Promoting Innovation in Australia

Research and Development Tax Incentives
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The authors would like to thank the anonymous company and Australian tax authority representatives for sharing their experiences and insights on R&D tax incentives.
Abstract

Australia has almost 30 years of experience with various models of tax deductions for Research and Development. Since 2011, the R&D Tax Incentive has been the Australian Government’s main programme for promoting innovation and creating incentives for research collaborations between industry and science. In the 2012/2013 fiscal year, AUD 2 billion (approx. EUR 1.7 billion) were dedicated to R&D tax rebates, almost a quarter of the entire public research funding. Project funding, which is the main form of research funding in Germany, plays a much smaller role in Australia.

The political objectives of the new R&D Tax Incentive are:

- Generous benefits and wider access to the funding, in particular for small and medium-sized enterprises (SMEs) and for international R&D
- Increased funding certainty
- Clear eligibility criteria and definitions

First assessments by the tax authorities suggest positive effects of the new scheme:

- More than twice as many SMEs are participating in the R&D Tax Incentive compared to the previous programme; meanwhile the number of applications made by larger companies has fallen
- The R&D expenditures for which a tax credit has been claimed have increased by approx. 15%, with SMEs holding a larger share
- International R&D activities have risen by a factor of 10

An industry survey carried out for this study among 10 companies in Australia finds general approval of the R&D Tax Incentive. Start-up companies in particular value the R&D Tax Incentive as significant financial support for building up R&D activities. Large companies regard the R&D Tax Incentive as a useful bonus. For foreign companies carrying out research in Australia, intellectual property rights have been significantly relaxed, and some R&D activities carried out abroad are now eligible for tax credits.

Recommendations to policy makers for designing future R&D tax models include:

- Clear mandates and structures for tax authorities
- Continuity and simplicity in rules and criteria
- Timely payments for start-ups
- Targeted information for specific company categories/stages
- Confidentiality in collaboration with fiscal institutions
Introduction

In 2012, OECD member states on average invested 0.8 percent of their gross domestic product (GDP) in promoting research and development (R&D). 27 of the 34 OECD countries and some non-OECD economies support research and development in companies indirectly through tax incentives. In Germany, too, it has been discussed for years to supplement the currently dominating direct research funding (project funding) with tax incentives for R&D, in order to remain internationally competitive in research and innovation. In Australia and Canada, government spending on R&D tax concessions is five times as high as direct research funding (OECD, 2013), with Australia having almost 30 years of experience with two different systems of R&D tax breaks.

This study1 presents both Australian R&D tax schemes, 2) provides initial estimates on the effectiveness of the current R&D tax model and 3) offers recommendations for existing and future R&D tax schemes.

The first part of the study is based on publicly available reports from the Australian tax authorities. The effects of the current tax scheme and recommendations for existing and future models were gathered mainly on the basis of interviews with companies and representatives of companies in Australia. In order to gain a wide range of opinions on the tax incentive and on experience with it, a total of 10 interviews were carried out with representatives of various companies. These included technology companies (two multinational companies, four SMEs), tax consultancies (three of the Big Four auditing companies) and one of the two biggest Australian providers of seed funding for start-up SMEs. The interviewed company representatives came from the following economic and service areas:

- Press and Communication
- Chemical, oil, gas and plant protection
- Energy, mobility, building and drive technology, nanotechnology
- Pharmaceutical and health care
- Auditing and tax consultancy
- Seed capital provider

The technology companies represented both industries with locations solely in Australia as well as multinational companies with subsidiaries in Australia and headquarters in Germany. The size of the R&D divisions varied from small R&D departments with 1 to 10 researchers up to research centres with several hundred R&D employees. As part of the questionnaires for companies and tax authorities (see appendix), semi-structured interviews were carried out with general managers and employees in the tax accounting teams of these organisations. The evaluation includes information from an Australian academy that advises the Australian Government and public on innovation policy. Furthermore, contributions from an Australian company for employers in the areas of R&D and technical innovations as well as results of an industry survey (Thomson Reuters, April 2013) were included.

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1 The Australian Taxation Office defines small companies as companies with annual turnover of less than AUD 2 million, while medium-sized companies have a turnover of between AUD 2 and 250 million (Australian Government – Australian Taxation Office, 2014).
Tax deductions for research in Australia: Thirty years, two models

Tax deductions for R&D have been one of the key elements of the Australian government's innovation policy for almost 30 years. In the 2012/2013 financial year, AUD 2 billion (approx. EUR 1.7 billion) were dedicated to R&D tax rebates, almost a quarter of the entire public research funding. Project funding, which is the main form of research funding in Germany, plays a much smaller role in Australia.

The original model, initiated in 1985, was based on a tax concessions for R&D expenditure, had been modified several times and was finally replaced by a new system of tax credits in 2011 (see Fig. 1).

The “R&D Tax Concession”: Tax deductions for industry R&D

In 1985, Australia introduced an R&D Tax Concession as a new element of its industry and technology policy. It aimed at supporting Australia to develop into an internationally competitive, export-orientated and innovative economy by providing funding for private sector research investments (see Cutler 2008: 102).

Key elements

The R&D Tax Concession allowed for income tax deductions on in-house and procured R&D, if expenditure for research and development activities exceeded AUD 20,000 per year or the R&D was contracted to an external research agency. The Tax Concession was widely used and not restricted to individual industries, with the companies deciding upon the scope and schedule of their R&D activities (Australian Taxation Office & AusIndustry 2010: 11).
In 2001, the funding system was modified and transformed into a combination model comprising four essential elements:

- **The actual R&D Tax Concession**: A deduction from assessable income of up to 125% (1986–1997: up to 150%) of eligible “Australian-owned R&D activities” for companies when lodging their income tax returns.

- **An R&D Tax Offset for SMEs with a negative tax burden, usually start-ups**: Loss-making firms were able to have the equivalent of the 125% R&D Tax Concession paid out (minus other tax due). The R&D Tax Offset was restricted to companies with an annual turnover of under AUD 5 million and R&D activities eligible for funding of between AUD 20,000 and AUD 1 million (from 2009 to AUD 2 million).

- **An additional 175% Premium R&D Tax Concession in the form of incremental funding**: Companies that increased their R&D intensity above a basic value were able to offset the additional expenditure at 175 percent of the business tax. The average of the R&D expenses submitted for the three previous years was used as the reference value.

- **An 175% International Premium R&D Tax Concession** was available for increases in foreign-owned R&D activities that were carried out by companies incorporated in Australia.

From 2007, multinational corporations were eligible to claim tax deductions on R&D activities carried out in Australia (Australian Taxation Office & AusIndustry 2010: 10f.).

For all elements the same basic rule applied: Research activities had to be carried out predominantly in Australia to be eligible. Projects were only tax deductible if no more than 10 percent of the entire R&D costs were incurred abroad (Australian Taxation Office & AusIndustry 2010: 11).

**Impact: Increase in research, but little innovation**

To date, no comprehensive, publicly available evaluation of the effectiveness of fiscal funding for research in Australia has been conducted. This is partly due to legal barriers protecting tax information, and also due to the lack of long-term data around matched datasets (Cutler 2008: 101). Trend analyses do exist for individual elements, but these only cover short periods of time and offer little qualitative evidence (e.g. Australian Government 2007).

The Australian Taxation Office and AusIndustry assume the R&D Tax Concession to have generally had a positive effect, especially in terms of:

- Accelerated progress of R&D activities and marketability achieved sooner
- Better understanding of the benefits of R&D
- Higher R&D commitment in industry
- Improved R&D management

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2 Australian-owned R&D activities are defined as R&D expenditure for which the resulting intellectual property rights remain in Australia (Australian Taxation Office & AusIndustry 2010: 10).

3 Foreign-owned R&D activities are defined as R&D expenditure, for which the resulting intellectual property rights remain abroad (Australian Taxation Office 2010: 10).
- Improved business strategy
- Improved collaboration with universities (this final point is not backed up by statistical evidence, however – see below).

The R&D Tax Offset introduced in 2001 was deemed to be particularly successful. Within the first three years, R&D expenses submitted for a tax credit by loss-making SMEs had doubled (Australian Government 2007: 4). However, it is assumed that the growth not only reflects additional R&D investments, but that many smaller companies had not previously claimed research activities as there had been no immediate funding incentives. Furthermore, an abrupt cut-off of research investments can be seen at the AUD 1 million funding threshold (Australian Government 2007: 7 and Cutler 2008: 8).

Examining aggregated economic data produces a mixed picture. Business Related Expenditure for Research and Development (BERD) show impressive growth and suggest a strong correlation with tax policies: Within just a decade, Australian R&D expenditures increased six-fold from approx. AUD 0.7 billion in 1985 to almost AUD 4.5 billion in 1996. After a minor fall from 1997 (coinciding with a reduction of the Tax Concession rate), research activities in industry increased considerably again in the first few years of the new millennium (following the introduction of additional elements) (ABS 2006; see Fig. 2).

The “Cutler Review”, one of the baseline studies of the Australian innovation system commissioned by the Australian Government, however, advises caution in imputing causation: “One question is how much of the growth was driven by the internationalisation of the Australian economy in the 1980s and the resulting need for trade exposed companies to innovate to be competitive, as opposed to the effects of the Tax Concession” (Cutler 2008: 103). Furthermore, from 2000, it is difficult to separate the effects of the R&D Tax Concession from those of other innovation programmes, i.e. the expansion of the Cooperative Research Center program (Cutler 2008: 103).

The sharp rise in research investments in the Australian economy has, however, no longer been reflected in increased productivity growth since the start of the new millennium. Following a productivity boom in the 1990s, multi-factor productivity in Australia has grown at a much slower rate than the OECD average since 2002. In
recent years, productivity growth has been flat or even negative (Parham 2012; Cutler 2008: ix). This can, in part, be explained by the sharp increase in investments in the mining sector: rising commodity prices leading to the exploitation of even remote mineral resources, which results in productivity losses (Parham 2012: 45f.). The Australian Government in its 2012 Australian Innovation System Report, however, believes that the low innovation capacity of the Australian economy is likely to be an essential factor for the stagnation of productivity: “Australia’s rate of innovation appears to be relatively slow compared to leading OECD countries. This is especially stark for large Australian businesses which rank almost last in the OECD on innovation and collaboration despite their larger expenditures on intangibles such as R&D”. A large proportion of the research spending is being invested in adapting and modifying innovations carried out abroad rather than creating genuine innovations (DIISRTE 2012b: X).

The R&D Tax Concession has also failed to improve the cooperation between universities and the private research sector. On the contrary, the proportion of innovative companies collaborating with universities fell between 2006 and 2011 to just 9.5 percent – a decline by more than a fifth (DIISRTE 2012b: XI).

The persistent lack of innovation in the Australian economy prompted the Government in 2008 to commission a comprehensive study on the state of the innovation system and to work on recommendations for a more focused and efficient innovation policy. The resulting “Venturous Australia. Building Strength in Innovation” report (the “Cutler Review”) criticised the R&D Tax Concession as being inefficient and gave specific recommendations for a fundamental reform of fiscal funding for research.

The Cutler Review found the following shortfalls of the Tax Concession scheme (Cutler 2008: xii, 104-106):

• Lack of funding for start-ups: Only companies that were already in tax profit benefited from the R&D Tax Concession. Many of the most innovative companies, e.g. in the biotechnology sector, however, only reach the profitability threshold after several years of research investments. The introduction of the R&D Tax Offset for companies with a negative tax burden only solved part of this problem since the eligibility criteria were very narrow and only small companies were able to apply.

• Lack of planning ability, low incentives: The assistance the R&D Tax Concession has provided was subject to fluctuation and generally continued to fall. With the reduction in the rate of concession from 150 to 125 percent, and due to several falls in the rate of corporate tax, the effective value of the Tax Concession was reduced to less than 1/3 of its original value over its lifetime. Furthermore, the indirect calculation of the Tax Concession “below the line” at the end of the financial year meant that it was often “invisible” for business when making their financial decisions.

• Fragmentation and complexity: The introduction of additional elements as well as multiple changes to the criteria and definitions of eligible research expenses led to a fragmented and complex scheme. Several big lawsuits appeared before the High Court due to ambiguous definitions of the eligibility criteria (in particular around the terms “innovation”, “high technical risk”, “core technology” etc.).

Based on the “Cutler Review’s” recommendation to move to a new funding scheme which uses tax credits, the “R&D Tax Incentive” was introduced in 2011.
The current “R&D Tax Incentive”: Tax credit based on international “best practice”

Based on the recommendations of the Cutler Review, the Australian Government introduced a new “R&D Taxi Incentive” as part of their 2009 Innovation Agenda.

This new volume-based R&D tax credit system replaced the previous regime for tax years commencing on or after 1 July 2011. The R&D Tax Incentive explicitly geared towards international “best practice” and was designed in the style of tax credits in the US, Japan and some European countries in order to attract more international investments: “The new system will be familiar to international firms headquartered in these places, making Australia a more attractive destination for foreign R&D investment in defence, pharmaceuticals and a host of other industries” (DIISR 2009:47).

What’s different?

The Government states the following points as the most important changes in the “R&D Tax Incentive” (DIISR 2009: 47; AusIndustry 2012):

• Generous benefits and wider access to the funding, in particular for small and medium-sized businesses as well as for international R&D
• Increased funding certainty through linking the business tax and the possibility of an initial enquiry into the eligibility for funding
• Clear definition of research and development activities

Programme components

The R&D Tax Incentive allows eligible companies to claim a tax break for the money they spend on internal R&D. Eligible research expenditures are deducted from the income tax owed by a company, and thereby directly reduce the the tax burden.

The programme has two core components (AusIndustry 2010):

• a 45% refundable tax offset for eligible entities with an annual turnover of less than AUD 20 million. This corresponds to a tax rebate of 150% in the old regime. For companies that are exempt from income tax, the tax credit can be paid out (cash refund).
• a 40% non-refundable tax offset for all other eligible entities (annual turnover of at least AUD 20 million). For these companies there is no possibility of a refund, but tax credits that are not claimed can be carried forward indefinitely.

The Australian Government has announced its intention to change the rates of assistance to 43.5 and 38.5 per cent respectively. This change requires further legislation (business.gov.au 2015).
Eligibility

The range of eligible companies has been expanded. The R&D Tax Incentive is no longer limited to particular industries and can be accessed by:

- entities that are incorporated under Australian law
- Foreign companies resident in Australia for tax purposes
- Foreign companies with headquarters in a state that has a double taxation agreement with Australia and carries out R&D activities at a permanent establishment in Australia (InvestVictoria 2011; www.AusIndustry.gov.au).

The general requirement is that at least AUD 20,000 research costs are incurred each year and that this research is carried out for the company itself. The company must bear the technical and financial risk for the R&D and must own the intellectual property rights for evaluating the research results.

The rules relating to intellectual property rights have been significantly relaxed: Foreign companies carrying out research in Australia can apply for the R&D Tax Incentive, even if the intellectual property rights are owned by a parent company abroad.

Another new element is that a large part of the research can be physically performed outside Australia if at least 50% of total project costs are incurred in Australia. If the foreign activities have direct links to the core activity in Australia, tax credits can be claimed for R&D costs incurred abroad under certain circumstances.4

In February 2015, the Australian parliament passed a controversial bill limiting the amount for which companies can claim R&D tax breaks to AU$ 100 million. The new legislation applies retrospectively from July 1, 2014. The government expects, however, that the cap would affect fewer than 25 companies, above all mining giants and multinational corporations (Spencer 2015).

R&D expenditure eligible for funding

The program distinguishes between core and supporting activities.

Core R&D activities are defined as experimental activities,
- whose outcome cannot be determined in advance,
- and is conducted with the aim of acquiring new knowledge.5

Supporting R&D activities are activities that are directly related to core activities.

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4 (1) no access to facilities or expertise in Australia, (2) activities require access to population of living objects not available in Australia, or (3) activities require access to geographical or geological features not available in Australia.
5 Qualifying expenditure can include costs for research activities (e.g. salaries for scientists, administrative costs, costs for research providers and research cooperation in Cooperative Research Centers), as well as the depreciation of assets.
Some activities are explicitly excluded from funding, in particular the exploration of natural resources, the development of software for internal business administration, market research and management studies as well as social science research.

Cooperation with universities and research institutions

To encourage the transfer of knowledge between universities and industry, the current scheme makes it easier to claim for the costs of cooperative projects.

Companies involved in Cooperative Research Centers (CRCs)\textsuperscript{6} can claim the full amount of their contributions to CRCs through the R&D Tax Incentive. Services of external research providers can also be claimed. In both cases, the minimum value of AUD 20,000 does not apply.

Management

Like its predecessor, the R&D Tax Incentive Scheme is jointly run by AusIndustry (a division of the Department of Industry and Science) and the Australian Taxation Office (ATO).

To claim an R&D Tax Offset, companies have to register their R&D activities annually within 10 months of the end of their income year. An „advanced finding“ can be applied for to allow for certainty that the activity is considered eligible for tax offsets.

Effectiveness: Initial indicators

The most recent macro-economic data of the Australian Bureau of Statistics available show a moderate 2% rise in Business Expenditure on Research and Development (BERD) from the 2010/11 to the 2011/12 financial year, to a total of AUD 18.3 billion. In the same period, however, the research intensity (BERD as a proportion of GDP) fell slightly from 1.28 percent to 1.24 percent (ABS 2013).

To date, there has been no comprehensive evaluation of the new Tax Incentive Scheme. The biannual evaluation scheduled for late 2013 had been delayed due to the elections and the change in government. The current government has announced that the evaluation of the R&D Tax Incentive would be integrated into a general tax review. Treasurer Joe Hockey has announced a Taxation White Paper which is expected to be released later this year.

First surveys have come to different conclusions about the effectiveness of the new tax scheme. A non-representative survey of 171 enterprises suggests that 84% of the companies had not increased their R&D expenditure after the introduction of the R&D Tax Incentive. (Thomson Reuters 2013) In contrast, a first internal evaluation of the R&D Tax Incentive by the tax authorities found that:

\textsuperscript{6} The CRC Programme supports industry-led collaborations between researchers, industry and the community. The CRC Programme was established in 1990 and since then CRCs have developed important new technologies, products and services that help solve major economic, environmental and social challenges facing Australia. In 2014-15 there are 35 active CRCs in areas as diverse as hearing, healthcare, pest management, bushfire and natural hazards management, financial markets security and the auto and aerospace industries. As well as commercialising leading-edge research taking place in our universities and research institutions, CRCs are producing graduates with hands-on industry experience. This is helping create a highly-skilled workforce for the nation (Australian Government, 2015).
more than twice as many SMEs were participating in the R&D Tax Incentive compared to the previous Tax Concession,

the number of applications by larger companies had fallen,

the claimed R&D expenditures had risen by approximately 15%, with SMEs holding a larger share,

a 10-fold increase in R&D activities abroad. (Interview with the Tax Institute)

These findings are consistent with the interviews conducted for this study which are discussed in the following chapters.
Evaluation of the R&D Tax Incentive by companies and business-related organisations

Overall evaluation

All of the companies surveyed in this study consider the new R&D Tax Incentive to be a very appealing and useful tool. One of the tax consultancy organisations believes that most users of the new tool are very satisfied with it (approx. 7–8.5 out of 10 companies). The cost-benefit ratio was assessed to be worthwhile by all survey participants. Start-up companies in particular value the R&D Tax Incentive as essential financial support for establishing R&D activities. For large companies, the R&D Tax Incentive is a very helpful bonus; for small SMEs it is an income which is taken into account in strategic planning. However, large and small companies differed in their opinions about the extent to which the prospects of tax reliefs influence their R&D investment decisions:

Large companies

The large companies surveyed stated that potential R&D tax reliefs do not influence their decisions for or against starting certain projects. The tax incentive bonus therefore is not included in project planning and development. However, R&D tax reliefs are integrated in the project budget, in order to make direct use of them within the running project.

The possibilities of the tax reliefs are included as an important location factor in the discussion when new company branches or regional company centres are planned because ownership and use of the intellectual property rights of R&D results are part of strategic location decisions. In the Asian-Pacific region, the use of the intellectual property from R&D activities in Australia is seen as a significant competitive advantage over Singapore.

Small and medium-sized companies

In small companies registered in Australia with relatively small R&D departments and therefore also few R&D activities and costs, the R&D Tax Incentive is less used for strategic planning. These companies make their strategic decisions in order to fulfil customer requirements and not political targets. Such companies therefore perceive the R&D Tax Incentive as a bonus for their relatively limited R&D activities.

However, if the R&D activities represent a significant part of the overall activities of the company, such as in clinical biotechnology trials, the SMEs surveyed make use of the tax relief in a strategic manner. This may influence e.g. decisions on whether to carry out R&D activities abroad (perhaps because special technology, infrastructure or research personnel are available abroad) or to reinvest the tax savings in building up further R&D activities.

The Australian organisation for companies in the R&D and technical innovations also values the R&D Tax Incentive as a very appealing offer for SMEs. However, a lack of continuity in these tax relief measures was pointed out. Numerous major changes in the scope and application requirements within the last 10-15 years have made it difficult for SMEs to effectively use the tool within the normal duration of a company’s lifecycle.

Furthermore, delayed payment of the tax credit, sometimes up to one year after submitting the application, was perceived as a problem. Such delays can have a serious
effect, especially for technological start-up companies with very tight capital resources. Many SMEs are disappointed about the decision against the introduction of a quarterly payment option for the tax bonus.

It was also emphasised that the success of the R&D Tax Incentive must not be looked at separately but in the context of framework factors such as basic capital, company culture, coordination processes and trust, which often constrain successful collaboration between SMEs and scientists in Australia.

Introduction and application

Overall, the companies assessed the effort to apply for the R&D Tax Incentive as reasonable. Although the documentation for R&D activities is time-consuming, it is justified if one considers the benefits. The effort required for the documentation is reduced if the company has well-organised R&D documentation systems in place.

Small and medium-sized companies

In small SMEs the director, who is familiar with all the R&D activities, determines for which R&D expenditures tax reliefs could be requested. Since the biotechnology sector generally keeps records more intensively, the documentation required for the R&D Tax Incentive does not usually involve any additional work.

One company surveyed with a small R&D department only found out about the possibilities of the R&D tax relief for individual R&D-related activities, such as software development, approx. 3 years ago. Since, due to the small size of the company, it does not have its own tax experts, it is supported by an auditing and tax consultancy organisation, which specialises in tax relief. This tax consultancy organisation advises the business on an annual basis. As part of this, all new projects are systematically examined to see whether there are any possibilities for applying the R&D Tax Incentive. The tax consultancy organisation carries out the entire process and identifies all activities that could potentially be funded and collects the individual documentation elements to develop the final document.

Large companies

In larger companies external R&D tax experts advise the strategy department. The experts use checklists for standardising the information required each year and provide intermediate updates on the legislation, if necessary. The checklists guide the strategic controllers in identifying which R&D activities are definitely, potentially and not eligible for funding through tax reliefs. Based on the check lists and other tax information, the controllers of the business division in the R&D subject areas are given annual training to identify as much expenditure as possible for R&D expenditure. Furthermore, the managers of the research laboratories and technicians in the R&D area are advised on the need for better documentation and an increased awareness, in order to correctly monitor all R&D activities. The consultation and trainings are aimed at expanding the R&D understanding of economists, managers and technicians beyond the traditional scope of laboratory research, and thereby also including activities that support R&D, such as preparatory studies.

The responsible R&D employees complete a form containing the checklists. The external advisor prepares the R&D application and advises the company on the potential
reimbursement of R&D expenditure before the documents are submitted. In a second step, consultants from the corresponding technical and industrial sectors examine in more detail whether there are any more potential R&D activities for which tax reliefs may be claimed. The final form is then submitted to AusIndustry.

Tax consultants

As a consequence of the relatively frequent changes in the tax initiatives in recent years and the related difficulties in documenting and evaluating the potential funding eligibility of R&D projects and activities for companies, an increasingly growing tax consultancy sector has emerged in Australia. According to the Thomson-Reuters study (2013), 72% of companies surveyed invest in external consultants for advice when applying for the R&D credit. In addition to growth in the consultancy activities of the big four auditing companies (Deloitte Touche Tohmatsu, PricewaterhouseCoopers, Ernst & Young, KPMG), numerous other consultancy services and providers of consultancy software (e.g. ONESOURCE R&D Tax Incentive, Thomson Reuters, 2013) are involved in supporting companies with project management, documentation, and budgeting.

Criteria

Companies surveyed suggested to improve the criteria for approving R&D tax reliefs. In general, the differentiation between the core and supported R&D activities are complex and in part confusing for some sectors.

The strongest criticism referred to the presently narrow definition of core R&D activities as well as the definition of „supporting activities“, which to some extent discriminates between individual industry sectors. That restriction of the criteria could force global companies to select other locations than Australia for carrying out their R&D activities. This would go against the original objective of increasing the level of R&D activities in Australia in order to make the funded companies more competitive internationally.

Reliability and continuity of the conditions and definitions were valued to be very important, particularly in a tax system based on self-assessment. Any changes in these conditions would create uncertainty among companies and would be detrimental to the original purpose of the measure.

Intellectual Property (IP)

The previous tax relief system in Australia required that R&D activities were the risk of the local company. Thus, no tax reliefs were possible for the expenditures of a local company in Australia that were paid for by a parent company abroad e.g. Germany, for research activities carried out in Australia. Tax relief could be applied for only if the local subsidiary would pay for the expenditure. For this reason, the previous tax relief systems led to the development of local IP and its ownership. Conversely, most rebate agreements between parent-company and subsidiary are based on the parent-company securing the legal ownership of the respective intellectual property gained from R&D activities.

The current R&D tax incentive model is more extensive and supports the need to create and further develop more knowledge and employment in Australia. It allows local
Australian companies to yield the benefits of R&D activities, even if the R&D was carried out offshore. This is possible because the majority of industrial use of IP that was created in Australia can take place in Australia, and the tax reliefs can be requested for the corresponding R&D activities, even if the IP ownership is outside Australia (offshore). For the Australian Government, funding R&D activities and thereby employment and knowledge in Australia is paramount, while the locality of IP, whether in Australia or offshore, is less important for the Australian Government.

Thus, for example, a German parent-company can receive tax relief for R&D expenditure payments for the Australian subsidiary in Australia. The Australian company can receive tax reliefs for all R&D expenditures in Australia, which it is carrying out on behalf of the German parent-company, which ultimately retains the intellectual property. This applies if the parent-company and the subsidiary have entered into a double taxation and a formal agreement.

In addition to the improved R&D commitments of multinational technology companies with subsidiaries in Australia, this regulation is also interesting for foreign seed capital providers. A start-up company that took part in the questionnaire stated that certain R&D activities are funded by an American seed capital provider, which in turn claimed the corresponding R&D reliefs for these.
Clear definitions and structures

It is important for companies that the administrative and political structures as well as the mandates of institutions that carry out the tax reliefs are clearly defined and separate. The companies prefer a direct contact in the administrative sector for the consultancy and the preparation of their confidential R&D information. On the other hand, since companies want to keep their company strategy as autonomous as possible, they favour more distance from the political structures of the R&D tax authorities. In Australia, a separate institution (AusIndustry) is responsible for the implementation and administration of the R&D tax credit, while the political representation of the R&D tax relief is carried out by the Australian Taxation Office.

In general, countries that offer R&D tax reliefs try to unify their definition of R&D activities and base the classification of the R&D activities on the Frascati Manual (OECD, 2007). Australia explicitly follows the internationally recognised funding standard, too. While in the Australian initiative the area of research is very clearly defined, the area of development, according to the companies surveyed, allows for greater room for interpretation. This creates difficulties for multinational companies when assigning their R&D activities.

The companies surveyed emphasised that clear definitions for managing the tax incentive tool are of utmost importance. This applies both for the question of which R&D activities are deductible (e.g. software development or classic R&D), the regulation on the use and ownership of intellectual property rights as well as the possibility of relocating R&D activities abroad.

Continuity

The technology companies, consultancy services and seed capital provider surveyed highlighted that for them the continuity of a mature tax incentive tool is very important. The introduction of pilot tools or frequent changes to regulations are counterproductive. 51% of companies questioned by Thomson Reuters (2013) complain that frequent changes to tax incentive tools were one of the main obstacles to successful participation in a tax initiative. These changes above all refer to the criteria for distinguishing between core and supported R&D activities. Furthermore, the companies questioned complained that the changes then create more work in terms of documentation and therefore increase application costs.

Depending on the size of the company, these investments start to count after a year (for start-ups) or after 3-4 years (for established companies), meaning that companies can integrate the tax relief strategically into the further company development. The necessary investment costs, the increased work required for documentation and the short lifetime of the recent tools for R&D tax reliefs could be reasons why to date only an estimated 5% of SMEs (approx. 10-12,000 companies) and around 10% of multinational companies (approx. 8-9000 companies) have taken part in state R&D tax reliefs (statements are assessments of a tax consultancy firm). With a longer lifetime and continuity in the conditions of the current R&D tax initiative, we can expect to see stronger growth in tax claims through multinational companies (particularly in the areas of IT, IT services, pharmaceuticals), and moderate to strong growth for SMEs.
Timely payments for better protection of start-ups against risks

The tax payment by the administrative services of the tax authorities should be carried out in a timely manner, so that the payment can be used by SMEs that only have a low level of capital. The fact that quarterly payment of the tax credit originally planned has not been introduced will not decrease the financial risk of small start-up companies.

Information for company categories and development phases

When introducing the tool it is thought important that information is supplied via various communication channels, e.g. via tax authorities, tax consultancy institutions as well as trade associations and associations of financial experts. These organisations and groups of trade associations represent an important information platform for smaller companies. The information is supposed to meet the specific needs of all potential industry sectors (e.g. sector-related, small and large companies in various stages of development). After evaluating first experiences, AusIndustry has provided instructions for individual sectors such as biotechnology, agriculture, IT, energy, manufacturing engineering, environmental technology (AusIndustry, 2013a). In these instructions, the R&D tax reliefs are explained for typical case studies.

Confidentiality and trustful collaboration

Since the company provides extensive, confidential company information, many of the companies questioned amplified confidentiality and a trustful collaboration with the tax authorities as the key for a successful tax incentive.

Simplicity

The criteria of a new R&D fiscal tool to be introduced must be simple in order to keep the hurdles faced by companies to a minimum for as many as possible.
Conclusions and outlook

This study provides an overview of almost 30 years of R&D tax offsets in Australia.

The current R&D Tax Incentive scheme was positively evaluated by all 10 companies surveyed. An initial internal assessment by the authorities also points to the fact that the R&D Tax Incentive is having a positive effect, especially for SMEs which significantly increased their participation. Furthermore, the claimed R&D expenditure rose by approximately 15%, with SMEs holding a larger share. Thus, the R&D Tax Incentive is consistent with the Australian Government’s objective to support innovation and employment in Australia.

The companies surveyed identified the following key factors for successful R&D tax incentive schemes: timely payments, continuity in regulations and criteria, provision of specific information for companies in various sectors and development levels, simplicity in the criteria and in the use of the tax tool, and confidentiality of data provided to the tax authorities.

To evaluate overall effects on productivity and competitiveness, a comprehensive, representative survey would be necessary. Such a survey would need to take into account which proportion of the tax funded R&D would have also taken place without government intervention (deadweight loss effect). It would also need to consider to what extend true innovation – breakthroughs in new products and services – has been encouraged rather than just traditional development.

A qualitative analysis of the R&D Tax Incentive would need to consider the overall context of the Australian innovation system, benchmarking the tax scheme against other forms of research funding and bringing it in line with Australia’s research priorities as well as international R&D dynamics. One of the key questions would be to examine the long-term effects of the significantly relaxed handling of IP rights on productivity and international competitiveness.
## Abbreviations

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<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>ABS</td>
<td>Australian Bureau of Statistics</td>
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<tr>
<td>AUD</td>
<td>Australian dollar</td>
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<tr>
<td>ATO</td>
<td>Australian Taxation Office</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<tr>
<td>R&amp;D</td>
<td>Research and Development</td>
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<tr>
<td>SMEs</td>
<td>Small and medium-sized enterprises</td>
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Questionnaire for companies

I. Illustrative notes

We hereby guarantee that information provided in this interview will be handled securely and confidentially.

II. Purpose of the interview

1: The aspects that we want to expand on in our study are:

(a) Introduction and implementation of the tax incentive tool for R&D.
   - Possible further development and modification

(b) Organisational aspects of the financial regulations with regard to
   - Applications
   - Approval or refusal
   - Economic analysis
   - Setting up an administrative and systematic control option

(c) Experiences from the application for R&D Tax Incentives from the perspectives of
   - Companies (and their consultants and auditors)
   - Administrative departments (ministries, funding organisations, financial managers)
   - Auditors (and possibly chambers of auditors)

(d) If applicable, experiences with the evaluation of the tool

III. Your experience with the subject

2: Please describe the professional experience you have in the area of tax reliefs for R&D? In what way does your work relate to the subject area?

IV. Application

3: How does your company determine for which R&D expenditures tax reliefs can be applied for?

   - Are the criteria for approving R&D Tax Incentives clear and precise?
   - Which tools do you use to ensure that the activities of a company correspond to the requirements of the R&D Tax Incentive?
   - How do you record the R&D content of these activities?
   - How do you deal with the requests for cost centres and the corresponding documents?
4: What information sources do you have at your disposal if you have questions relating to R&D Tax Incentives in a special R&D project?

Do you have contact partners in the relevant agencies that you can contact if you have any questions?

- Are there contacts in the relevant chambers and industry associations?
- How do you rate the application process? In which areas would you recommend improvements?
- Are funding applications handled in a transparent, traceable manner?
- How could the tax authorities improve the information that they provide?

V. Approval/Refusal

6: What conditions make applying for a tax relief attractive to your company? What reasons would go against it?

- Do you apply for the R&D Tax Incentive on a project basis with an estimate of the respective costs, or for the total amount of all R&D expenditure over the financial year based on a single cost calculation?

7: Which of your R&D Tax Incentive applications were approved and which were refused? What were the reasons for the refusal?

- What measures were taken in response to these cases?

8: Is it possible to obtain both direct and indirect funding within the same research project?

VI. Economic and tax inspection

9: Can you describe how the R&D activities are checked with regard to the tax relief?

- Which pitfalls do you have to pay close attention to?
- Do these relate to specific statutory provisions?

10: What are your experiences of how a public tax inspection with R&D investments is run, that includes tax reliefs?

VII. Introduction and modification of the Tax Incentive

11: What changes in your company were linked to the introduction of the R&D Tax Incentive?

- To what extent did this lead to additional internal and external costs?
- In what areas did this lead to unexpected costs?
12: What structures that already existed in your company at the time of the introduction of the R&D Tax Incentive led to profits?

• What level of support did the responsible employees in your company receive?

13: To what extent have changes been made in your company since the introduction of the R&D Tax Incentive in order to make better use of the tool?

VIII. Evaluation

14: How do you rate the efficiency of the R&D Tax Incentive with regard to cost-benefit ratio in terms of your own experiences in your company and in your industry sector?

15: How do you rate the relevance of the R&D Tax Incentive compared to direct funding for your company?

16: To what extent have your decisions relating to investments in the R&D area been influenced by the expectations of tax reliefs?
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