precious commodities. Successfully navigating these changes will require Australian businesses and research organisations to work in partnership to create the new products, processes and industries needed to secure Australia's future economic prosperity.

The Australia university system provides the critical intellectual and research infrastructure that underpins national productivity, prosperity and innovation. Our universities deliver excellence in teaching, scholarship and research; support regional economies and communities; transform lives through educational opportunity and research; and have been at the forefront of Australia's 'soft diplomacy' agenda. They provide the building blocks that will enable us to make the transition to a productive and internationally competitive innovation nation.

The low levels of industry–university research collaboration in Australia are well-documented and are the subject of the Government's recently released National Innovation and Science Agenda (NISA). Adjustments to university research funding and the introduction of a new impact and engagement assessment announced in the NISA convey a strong expectation that universities should do more to reach out to industry and other end-users in the collaborative effort needed to drive national innovation.

These changes to the 'supply side' of the collaborative effort, however, must be complemented by commensurate 'demand side' incentives to encourage industry to become active partners in the national research and innovation effort. Government policy, particularly through the design of the Research and Development (R&D) Tax Incentive, has an important role to play in serving as a catalyst for change.

In Australia the R&D Tax Incentive is the principal form of support for business innovation. Despite an annual cost of almost \$3 billion in revenue foregone, Australia continues to lag behind comparable countries on indicators of business innovation.

As highlighted in the R&D Tax Incentive Review Issues Paper (the issues paper), legitimate concerns have been expressed about the level of 'additionality' and 'spillover' that the measure delivers. Universities Australia welcomes the review's focus on improving the effectiveness and integrity of the R&D Tax Incentive.

Universities Australia supports the introduction of reforms to ensure the incentive is supporting the aims of the NISA to stimulate world-leading innovation and greater collaboration between industry and research organisations.

Universities Australia encourages the reviewers to also consider the case for supplementing the incentive with more direct and targeted measures, including competitive grants and non-financial support measures, like mentoring and network development. Australia must ensure we have the right balance of indirect and direct support for business innovation.

In this submission, Universities Australia recommends:

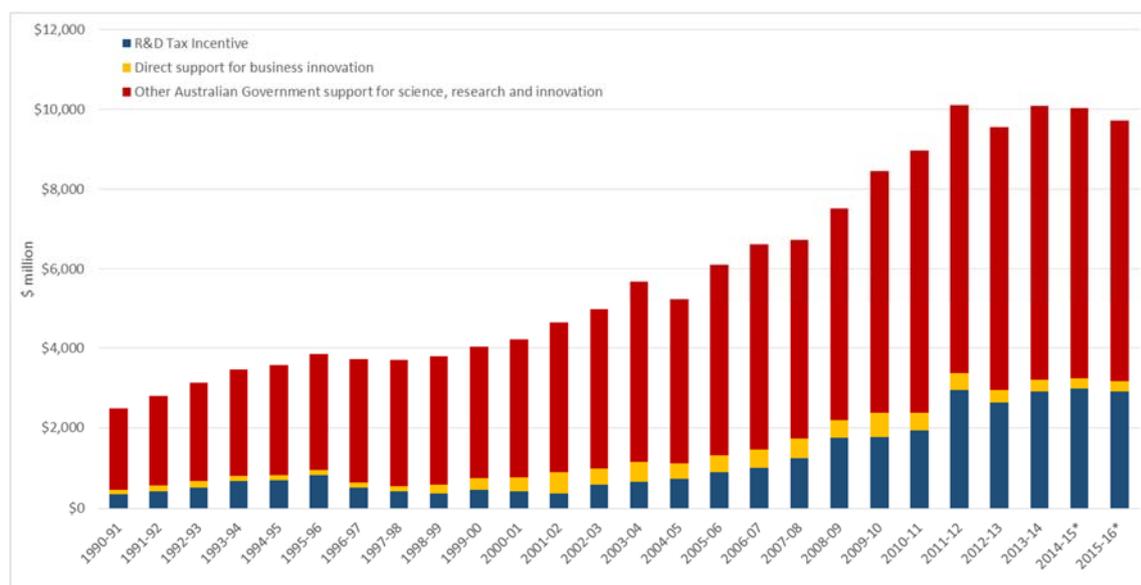
- (i)* that the level of public investment in stimulating business innovation and collaboration with research organisations be maintained at internationally competitive levels;
- (ii)* the introduction of a premium tax concession rate for businesses collaborating with public research organisations on R&D;
- (iii)* targeting the R&D Tax Incentive more strongly towards small to medium-sized enterprises (SMEs);
- (iv)* charging Innovation and Science Australia with overarching responsibility for research and innovation policy and program coordination, including the R&D Tax Incentive; and
- (v)* rebalancing the mix of direct and indirect support for business innovation by increasing direct support, particularly for SMEs, to encourage greater levels of industry innovation and researcher collaboration.

## I. Effectiveness of the R&D Tax Incentive

The R&D Tax Incentive is a broad-based program designed to encourage Australian businesses to invest in R&D activities that would not otherwise occur and is likely to benefit the wider Australian economy.

The R&D Tax Incentive has increased from around 15 per cent of the Government's total science, research and innovation spending in 2005–06 to almost 30 per cent in 2014–15. Cost in foregone revenue has increased from \$2.5 billion in 2011–12 to \$2.9 billion in 2013–14. It now accounts for 90 per cent of Government's support for business innovation.

**Figure I: Australian Government support for science, research and innovation**



Source: Australian Government 2015, *2015–16 SRI Budget Tables*.

The R&D Tax Incentive is forecast to grow to \$3.5 billion in 2017–18. It is evident from the issues paper that the actual cost of the program has increased beyond what was previously forecast.

Despite the growing size of this measure, only 12,000 businesses in Australia registered for the R&D Tax Incentive in 2012–13, or less than 0.6 per cent of businesses. Australia's business expenditure on R&D is heavily concentrated in a few large businesses. Less than 3 per cent of businesses are responsible for 61 per cent of the total \$19.7 billion in business R&D reported in 2012–13.<sup>1</sup>

Australia's business expenditure in R&D (BERD) as a percentage of GDP has been declining since 2008, falling from 1.37 per cent in 2008 to 1.19 per cent in 2013, and it remains well below the OECD average of 1.61 per cent.<sup>2</sup>

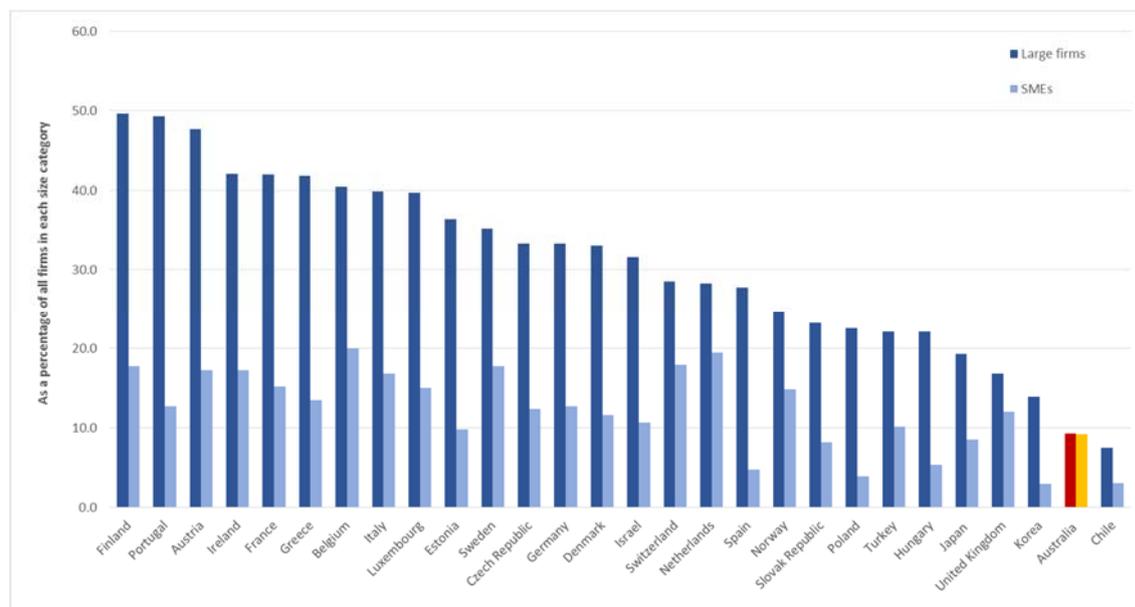
Australia's performance in producing innovation and the levels of R&D in our innovative firms remains underwhelming. The percentage of innovative firms in the manufacturing and

<sup>1</sup> Innovation Australia 2014, *Annual Report 2013–14*, p. 22.

<sup>2</sup> OECD 2016, Main Science and Technology Indicators, OECD Publishing, extracted 22 February 2016.

services sectors that undertake R&D, either internally or with a partner, is the lowest and second lowest respectively in the OECD. In addition, only 9.3 per cent of large firms in Australia (27 of 28 OECD countries) and 9.2 per cent of SMEs (21 of 28) introduced products new to the market in the period 2010 to 2012.

**Figure 2: Firms introducing products new to the market, by firm size, 2010–12**



Source: OECD 2015, *Science, Technology and Industry Scoreboard 2015*, p.165.

From the information available it appears that the growth of the R&D Tax Incentive has not been matched by commensurate improvements in Australia's innovation performance. Australia requires a new approach, building on existing government schemes, to achieve greater industry–university engagement and collaboration and a culture of innovation within Australian businesses.

## 2. Cutting-edge innovation

Not all innovation is equally effective in delivering new sources of growth, creating high-wage jobs and driving national economic prosperity. Innovations that are new to the world have significantly more impact and create more spillover benefits than the adoption of innovations that exist elsewhere. Australian businesses that develop world-first innovations are eight times more likely to export than non-innovators, and twice as likely as businesses adopting existing innovations from elsewhere and adapting them for the Australian market.<sup>3</sup>

The vast majority of innovation undertaken in Australia, however, is limited to adopting and modifying innovations from overseas for the Australian context. ABS data show that of those Australian businesses that innovate, between 75 and 92 per cent of innovations were new-to-firm only, rather than being new to the industry, region, or world.<sup>4</sup> Australia lags well behind other OECD countries like New Zealand, Canada and Japan in producing new

<sup>3</sup> Department of Industry 2014, *Australian Innovation System Report*, Commonwealth of Australia, p. 48–49.

<sup>4</sup> Australian Bureau of Statistics 2014, *Innovation in Australian Business 2012–13*, cat. no. 8158.0.

to the world, cutting-edge innovation, and has experienced an absolute decline in new-to-world goods and services innovation since the early 2000s.<sup>5</sup>

For Australia to become a leader in innovation, incentives for business innovation need to be designed to promote radical, new-to-world innovations. Australia is well-placed to achieve this. We have a diverse, well-educated workforce. Our research institutions are world-class, are sought after as international collaborators and discover new knowledge and technologies which are almost always new-to-world. The challenge for Australia is to translate these strengths into the foundations of a productive and internationally competitive economy through strong partnerships between Australian universities and industry.

### 3. Collaboration

The statistics on Australia's low level of university-industry collaboration are well-known and well-documented. Australia ranks last of 26 OECD countries for the percentage of innovation-active businesses collaborating with universities and other research institutions.

The NISA contains important initiatives to encourage universities to better engage with business. The success of these research 'supply side' initiatives, however, will be limited unless complemented by targeted incentives to encourage industry and other research end-users to 'reach into' universities.

Only a small proportion of the claimed tax benefits from the R&D Tax Incentive relate to investment by businesses in research conducted with universities and other publicly funded research institutions. The effectiveness of the R&D Tax Incentive could be readily and substantially improved if the incentive explicitly encouraged collaboration. Six other OECD countries—France, Italy, Iceland, Japan, Hungary and Belgium—offer more favourable terms through their R&D tax incentives to business that collaborate.

Australia's R&D Tax Incentive offers higher tax concession rates for SMEs. Similarly, a premium tax concession rate should be offered to all businesses collaborating with public research organisations.

In addition to sending a strong policy signal to industry around the Government's collaboration expectation, a premium rate would also help address industry concerns about additional overheads incurred in collaboration and could be used to support greater researcher mobility. Eligible activities could include supporting industry researchers to work within a publicly funded research organisation as well as embedding higher degree research students and post-doctorate researchers within a business on R&D projects.

A premium tax concession would also encourage industry to better leverage existing resources, specialist staff and infrastructure across the university research sector. To illustrate, collaborative approaches to research infrastructure under the National Collaborative Research Infrastructure Strategy (NCRIS) has delivered a globally renowned system of networked facilities with a strong return on public investment. For every dollar invested by the Australian Government in NCRIS, an additional \$1.06 has been co-invested

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<sup>5</sup> Department of Industry 2014, *Australian Innovation System Report*, Commonwealth of Australia, p. 50.

by partners in industry, research organisations and other governments.<sup>6</sup> These facilities allow small, innovative companies to experiment with new approaches at lower cost and less risk than if they were to do it themselves. It also ensures effective and efficient utilisation of these nationally significant research facilities.

The increased national focus on research–industry collaboration and research impact should not exclude the social sciences, arts and humanities. The creative industries, social sciences and humanities have driven innovations across the full suite of human endeavour including health care, urban planning and public policy.

As such, further consideration should be given to broadening the scope of R&D activities eligible for support through the R&D Tax Incentive to include research in the social sciences, arts and humanities. Universities Australia recognises that changing eligible R&D activities could lead to an increase in the number and quantum of the claims thereby putting further pressure on the financial sustainability of the program. As such, any changes would need to be carefully managed. Limiting the broadening of eligible R&D activity to that occurring with Research Service Providers (RSPs) could help to safeguard the integrity of the program and encourage a stronger focus on genuine, high-quality R&D, including with the social sciences, arts and humanities.

#### 4. Targeting small and medium-sized businesses

The R&D Tax Incentive already provides more generous treatment for smaller companies through a higher tax offset rate and a refundability element. However, there is more that can be done to encourage greater levels of innovation amongst SMEs. Australian microbusinesses outperform large firms in producing new-to-world innovation, and deliver greater additionality of R&D per dollar of tax foregone than large businesses.<sup>7</sup> As highlighted in the issues paper, studies show smaller innovative firms are also more responsive to fiscal incentives. Given that 97 per cent of Australian businesses are small, even moderate increases in R&D activity by these firms could deliver a substantial increase in innovative products and processes.

The R&D Tax Incentive already recognises that large businesses conducting substantial R&D are likely to continue to do so regardless of the R&D Tax Incentive, by providing a lower tax offset rate to larger companies, and applying an upper threshold of \$100 million in annual R&D expenditure. Consideration could be given to further targeting government investment to SMEs by progressively reducing the tax offset rate for larger business based on expenditure, up to the current threshold of \$100 million. The savings could be redirected towards other changes to improve the effectiveness of the tax incentive, or to a more sophisticated and targeted suite of direct support for businesses.

Consideration should be given to the introduction of quarterly tax credits for SMEs, including early-stage start-ups. This is not a new proposal and has been the subject of

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<sup>6</sup> KPMG 2015, *National Collaborative Research Infrastructure Strategy Project Reviews - Overarching Report*, p. 7. Produced for the Department of Education and Training.

<sup>7</sup> Department of Industry, Innovation and Science, 2016, *R&D Tax Incentive Review Issues Paper*.

widespread discussion and support in the past. Allowing companies to access their benefits earlier would lead to improved cash flows and support further investment in R&D.

Other countries are reviewing their R&D tax system to improve access for SMEs. A review of the Canadian Scientific Research and Experimental Development (SR&ED) tax credit in 2011, for example, recommended limiting the base for the tax credit for SMEs to labour-related costs, with compensating increases in the tax credit rate. This reduces the complexity and compliance costs for SMEs and the need for third-party consultants.

Advanced knowledge economies require a pipeline of highly-skilled researchers. Belgium, for example, has introduced a partial salary withholding tax exemption to reduce the employment costs of qualified researchers. By subsidising business investment in highly skilled graduates, the tax incentive would also help to expand a highly skilled research workforce.

## 5. Administration

Universities Australia recommends that Innovation and Science Australia remains part of the advisory structure for the R&D Tax Incentive. While moving to a single agency model may provide some administrative savings, the removal of strategic oversight could reduce the necessary coordination of the tax incentive with other innovation programs and initiatives. The creation of Innovation and Science Australia is a commendable initiative and it is important that this body has the ability to shape innovation policy in the national interest and for the long-term.

The issues paper includes a suggestion from the Centre for International Economics (CIE) that a pre-registration process would likely increase the consideration of the Tax Incentive in firms' decision making, thereby increasing the likelihood of claims generating additional R&D. The CIE also noted that this type of approach has been adopted in Norway, whose program has reported high additionality rates.

Universities Australia supports further consideration of this approach, taking into account the international evidence. If a substantial number of firms are simply utilising the tax incentive as a means for receiving a windfall gain, it is unlikely that additional R&D will have been stimulated.

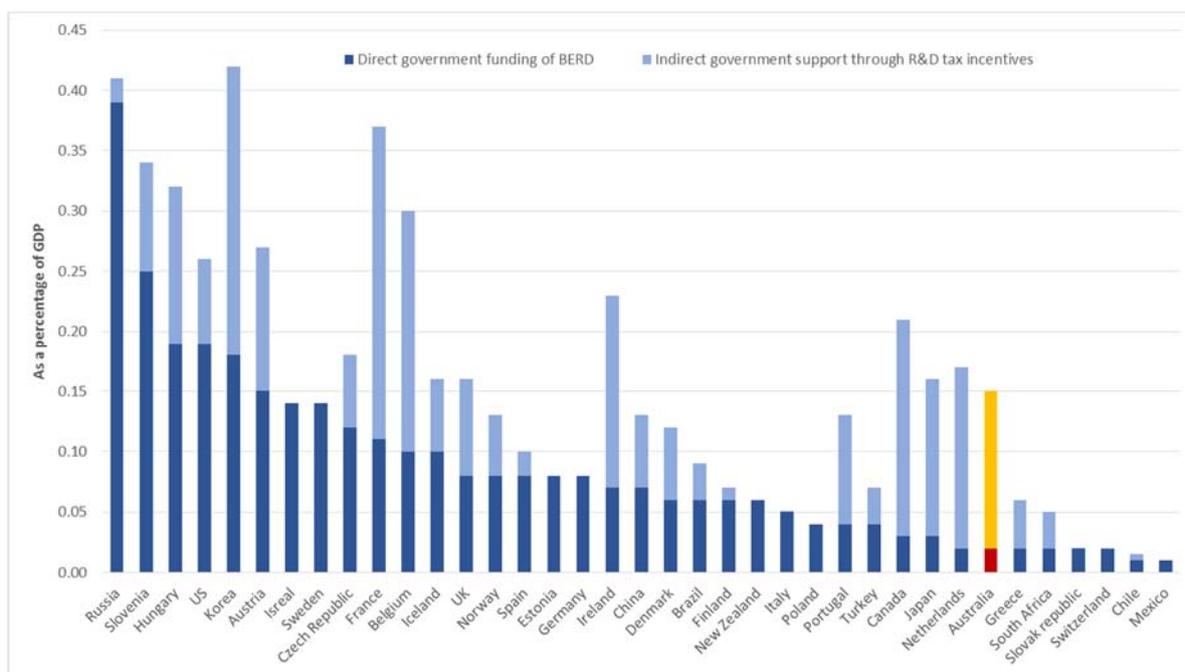
## 6. Balance between direct and indirect support for business innovation

Australia is unique in the extent to which it relies on indirect incentives.<sup>8</sup> As highlighted in the 2015 *OECD Science, Technology and Industry Scoreboard*, Australia ranked equal second last for the amount of direct government funding as a proportion of GDP for business R&D, but ranked 7 out of 37 countries for indirect government support through R&D tax incentives.

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<sup>8</sup> Bell, J, Dodgson, M, Field, L, Gough, P & Spurling, T 2015, *Translating research for economic and social benefit: country comparisons*, Report for the Australian Council of Learned Academies.

Figure 3: Direct government funding of business R&D and tax incentives for R&D, 2013



Source: OECD 2015, *Science, Technology and Industry Scoreboard 2015*, p.170.

The advantage of an indirect tax-based approach to innovation is that decisions about what R&D to undertake, and when, are the responsibility of the company taking into account its particular and unique circumstances. Unlike grant applications, tax incentives do not discriminate between eligible businesses based on sector or opportunity. However, this also means that indirect tax incentives are blunt, untargeted instruments and are not necessarily the best tools to achieve specific policy objectives, like boosting industry–research collaboration or maximising spillover benefits from public funding of private R&D.

Not every R&D activity will deliver the same level of social and economic return, and not every business is equally in need or equally responsive to public support. Direct funding can better target the parts of the sector that most need support and at types of innovation that deliver the greatest benefits. The OECD has highlighted that direct subsidies are more targeted towards long-term research and R&D tax schemes are more likely to encourage short-term applied research and boost incremental innovation rather than radical breakthroughs.<sup>9</sup>

While the R&D Tax Incentive will remain an important mechanism to support innovation, it needs to be seen as part of a system that also includes more direct and targeted incentives. Universities Australia recommends the Government rebalance the mix of direct and indirect funding by increasing direct expenditure support for innovative and collaborative businesses, especially SMEs.

Other leading innovation nations have been reviewing their innovation policy mix to deliver a more balanced and coherent suite of programs and supports. Like Australia, Canada's

<sup>9</sup> OECD 2014, *Science and Technology Industry Outlook 2014*, OECD Publishing, Paris p. 156

program mix was heavily weighted towards a single indirect tax incentive program. The Canadian review of its SR&ED tax incentive recommended redirecting expenditure from the SR&ED to a range of targeted programs for SMEs. In particular, the review recommended reducing the refundable portion of the incentive for individual SMEs after a certain number of years of accessing the incentive, with all savings redirected to direct support for SMEs. More mature businesses would only continue to access the benefits of the SR&ED tax incentive once they had made the transition to profitability.

The United States has a range of grant programs to drive business innovation and collaboration. The United States Small Business Technology Transfer (STTR) program, for example, has been in place since 1994 and has been successful in lifting the level of commercialisation by SMEs of publicly funded research. To be eligible for a STTR award, a small business must collaborate with a non-profit research institution such as a university, a federally funded R&D centre, or similar organisation. In the period 2001–12 around \$US262 billion was awarded through this program.

Canada's Engage Grants are targeted at assisting SMEs to solve a company-specific problem through university–SME collaboration. Denmark provides Innovation Vouchers to SMEs to facilitate their access to public sector research, with a specific focus on research translation. While Australia has a number of programs that support industry–research collaboration, their scale is substantially smaller than equivalent programs in other countries and have suffered from cuts and changes that reduce the willingness of businesses to engage.

Non-financial support measures, like mentoring and network development are an important component of the overall policy mix, and are particularly effective for SMEs and startups. Increasing the level of research, science and innovation expertise in senior management positions and the employment of research trained staff in industry are also important ways to create long-term cultural change in industry.

Universities Australia welcomes the researcher mobility initiatives in the NISA and supports the further development of industry researcher and higher degree research student and graduate secondment and mobility programs. A number of schemes already exist at the institutional level but additional support would enable these programs to be scaled up and industry visibility and engagement to be improved.

Scale, visibility and stability are essential for securing the cultural shift needed in both universities and business to reap the tremendous value of collaboration and engagement.