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The Secretary
Senate Standing Committee on Economics
Parliament House
Canberra ACT 2600

Dear Sir

Tax Laws Amendment (Research and Development) Bill 2013

In the view of the Academy of Technological Sciences and Engineering (ATSE)¹, this legislation is flawed and should not be passed. ATSE is concerned that passing this Bill would have severe impacts on Australia's productivity. ATSE finds it difficult to understand the arguments presented to justify this Bill.

Technological innovation, underpinned by research and development (R&D), is a key driver of productivity and international competitiveness for Australia. Large companies play an important role in driving innovation through investment in R&D. Given the priority to lift productivity in Australia, ATSE has strong concerns regarding the adverse impact that this Bill is likely to have on large companies and their investment in R&D in Australia.

ATSE urges the Committee to consider the following key suggestions:

1. Ensure that a rigorous evidence-based approach is taken in analysing this Bill, and that this approach is reflected in the Committee's report to the Senate
2. Recognise and take steps to avoid unintended consequences of driving R&D investment offshore (including loss of employment and related spill-overs as well as negative impacts on some large Australian companies).

Further comments on these suggestions follow.

¹ ATSE advocates for a future in which technological sciences, engineering and innovation contribute significantly to Australia's social, economic and environmental wellbeing. The Academy is empowered in its mission by some 800 Fellows drawn from industry, academia, research institutes and government, who represent the brightest and the best in technological sciences and engineering in Australia. The Academy provides robust, independent and trusted evidence-based advice on technological issues of national importance. ATSE fosters national and international collaboration and encourages technology transfer for economic, social and environmental benefit.
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1. Ensure that a rigorous evidence-based approach is taken in analysing this Bill, and that this approach is reflected in the Committee's report to the Senate

ATSE advocates a rigorous, evidence-based approach. It notes that the explanatory memorandum states under '*compliance cost impact*' that the Office of Best Practice Regulation has determined that a regulatory impact statement is not necessary. While ATSE understands that these sorts of Bills are not normally subject to regulatory impact statement requirements, it feels that the Committee should be provided with detailed information that would be normally be found in such statements.

Given the likely impact of the Bill on industry R&D expenditure in Australia, and that the R&D tax incentive program has only been running for a short period of time, it is important that the Committee has access to detailed information regarding the cost, benefits and impacts of the Bill including whether there could be adverse impacts on the profitability and productivity of businesses that perform R&D in Australia.

2. Recognise and take steps to avoid unintended consequences of driving R&D investment offshore

Loss of business investment in R&D in Australia

The Second Reading Speech contains a statement that the measure "targets access to the research and development (R&D) tax incentive to the small and medium sized entities". However, the Bill does not change the ability of, or the extent to which, small and medium sized enterprises (SMEs) access the incentive. Furthermore, a proposal in relation to the quarterly tax credits, which ATSE notes has been deferred for further consultation, would have a very significant impact on the efficacy on the growth and stability of SMEs.

The Second Reading Speech also states that SMEs are more responsive (than big companies) to increasing their R&D spending as a result of incentives. ATSE knows of no evidence to support this claim. The ability of SMEs to undertake R&D changes as their fortunes change. Larger companies are much more stable and make larger, longer-term investments in R&D. Unlike SMEs, large companies have the capacity to take up and use their research outcomes rather than having to raise money for the expensive commercialisation stage. Therefore research performed by large companies is likely to have a greater return on investment than smaller company research favoured by the legislation.

The \$20 billion threshold creates problems, because companies that are achieving results approaching this figure will not know until well after the end of the financial year whether or not they will benefit from the incentive. For such companies, there is effectively no incentive.

The Explanatory Memorandum implies that the Bill will have no impact on business expenditure on R&D in Australia. However, ATSE notes that a significant proportion of business expenditure on R&D in Australia is performed by large companies (more than 68 per cent according to the 2013 Innovation Systems Report). The majority of these large companies are multinational and are capable of shifting their R&D to whichever country provides the greatest incentives. By removing access to the incentive, some large companies that currently invest in R&D in Australia may move some or all of this investment overseas.

This would have a major multiplier effect as it is the R&D personnel in large companies that form the receptors (or bridges) between industry and the academic and government-funded researchers. There is likely to be a double impact, not just the research shifting off-shore, but a loss of those capable and experienced in collaborating with our universities and our research institutions, such as CSIRO. Australia's relatively poor position in terms of collaboration would only get worse as a result.

ATSE is most concerned that there will be significant and adverse impacts from this Bill on investment in R&D in Australia.

Loss of employment and related spill-over benefits

Large companies undertaking R&D in Australia employ Australian graduates including PhDs. When these employees move jobs, they take with them R&D skills and knowledge, often to the benefit of other companies operating in Australia. The employment of researchers by large companies generates secondary employment in the community. For every researcher employed, additional jobs are created in the Australian economy, ranging from technicians servicing research equipment to the services sector (e.g. banking, retail and food). Australia could lose some of these benefits if this legislation drives large companies to invest in R&D elsewhere.

Large companies also collaborate and contract with Australian firms, resulting in transfers of technology and expertise. Over the past two decades large companies in Australia have progressively reduced their in-house research effort in favour of contracting research to public sector research organisations and universities. This has seen these companies investing heavily in special research centres, endowing professorial chairs and providing scholarships. Universities have benefitted by acquiring world-class facilities and people, and industry has benefitted through the availability of trained people who have an understanding of its needs and an orientation towards practical rather than purely academic outcomes. Only large companies have the capacity to make this type of investment, so removing much of their incentive to do this will see a reduction in their interest in providing such strategic support for new technology development and application.

The secondary employment and related spill-over benefits of the sort noted above will be lost if large companies, no longer eligible for the incentive, move their research offshore. In some cases, it could even lead large companies to decide to relocate their entire operations offshore. According to media reports, several countries are already approaching companies likely to be affected by this legislation.

Instability impedes effectiveness

The Explanatory Memorandum reflects a lack of understanding of the decision-making processes and long-term nature of R&D expenditure in large companies. R&D is mobile prior to any decision about where it is conducted. After that decision is made the R&D will be completed in the most cost effective place and the funds are no longer mobile. If there is any uncertainty regarding the ultimate cost of conducting R&D because of the threshold being capped this will have a negative impact on the decision-making processes about where the R&D is conducted. Competitor countries compete for such activities, rather than providing disincentives.

The Second Reading Speech states that the Bill “reduces waste by ensuring that government incentives for R&D are applied in a more effective way”. Again, ATSE knows of no evidence to support this claim. A key rationale for providing incentives for R&D is that, in the absence of government support, firms would under-invest. This applies equally to all sizes of firm.

With any government incentive, stability is essential to effectiveness. Australian governments, over the years, have sought to encourage foreign firms to invest in Australia and to undertake R&D here. Large foreign firms have been the target of marketing campaigns by Invest Australia and Austrade. This Bill could be counter-productive to these efforts, by implying that foreign firms cannot rely on stable R&D incentives in Australia.

ATSE believes that collaboration between publicly funded researchers, cutting-edge technology SMEs and large businesses (who can both assist in the development of new technology and act as customers for it), supported by technology intermediaries, such as Cooperative Research Centres (CRCs), provides a powerful model for innovation in Australia. This model would be placed at risk by this legislation as large companies would have less incentive to pursue longer term strategic research and would instead confine their research to tactical, short term problem solving projects. New CRC proposals already confront considerable problems in raising the required matching funding from industry. Some SMEs only participate because they have the comfort of a large company co-investing, so passing this legislation would run the risk of further reducing the already diminished number of CRC applications that are not just for public benefit.

Unrealistic cost savings

The Explanatory Memorandum states that the Bill is estimated to provide savings of \$1.1 billion. This estimation presumably assumes that all the large companies will continue to invest in R&D in Australia and deliver benefits to the economy. However, it would be most surprising if this turned out to be the case. Although existing arrangements would be likely to stay in place until work was completed or contracts honoured, there is little question that large companies driven by targets to support their share price and by cost reduction programs to remain internationally competitive, would rearrange their affairs to minimise the impact of the tax changes on their businesses.

Given that the last round of amendments to the incentive occurred only recently, past claims are not likely to provide a reliable basis for estimating possible savings from the adoption of this Bill. Even if these savings to the budget are realised, the Australian economy as a whole can be expected to be worse off as business R&D expenditure declines.

Finally, ATSE is dismayed at the prospect that large Australian companies will be particularly disadvantaged because all their income (whether earned in Australia or overseas) is likely to be assessable while, for foreign companies undertaking R&D here, only income derived in Australia will be assessable. It is difficult to understand how the Parliament could agree to such a discriminatory approach.

I trust these brief comments are useful. The contact here at ATSE is Harriet Harden-Davies

Yours sincerely

Dr Alan Finkel AM FTSE
President