

**CSL submission to the Treasury in
response to the “Re:think” tax
discussion paper**

1 June 2015



Summary of comments and recommendations

In March 2015, the Commonwealth Government of Australia released a tax discussion paper entitled 'Re:think,' subtitled 'Better tax system, better Australia,' which places tax reform as central to its policy agenda to 'to build jobs, growth and opportunity.' CSL welcomes the opportunity to participate in this review.

CSL Limited is a global biotechnology company headquartered in Australia. It is Australia's eighth largest public company and Australia's largest advanced manufacturer with facilities in Australia, the US, Germany and Switzerland. CSL's advanced manufacturing is supported by substantial research and development ('R&D'), a large proportion of which take places here, in Australia. CSL invests globally in new products, new manufacturing, R&D and new R&D facilities. This investment supports our continued growth and brings with it new highly skilled, high wage jobs. Tax is one of the factors CSL has to consider when making these investments.

The questions that CSL has addressed

The Better Tax paper set out 66 discussion questions covering the breadth of the Australian tax system. Of these, CSL's submission addresses the following:

3. How important is it to reform taxes to boost economic growth? What trade-offs need to be considered?
24. How important is Australia's corporate tax rate in attracting foreign investment? How should Australia respond to the global trend of reduced corporate tax rates?
31. To what extent should the tax system be designed to attract particular forms of inbound investment (for example, by distinguishing between active and passive or portfolio and non-portfolio)? If so, what principles should inform this?
38. In what circumstances is it appropriate for certain types of businesses to be subject to special provisions? How can special treatment be balanced with the goal of a fair and simple tax system?
39. Does the R&D tax incentive encourage companies to conduct R&D activities that would otherwise not be conducted in the absence of government support? Would alternative approaches better achieve this objective and, if so, how?

Australia's corporate tax is uncompetitive

Australia has an uncompetitive corporate tax rate compared to its OECD peers. Australia's effective tax rate of 25.9% was the equal 7th highest in the OECD in 2013, above that of Italy (24.5%), Germany (24.4%) and Canada (18.6%). It has one of only seven effective marginal corporate tax rates for large businesses that has remained unchanged since 2005.

Countries such as the UK, US, Germany, Switzerland, Ireland and Singapore have non-tax attributes that make them desirable locations for the advanced manufacture of novel products, such as availability of skilled staff and closeness to major markets. Some also have considerably lower effective corporate tax rates than Australia, often no higher than 10%. By way of example, since 2013, the UK has reduced its corporate tax rate to 20% and has established a lower 10% rate for income derived from eligible patents under the so called 'Patent Box' tax concession (which would be applicable to some of CSL's investments).

The importance of the advanced manufacturing sector

CSL operates in the advanced manufacturing sector, a sector characterised not so much by the type of industry but by manufacturing businesses that generate high value by investing in and developing new knowledge and processes, as revealed through measures such as R&D intensity and the use of highly skilled (professional or university educated) workers.

CSL concurs with the Commonwealth Government that this sector has substantial potential to grow and contribute to the Australian economy, and with the Prime Minister that it is an important target for growth. However, over the last five years, its growth has lagged the economy as a whole, and has not offset the decline in growth in traditional manufacturing, nor increased employment.

Growth in advanced manufacturing requires investment. But investment in the sector is particularly sensitive to corporate tax rates because it generates high (i.e. taxable) value and because the investment is typically footloose; an increasing number of jurisdictions provide the educated and highly skilled workers that this type of manufacturing demands.

In CSL's view, Australia will not be able to substantially grow the advanced manufacturing sector, by attracting new advanced manufacturing to supply global markets, unless it has a competitive corporate tax rate.

The importance of investment in R&D

R&D is an important input for advanced manufacturing. CSL has been broadly supportive and appreciative of government support for R&D through the tax system. CSL undertakes a significant amount of its R&D in Australia, in part a reflection of this support.

CSL is therefore concerned that the Tax Superannuation Laws Amendment (2015 Measures No.3) Bill 2015 proposes to drop the refundable tax offset from 45% to 43.5% and the non-refundable tax offset from 40% to 38.5%. CSL is also concerned about the recently introduced \$100m cap on eligible R&D. The rate reductions and cap are themselves unfortunate, but so too are the continual changes in R&D support arrangements, which increase the risk of long-term investment in R&D. In CSL's view, these are retrograde measures. They make Australia a less attractive location for R&D and, because R&D is an essential complement to advanced manufacturing, detract from rather than enhance the prospects for advanced manufacturing in Australia.

CSL recommends an Advanced Manufacturing Tax incentive

Based on our own experience of investing in R&D and advanced manufacturing to support a global supply chain, CSL recommends that the Commonwealth Government introduce an Advanced Manufacturing Tax incentive comprising:

- a corporate tax rate of not more than 10% on new advanced manufacturing;
- qualification for the advanced manufacturing tax will require:
 - new investment in advanced manufacturing facilities in Australia;
 - the value of which is substantially derived from identifiable and valuable qualifying IP, including but not limited to patents; and
 - the qualifying IP should be either developed in Australia or, if it is acquired IP, significantly enhanced through further expenditure under Australian ownership.

Potential impact

CSL believes that an Advanced Manufacturing Tax incentive will deliver significant benefits to the Australian economy. In CSL's view, it represents the single most important step towards improving Australia's poor record of commercialising its high quality R&D base.

CSL would not expect the Advanced Manufacturing Tax to reduce government tax revenues in the short term. In the longer term, perhaps five years, CSL would expect it to increase tax revenues by stimulating much greater growth and employment in the advanced manufacturing sector than would otherwise arise.

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1. Introduction

In March 2015, the Commonwealth Government of Australia released a tax discussion paper entitled 'Re:think,' subtitled 'Better tax system, better Australia'. The forward to this paper, 'Better Tax,' places tax reform as central to its policy agenda to 'to build jobs, growth and opportunity.' CSL welcomes the opportunity to participate in this review.

CSL Limited is a global biotechnology company headquartered in Australia. It is Australia's eighth largest public company and one of Australia's largest advanced manufacturer with facilities in Australia, the US, Germany and Switzerland. CSL's advanced manufacturing is supported by substantial research and development ('R&D'), a large proportion of which take places here, in Australia. CSL invests globally in new products, new manufacturing, R&D and new R&D facilities. This investment supports our continued growth and brings with it new highly skilled, high wage jobs. Tax is one of the factors CSL has to consider when making these investments.

CSL is also mindful that Australia must be able to pay for the public services that the community demands. Accordingly, our focus is on changes that, based on CSL's own investment decision making, are likely to have the greatest impact on jobs and growth while sustaining rather than undermining this important revenue imperative.

1.1. Questions addressed by CSL

While the Better Tax paper set out 66 discussion questions covering the breadth of the Australian tax system, CSL's submission addresses only a subset of those questions, primarily in relation to how corporate tax affects the investment decisions of companies that, like CSL, have a global investment perspective. Broadly, then, this submission can be viewed as addressing the following questions:

24. How important is Australia's corporate tax rate in attracting foreign investment? How should Australia respond to the global trend of reduced corporate tax rates?
31. To what extent should the tax system be designed to attract particular forms of inbound investment (for example, by distinguishing between active and passive or portfolio and non-portfolio)? If so, what principles should inform this?
38. In what circumstances is it appropriate for certain types of businesses to be subject to special provisions? How can special treatment be balanced with the goal of a fair and simple tax system?

Addressing these questions inevitably impinges on question 3, namely how important is it to reform taxes to boost economic growth, and what trade-offs need to be considered?

1.2. Taxation and R&D

In addition, question 39 asks whether the R&D tax incentive encourage companies to conduct R&D activities that would otherwise not be conducted in the absence of government support, whether alternative approaches better achieve this objective and, if so, how? CSL spends more on R&D than any other Australian business involved in pharmaceuticals and advanced manufacturing. With CSL's main centre for R&D in Australia, CSL benefits from the R&D tax incentive. While CSL has identified areas where government support for R&D could be more effective, CSL is broadly supportive of the current level of support through the tax system.

CSL has addressed this issue in a number of other submission, so does not repeat that material in detail here.¹ However, CSL is concerned that the Tax Superannuation Laws Amendment (2015 Measures No.3) Bill 2015 proposes to drop the refundable tax offset from 45% to 43.5% and the non-refundable tax offset from 40% to 38.5%. CSL is also concerned about the recently introduced \$100m cap on eligible R&D. The rate reductions and cap are themselves unfortunate, but so too are the continual changes in R&D support arrangements, which increase the risk of long-term investment in R&D. In CSL's view, these are retrograde measures. They make Australia a less attractive location for R&D and, because R&D is an essential complement to advanced manufacturing, detract from rather than enhance the prospects for advanced manufacturing in Australia.

1.3. Summary

We conclude that Australia would benefit from some changes to corporate tax. In short, CSL believes that Australia's current levels of corporation tax makes Australia uncompetitive as a location for investment in new advanced manufacturing facilities. As a result, despite some manifest advantages that Australia does possess, such as a successful research and education base, Australia fails to capture globally footloose investment. Australia then fails to capture all the follow-on benefits that this footloose investment would otherwise deliver.

CSL believes that, if Australia wants to knit itself into global supply chains and create and sustain highly skilled, high wage jobs, it must become a much more competitive location for investment in advanced manufacturing. Tax is the most important impediment to this goal.

¹ See CSL (December 2006) *Submission to the Productivity Commission Research Study into Public Support for Science and Innovation in Australia*, CSL (April 2008) *Submission to the Review of the National Innovation System*, CSL (July 2014) *CSL Submission to the Senate Reference Committee Inquiry into Australia's Innovation System*, CSL (December 2014) *Boosting the commercial returns from research*, a CSL submission to the Department of Education and the Department of Industry and CSL (March 2012) *Submission to the McKeon Strategic Review of Health and Medical Research*.

2. CSL

CSL Limited is Australia's largest biotechnology company, with a market capitalisation of around A\$44bn, and over 13,000 employees globally. CSL develops, manufactures, and markets pharmaceutical products of biological origin to treat and prevent serious human medical conditions. The CSL Group, headquartered in Melbourne Australia, operates globally while maintaining a substantial R&D presence in Melbourne, Australia.

CSL was established in 1916 to provide the Australian community with human vaccines and sera that could not be guaranteed in the event of war. CSL continues with that proud tradition, supplying products of national interest such as seasonal and pandemic influenza vaccines, plasma products made from Australian plasma, antivenins and other vaccines.

CSL was incorporated in 1991 and sold by the Commonwealth Government in 1994. CSL's evolution into a global speciality biopharmaceutical company involved the acquisition of the Swiss Red Cross fractionator ZLB (2000), US blood collection centres from NABI (2001) Aventis Behring (2004). Since then, CSL has consolidated its position as a leader in the global market for plasma-derived medicines and as an innovator in these products, vaccines, and recombinant proteins. CSL is also a global leader in influenza vaccine, a position that it has consolidated with its impending acquisition of Novartis' global influenza vaccine business (which will also extend CSL's manufacturing base into the UK).

In 2013/14, CSL's Australian operations comprised total sales of A\$935 million, including A\$185 million in export sales; A\$252 million paid in wages and salaries to Australian workers; A\$758 million in goods and services bought from other Australian and overseas businesses; and 1,816 full-time equivalent employees. Globally, CSL had total sales revenue of US\$5,335m and a total R&D expenditure of US\$466m.

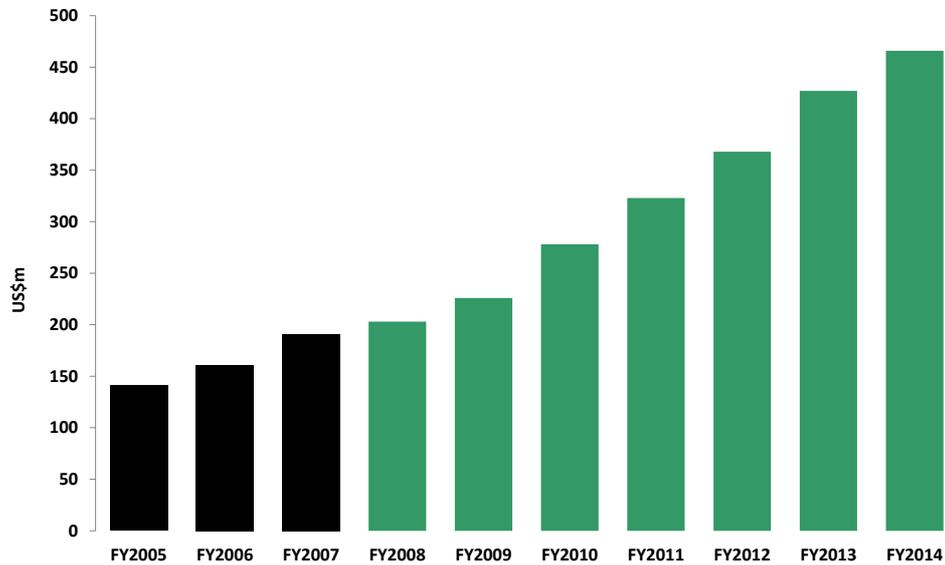
CSL expects to continue to make substantial investments in R&D and new manufacturing facilities across its global network. Over the next decade these could well amount to \$15bn or so, roughly divided between both.

2.1. CSL's R&D and investment pipeline

CSL has continued to increase its R&D expenditure (see Figure 1), which remains a cornerstone of CSL's growth plans. CSL has a successful R&D track record. For example, CSL successfully advanced² research relating to a potential HPV vaccine to the stage where it was ready for development into the global product Gardasil® by Merck, as a result of which CSL earned a royalties flowing back into Australia of US\$117m in 2013/14 alone.

² This was done through its collaboration with Professor Ian Fraser at the University of Queensland.

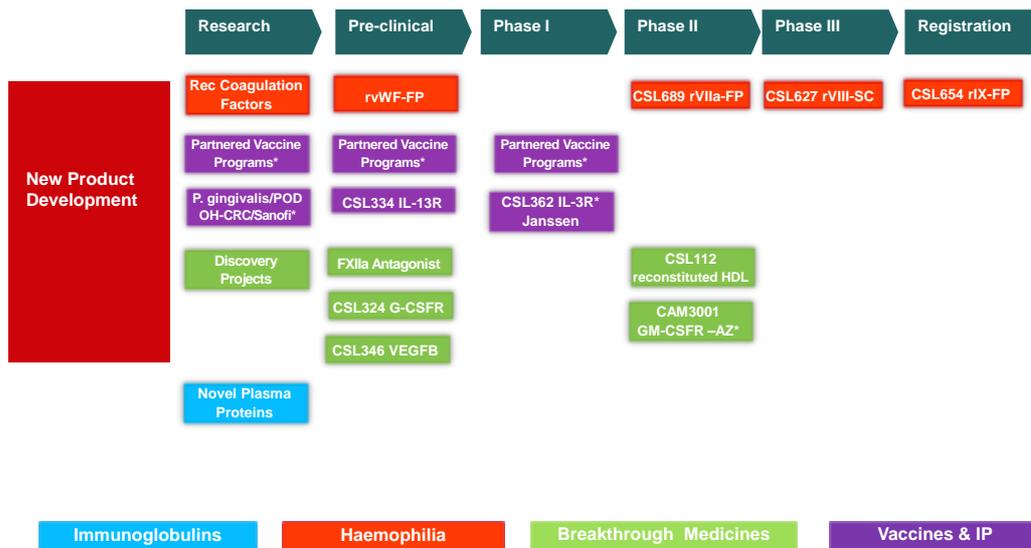
Figure 1. CSL's global R&D expenditure



FY2005-FY2007 in AU\$m. FY2008-FY2013 in US\$m.

CSL now has sufficient resources, skills and global reach to take innovative products from the discovery phase through to the market. That process is best exemplified by CSL's portfolio of recombinant blood clotting factors (referred to by their R&D project codes - CSL627, CSL654, CSL689), three of CSL's innovative products that are in the later stages of their clinical development (see Figure 2).

Figure 2. CSL global new product pipeline (April 2015)



CSL's constructed its Biotechnology Manufacturing Facility ("BMF") at Broadmeadows for the development and initial manufacture of its recombinant blood clotting factors. CSL received both Victorian State and Commonwealth support for this facility, highlighting the

importance of all levels of government in facilitating such investments. The BMF is capable of supporting such recombinant products through clinical trial phases into to early commercialisation. CSL is now in the process of developing a large scale advanced manufacturing facility suitable for global commercialisation of these new recombinant coagulation factors.

2.2. Growing demand for CSL's products

Global demand for our products has grown by close to 7% per annum for the last 5 years and is likely to continue to do so. Accordingly, CSL is continuing to invest in new capacity for existing products.

CSL's global supply chain for the supply of plasma-derived medicines spans three continents with manufacturing located in four different countries Australia, the US, Germany and Switzerland. These facilities operate as an integrated whole, with each location specialising in the production of particular products or intermediates. Hence, for example, CSL's facility at Kankakee the US performs most of the primary fractionation³ of human plasma, producing some finished products, such as albumin, and intermediates which are transferred to other sites for further processing. One of these intermediates is transferred to Bern, Switzerland, for processing into the finished intravenous immunoglobulin (IVIg), Privigen®. There are similar exchanges between all the sites.

2.3. A snapshot of CSL's recent global investments

CSL's operating paradigm, which has been in place now for many years, establishes main manufacturing sites as the entrepreneurial centres for each product. Those manufacturing sites then hold the intellectual property ('IP') for the products and processes alongside the manufacturing and R&D resources necessary to maximise commercial value. In CSL's view, the model is commercially efficient in that sites are then responsible for the maintenance of the value of that IP (through appropriate lifecycle management and market development R&D), exploiting the scope economies that arise from co-location of biological manufacturing, R&D and IP.

Bern, Switzerland, is the entrepreneurial centre for Privigen®. When CSL needed to expand capacity, it decided, for a number of reasons such as security of the supply chain, to do so at Broadmeadows in Australia. With Bern as the entrepreneurial centre for Privigen®, the commercially appropriate mode for Broadmeadows is to contract manufacture Privigen® for Bern, with Bern bearing the commercial risk of the product consistent with its entrepreneurial role. In the same vein, CSL has recently committed to a new site for the manufacture of another of its existing plasma products, Alburex®, to meet growth in global demand. Broadmeadows was once again the successful site within CSL's

³ The first of a number of processes in the manufacture of plasma derived medicines.

supply chain, operating the same contract manufacturing model as for Privigen®. CSL has been assisted greatly by State and Commonwealth governments in these and other projects in Australia.

2.3.1 Manufacturing capacity for CSL627, CSL654, CSL689

As noted above, CSL recently committed to a large scale manufacturing facility for its new recombinant coagulation products. CSL undertook an extensive analysis of alternative sites for this new manufacturing facility, looking to find a jurisdiction likely to maximise the value of the new products to CSL's shareholder. The candidate countries included *inter alia* Australia, Ireland, Singapore and Switzerland. The selection criteria were broad encompassing factors such as availability of suitably skilled staff, labour costs and flexibility, geographical proximity to important target markets, corporate tax rates, and extent of government assistance.⁴

The result of the review was that Switzerland was chosen as the site for development. Consistent with CSL's preferred operating paradigm, the new manufacturing facility will be the entrepreneur centre for these products, owning the necessary IP and responsible for continuing to develop and exploit that IP. Since the IP for the new recombinant coagulation products during its early development was held in and paid for from Australia (where CSL has its centre of excellence for earlier stage R&D for novel products), the new manufacturing facility has purchased the necessary IP from Australia on an arms-length basis through a once-off payment of US\$100m to be followed by a series of technical and commercial milestone payments and an appropriate royalty rate on commercial sales. This constitutes taxable revenue in Australia in the same way as some third party arrangements are structures e.g. as the royalties paid by Merck to CSL on its Gardasil® sales.

The difference in the effective corporate tax rates between Switzerland and Australia, 10% as opposed to 30%, while certainly not the only factor in Switzerland's favour, was significant. In this regard, CSL's decision making processes appear to be consistent with firms that face similar investment decisions.⁵ In the following sections we set out why Australia's corporate tax rate is particularly disadvantageous for the footloose advanced manufacturing exemplified by this new recombinant manufacturing facility.

⁴ Not simply financial assistance, although this was a consideration, but non-financial factors such as permitting etc.

⁵ See, for example, Devereux MP (2007) *The Impact of taxation on the location of Capital, Firms and profit: a Survey of Empirical Evidence*, cited in http://ec.europa.eu/taxation_customs/resources/documents/taxation/gen_info/economic_analysis/tax_papers/taxation_paper_15_en.pdf at p10

3. The investment effects of corporate income tax

Businesses make investment decisions based on a number of factors that influence the expected return. These include taxes on profits, the value of the tax savings from depreciation allowances, as well as a range of non-tax dependant other factors; for example, a country's economic and industrial structure, the size of the market, the availability of skilled personnel, labour costs, overall supply chain costs, the level of economic openness, and the extent of IP protection all contribute to the decision on whether to commit to an investment.⁶

Hence, for multinational firms operating at a global level, a favourable taxation system in and of itself will not necessarily create an attractive investment environment. However, where multiple countries with a similarly favourable investment climate are competing to attract direct investment, tax competition can play a critical role for footloose firms deciding whether to invest in a particular country or region. This is widely recognised. As the Institute of Fiscal Studies⁷ ('IFS') in the UK has noted:⁸

It has long been recognised that corporate income taxes can distort incentives in a number of harmful ways, and they are thought to have a particularly damaging effect on economic growth. The income and activities of multinationals are particularly mobile and responsive to the tax rate

3.1. Lower corporate tax rates attract investment

This is supported by empirical evidence. Ireland and Singapore are frequently cited as having significantly advantageous corporate tax rates. Ireland has a flat corporate tax rate of 12.5%, compared to Singapore's 17% corporate tax rate⁹ (noting that rates considerably lower than 17% are available on some types of investment). Both of these countries have been able to attract significant levels of inward direct investment despite the relatively small size of their economies. Between 2008 and 2012 Singapore attracted \$203.3 billion in

⁶ OECD, 'tax incentives for research and development: trends and issues' (2002) <http://www.oecd.org/sti/inno/2498389.pdf>

⁷ The IFS describes itself thus: 'The Institute for Fiscal Studies was founded in 1969. Established as an independent research institute, IFS was launched with the principal aim of better informing public debate on economics in order to promote the development of effective fiscal policy.' <http://www.ifs.org.uk/about>.

⁸ IFS (26 February 2015) *£8 billion giveaway used to boost corporate tax competitiveness* available at <http://www.ifs.org.uk/publications/7609>.

⁹ KPMG (2014) *Corporate tax rate survey 2014* <http://www.kpmg.com/IE/en/IssuesAndInsights/ArticlesPublications/Documents/kpmg-2014-global-corporate-indirect-tax-survey-2.pdf>

foreign direct investment ('FDI') inflows, equivalent to 74% of GDP, while Ireland attracted \$92.8 billion in FDI.¹⁰

Ireland's high-value manufacturing sector (equivalent to advanced manufacturing) now accounts for 23.3% of Ireland's GDP, well above the EU average of 15.1% and dramatically larger than the share in Australia of approximately 1.9%; indeed the whole of manufacturing in Australia represented only 6.5% of GDP in 2014 and is still in decline, with annual investment falling to a 12 year low of \$8.8 billion. Further, since 2010, employment in Ireland in the sector has increased by 6.5%, with the main drivers being Medical Technologies (14%), Computer and Electronic Equipment (6%) and the Chemicals sector (5%).¹¹

At a more discreet level, in 2013 GlaxoSmithKline moved \$800 million worth of new investment to the UK to benefit from the Patent Box¹² tax scheme,¹³ including the first manufacturing plant to be built by GSK in the UK in almost 40 years. GlaxoSmithKline CEO Andrew Witty noted that 'when implemented, the patent box has the potential to transform the way in which the UK is viewed by companies such as GSK as a location for new investments in high added-value R&D and manufacturing'.¹⁴

This appears to be part of a wider trend associated with the improving competitiveness of the UK from a corporation tax perspective. UK Trade and Investment (UKTI) reported last year that the UK attracted more inward investment projects in the 2013-14 year than in any year since records began in the 1980s: 1,773 projects, creating 66,390 new jobs.¹⁵ They also reported that the UK is attracting the largest number of FDI projects in Europe, and is the largest recipient of capital investment in Europe.¹⁶ The UK attracted 14% more projects than the previous year (2012 to 2013).

Empirical evidence shows that the location of real investment is responsive to the effective average tax rate. A literature review by Griffith, Miller, and O'Connell in 2014 found that

¹⁰ UHY (2013) *Singapore and Irelands tax regimes attract world beating levels of FDI* (2013) <http://www.uhy.com/singapore-and-irelands-tax-regimes-attract-world-beating-levels-of-fdi/>.

¹¹ http://www.idaireland.com/en/docs/publications/IDA_STRATEGY_FINAL.pdf

¹² Patent Boxes get their name from the fact that a business can literally tick a box on the tax return to indicate that the income in question is derived from a patent or other eligible IP in order to be assessed at a lower rate.

¹³ See http://uk.reuters.com/article/2013/12/11/uk-glaxosmithkline-britain-idUKBRE9BA006201_31211 and http://www.ausbiotech.org/userfiles/file/AIM_AusBiotech_April%202014.pdf.

¹⁴ <http://us.gsk.com/en-us/media/press-releases/2010/government-patent-box-proposals-and%u2013transformandsquo-uk-attractiveness-for-investment/>

¹⁵ <https://www.gov.uk/government/news/uk-attracts-highest-levels-of-inward-investment-on-record>

¹⁶ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/341601/UKTI_Inward_Investment_Report_2013-2014.pdf

whilst many factors will influence a firm's location decision, tax exerts a significant effect on location choices.¹⁷ They also noted that empirical studies have provided indirect evidence of tax avoidance by, for example showing that firms have relatively high profitability in low tax countries.

De Mooij and Ederveen examined the likely effect of corporate tax changes on firm behaviour¹⁸ finding a relatively large elasticity (-1.2)¹⁹ of profit shifting by multinational firms. They considered that this high elasticity may well explain recent trends by jurisdictions to reduce their corporate tax rates to attract profitable enterprises. They also found large investment elasticities with respect to tax rates of between -0.4 and -0.65. That is, a 1% decrease in corporate tax (say from 30% to 29%) would result in a 0.4% to 0.6% increase in investment. That is, lower corporate tax rates also attract real economic activity suggesting that they can be tailored to minimise pure profit shifting and maximising valuable economic activity.

3.2. Australia's corporate tax rate is uncompetitive

For CSL, countries such as the UK, US, Switzerland, Singapore and Australia have many of the non-tax attributes that make them desirable locations for the advanced manufacture novel products. Some have superior attributes to Australia in terms of factors such as availability of skilled staff, closeness to major markets etc. As a result tax is an important differentiating characteristic. In comparison to most of these peers, Australia's high and inflexible statutory corporate tax rate of 30% constitutes a significant disadvantage for the country in attracting capital investment.

Australia's major trading partners maintain lower statutory corporate tax rates, and in 2009 Australia had the third highest statutory corporate tax rate of small to medium-sized OECD economies.²⁰ In terms of Australia's effective marginal tax rate, there is an even more pronounced difference between Australia and other OECD nations. Australia's effective tax rate of 25.9% was the equal 7th highest in the OECD in 2013, above that of Italy (24.5%), Germany (24.4%) and Canada (18.6%) (see Figure 3).

¹⁷ http://personalpages.manchester.ac.uk/staff/rachel.griffith/PublishedPapers/GriffithMiller_OConnell_Final.pdf

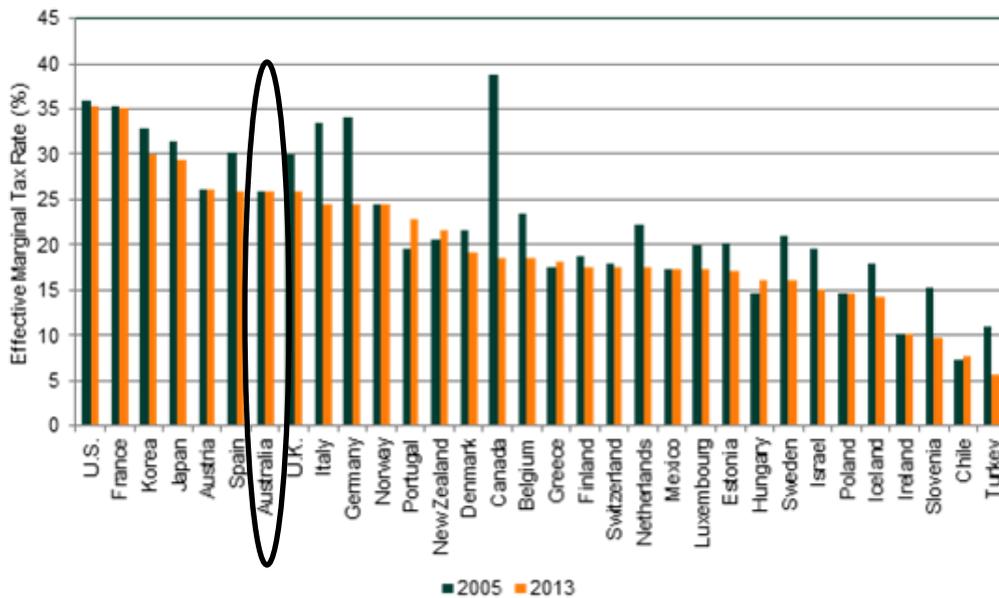
¹⁸ See De Mooij and Ederveen, Oxford University Centre for Business Taxation. Corporate Tax Elasticities: A Reader's Guide to Empirical Findings (2008).

¹⁹ To be more precise, they reported half-elasticities, namely the percentage change in investment resulting from an absolute change in tax rate. Elasticity (or full-elasticity) would be defined as the percentage change in investment resulting in a percentage change in tax rate.

²⁰ *Australia's future tax system: A report to the treasurer* (2009) http://taxreview.treasury.gov.au/content/downloads/final_report_part_1/00_afts_final_report_consolidated.pdf (Henry Tax Review).

It is also one of only seven effective marginal corporate tax rates to have remained unchanged since 2005, while 22 other countries have lowered their tax rates during that time (see Figure 4).²¹ Since 2013, the UK has reduced its corporate tax rate to 20% and has established a lower 10% rate for income derived from eligible patents under the so called ‘Patent Box’ tax concession.

Figure 3. Effective marginal tax rates,* OECD countries, 2005-2013

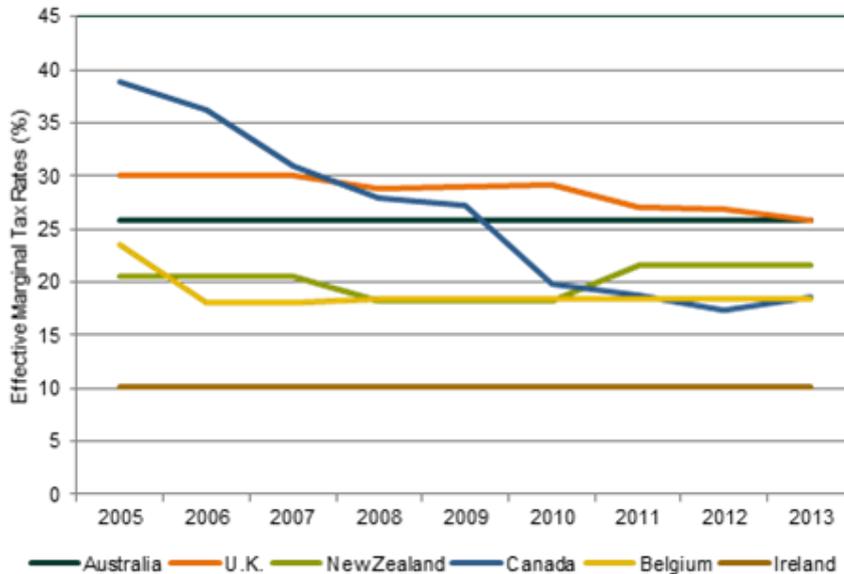


* Effective marginal tax rate measures the tax impact on capital investment as a portion of the cost of capital. It is primarily a function of the rate of corporate income tax.

Source: <http://www.policyschool.ucalgary.ca/sites/default/files/research/mintz-2013-globtax.pdf>

²¹ <http://www.policyschool.ucalgary.ca/sites/default/files/research/mintz-2013-globtax.pdf>

Figure 4. Effective marginal tax rates of selected OECD countries, 2005-2013



Source: <http://www.policyschool.ucalgary.ca/sites/default/files/research/mintz-2013-globtax.pdf>

The recently announced and welcome reduction in the tax rate for small businesses represent the first significant change in corporate tax rates for a decade, but the reduction does not apply to large business and irrelevant for multinationals considering making investments in Australia.

The impact of corporate tax might be smaller if Australia was otherwise a low cost location for businesses. This is not the case. Australia is one of the most expensive countries in the world to do business in.²² Australia’s ability to compete for business investment with other politically and economically stable OECD countries is disadvantaged by being a high-cost, high-tax country.

3.3. Advanced manufacturing is particularly sensitive to tax rates

CSL operates in the advanced manufacturing sector. For the reasons set out below, investment in advanced manufacturing is particularly sensitive to corporate tax rates.

3.3.1 The characteristics of advanced manufacturing

The sector is much broader than pharmaceuticals and medical technology, but there is no universally agreed definition of advanced manufacturing. There is, however, some consensus over its characteristics. Advanced manufacturing, is typically categorised as

²² Behind only Germany and the United States. KPMG’s *Competitive Alternatives 2014* available at http://www.competitivealternatives.com/reports/2014_compalt_report_vol1_en.pdf

manufacturing that is flexible, adopts innovative approaches, provides associated services, uses high skill labour, and is capital and R&D/IP intensive. Table 1 compares traditional and advanced manufacturing.

Most characterisations focus on the activities of the firms, rather than defining advanced manufacturing in relation to a specific industry:

Advanced manufacturing is about much more than particular high-tech industries and their products. Rather the distinguishing feature of advanced manufacturing is the approach to creating value around manufactured products.²³

Table 1. Advanced versus traditional manufacturing

Traditional manufacturing	Advanced manufacturing
Focused on producing goods	Production is merely the core of a wider set of services and activities, and firms can tailor output to the needs of individual customers
A majority of the workforce is employed in blue collar roles, with technical skills more common than commercial skills	Employees have a wider skill base across multiple competencies and a higher overall skill level. Fewer people are employed on the 'factory floor'
Competitiveness is based on stocks of knowledge, mostly developed and retained in house.	Competitiveness is based on the ability to identify and harness the production, diffusion and use of knowledge. The depth and quality of a company's networks and interactions is critical to its competitiveness
Mass manufacturing of relatively standardised commodity goods	Firms rapidly and economically adapt physical and intellectual capital to exploit changes in technology, markets and customer demand
Energy intensive with large waste streams	Manufacturing processes and products are more sustainable, including a move towards low-emissions, zero waste and zero carbon manufacturing.

Note: These represent a non-exhaustive, non-compulsory list of possible distinctions.

Source: AI Group (summarised)

The Department of Industry has outlined a proxy for advanced manufacturing based on the ANZSIC industry classifications in order to provide tractable proxy set of industries that satisfy these broader features. Their proxy measure includes 42 sub-industries which have been identified as having

...characteristics consistent with advanced manufacturing, such as the relative investment in developing new knowledge and processes as revealed through measures R&D intensity, and the relative use of highly skilled (professional or university educated) workers.²⁴

²³ Innes Willox, Advanced manufacturing: A smarter approach for Australia http://www.aigroup.com.au/portal/binary/com.epicentric.contentmanagement.servlet.ContentDeliveryServlet/LIVE_CONTENT/Publications/Reports/2014/CEDA%2520Advanced%2520Manufacturing%2520AiGroup%2520final.pdf (2014)

²⁴ Department of Industry 'Australian Industry Report 2014' <http://www.industry.gov.au/industry/Office-of-the-Chief-Economist/Publications/Documents/Australian-Industry-Report.pdf> October 2014

3.3.2 Returns on R&D and IP appear as superior taxable profits

The R&D and IP intensity of advanced manufacturing means that the sector is particularly sensitive to corporate taxation rates. The return that firms expect to earn on their R&D and the IP that they generate typically appears, under their statutory accounts, as very high corporate profits in comparison to traditional manufacturing of an equivalent size. Advanced manufacturing appears to earn very high returns on their tangible assets (e.g., plant and equipment) because the value of their intangible assets, created through investment in R&D²⁵ and IP, predominates.

Furthermore, the high risk associated with business models based on R&D and IP, predisposes lower levels of gearing, reducing the ability of such firms to benefit from the tax shield of interest payments on debt.

3.3.3 There are alternative locations for advanced manufacturing

The most important factors of production in advanced manufacturing, for example IP derived from R&D and skilled labour, are relatively footloose. There is a relatively large and growing number of international jurisdictions capable of supporting advanced manufacturing, even for the types of investments that CSL makes, which are characterised by strict regulation, highly skilled labour, exacting manufacturing processes and advanced engineering and automation. This is in contrast to industries such as mining, oil and mineral which are tied to the location of a natural resource, agriculture which is similarly tied, lower value goods with relatively high transportation costs (for example, concrete) and many services.

3.3.4 Advanced manufacturing investment is typically footloose

The unique combination of characteristics means that advanced manufacturing is both footloose and highly sensitive to corporate tax rates. Hence, while Australia's current rates of corporate tax make it an uncompetitive location generally, it is particularly uncompetitive as a location for the advanced manufacturing investments that typify CSL and many other multinational firms.

²⁵ Although R&D is undoubtedly viewed by firms as an investment, under standard accounting practice it is treated in much the same way as operating expenses.

4. An Advanced Manufacturing Tax

The Australian Government is already well aware of the importance of manufacturing to Australia. There are a number of policy reasons that have been outlined by the Commonwealth Government in support of Australia's manufacturing industry. These include:²⁶

1. Manufacturing is essential to Australia's national interests – for reasons of national security, self-reliance, national identity and economic potential.
2. Manufacturing provides benefits to the wider economy, generating jobs, investment, and value-added benefits.
3. Manufacturing is a platform for the development of knowledge, skills and abilities that are applicable beyond the sector.
4. There is value in the diversification of the Australian economy away from primary industries and services.

CSL believes that these objectives would be more effectively realised if Australia introduced an 'Advanced Manufacturing Tax' specifically aimed at attracting footloose investment in advanced manufacturing for which Australia is currently uncompetitive.

4.1. Outline of the proposal

4.1.1 A corporate tax rate of not more than 10% on advanced manufacturing

In broad terms, the incentive would be based on a corporate tax rate of not more than 10% on new advanced manufacturing undertaken in Australia.

It is widely recognised that corporation tax distorts investment decisions and that this can have an adverse impact on economic growth and national income.²⁷ Accordingly, in an ideal tax system there may well be a case for a low corporate tax rate on all business income, the model that Ireland has adopted and which the UK is moving towards with its 20% basic rate and 10% preferential Patent Box rate. However, the Patent Box and the recent 5% reduction in the corporate tax rate in the UK are together expected to reduce revenue to the Exchequer by £8bn (\$16bn) in 2016 alone.²⁸ Australia is more reliant on taxes on business income than the UK, so the proportionate impact of a similar change in

²⁶ August 2013, *The Coalitions Policy to Boost the Competitiveness of Australian manufacturing*.

²⁷ IFS (26 February 2015) *£8 billion giveaway used to boost corporate tax competitiveness* available at <http://www.ifs.org.uk/publications/7609>.

²⁸ Ibid.

Australia would be that much greater. A similar tax change in Australia with its current tax base is not likely to be affordable.

Accordingly, CSL recommends confining the lower rate to new advanced manufacturing in order to restrict its application to footloose investment that probably would not take place in Australia absent the preferential rate. In so doing, the incentive should not result in reduced revenue to the Treasury and can be expected to generate additional government revenues in the longer term. Conditions should be attached to the Advanced Manufacturing Tax rate aimed at ensuring this.

4.1.2 Conditions attached to the Advanced Manufacturing Tax rate

A manufacturing nexus

CSL believe that it is important that there should be a ‘manufacturing nexus’ to qualify for the lower rate.

Australia possesses excellent universities and a highly effective research sector, in large part as a result of governments’ policies and support. This is complemented by a well-educated and skilled workforce. These are essential building blocks for an advanced manufacturing sector capable of commercialising Australia’s R&D efforts; that is, converting Australia’s R&D into high value products for global markets.

Unfortunately, while Australia has policy goals aimed at commercialisation and has developed some notable pockets of success, we haven’t yet developed specialist globally competitive enterprises to replace traditional manufacturing. By and large, Australia is not an integral part of global supply chains. This is a frequent lament in Australia, from the CSIRO, the Chief Government Scientist, and the Ministers of Industry, Innovation and Science.

This lack of success has spawned piecemeal measures aimed at ‘commercialising’ Australia’s exemplary research base, with varying degrees of effectiveness. Even so, growth in advanced manufacturing in Australia has lagged the economy as a whole and, over the last five years or so, failed to add new jobs to the economy.²⁹ At the same time, there are other economies in the world, which are *not* noticeably superior to Australia in terms of their research expertise or research skills base, such as Ireland, Switzerland and Singapore, that have seen substantial growth in investment and employment in advanced manufacturing.

²⁹ Department of Industry ‘Australian Industry Report 2014’ <http://www.industry.gov.au/industry/Office-of-the-Chief-Economist/Publications/Documents/Australian-Industry-Report.pdf>
October 2014

The value of a manufacturing nexus is that it ensures that the lower rate is associated with real economic activity. Preferential rates that are solely tied to the exploitation of IP, such as the UK Patent Box and similar models elsewhere in Europe may result in profit shifting rather than real economic activity or material increases in the amount of within jurisdiction R&D.³⁰

This problem was instrumental in persuading Ireland to abandon its Patent Box model. According to Ireland's Minister for Finance, Michael Noonan, Ireland decided to abolish its exemption for patent income after the Irish Tax Commission concluded that the exemption did not have the desired impact in stimulating innovation. The Commission concluded that the relief was not well targeted and had not resulted in increased R&D. Instead, according to the Commission, the exemption was being used by some companies simply 'as a tax avoidance device to remunerate employees.'³¹ This problem is also echoed in the academic literature; Graetz and Doud report that patent box schemes not linked to real activity may encourage profit-shifting rather than actual economic benefits.³²

Even if real economic activity were to arise without the nexus, for example an increase in R&D, Australia will reap greater benefits if there is a nexus. These will arise from the valuable multiplier effects of advanced manufacturing necessary to commercialise that R&D from Australia including a larger high wage skilled workforce, much of which will be absent if IP is simply sold or licensed for offshore commercialisation.

Accordingly, an implication of this nexus requirement is that the preferential tax rate would not apply to profits earned on royalties, license fees or sales of Australian owned IP.

IP developed in or acquired by and enhanced in Australia

The relevant IP on which the advanced manufacturing is based should be either developed in Australia or, if it is acquired IP, significantly enhanced through further expenditure while under Australian ownership. This requirement embodies an attribute of 'economic risk' to an Australian owner in the development of the IP.

³⁰ CSL recognises that the UK Patent Box, as originally envisaged, is being modified to deal with this concern in the light of concerns expressed by the OECD and other EU countries, to conform with the Modified Nexus Approach. See OECD 2015 *Action 5: Agreement on Modified Nexus Approach for IP Regimes* available at <http://www.oecd.org/ctp/beps-action-5-agreement-on-modified-nexus-approach-for-ip-regimes.pdf>.

³¹ 730 No. 2, Dáil Deb., Written Answers – Tax Code, at 296 (Apr. 14, 2011), <http://debates.oireachtas.ie/dail/2011/04/14/unrevised2.pdf>.

³² Graetz M J and Doud R (2013) 'Technological Innovation, International Competition, and the Challenges of International Income Taxation' available at <https://www.law.upenn.edu/live/files/2795-graetzdoudpdf>. De Mooij and Ederveen (2008) at n 18 similarly point to high semi-elasticities of profit shifting.

CSL notes that if Australia is to commercialise the results of its R&D endeavours into products for global markets, some of that R&D effort must necessarily take place elsewhere. For example, in the novel pharmaceuticals sector, it is essential that a considerable proportion of the late stage clinical trials are undertaken in the larger target markets (notably the US and EU) in order to ensure a seamless transition to commercial sales should the clinical trials succeed.³³ No doubt similar imperatives exist in other R&D intensive advanced manufacturing sectors.

The intention would be to define IP relatively broadly rather than to confine the definition narrowly to patents, so as to encompass a breadth of new advanced manufacturing investments that derive substantial value from IP generated from Australian R&D. However, CSL also recognises that there are practical considerations that may necessitate a degree of precision in how qualifying IP is eventually defines.

New investment reliant on qualifying IP

CSL considers that the low rate should be confined to *new* investment by an ‘entrepreneur manufacturer’ in a manufacturing facility that is reliant on the valuable qualifying IP. This requirement embodies an entrepreneurial ‘value added’ attribute which would be delivered through construction, employment and ‘spillover’ and multiplier opportunities. The intent of the constraint is to limit the low rate to:

- new rather than existing manufacturing, since the purpose is to attract footloose investment that would not otherwise occur in Australia rather than investment that has already targeted Australia; and
- ensure, as far as is possible, that a substantial proportion of the anticipated value of the advanced manufacturing facility derives from the value of the IP on which it is based rather than the cost of its tangible assets such as plant and equipment.

4.2. Rationale for the proposed incentive

CSL is a global pharmaceutical firm specialising in plasma derived medicines and recombinant therapeutic proteins. CSL undertakes a substantial share of its R&D in Australia, and is not unusual in finding Australia an attractive location for such activities. Unusually, however, CSL has a large advanced manufacturing presence in Australia. This is not simply a legacy of CSL’s Australian origins, but a reflection of CSL’s continued investment in Australia.

CSL continues to grow and to innovate. As a result, CSL is continually investing in additional R&D and new advanced manufacturing facilities. CSL takes considerable care in

³³ CSL’s has addressed these issues in a number of prior submission, listed at n 1.

deciding where to locate these new investments and takes into account a broad range of factors in so doing. Unfortunately, CSL's experience is that Australia is not a competitive location for entrepreneurial investment in advanced manufacturing; its uncompetitive tax rate is an important determinant of that outcome.

That CSL has decided to invest in manufacturing facilities for existing products (to supplement supply from CSL's entrepreneurial manufacturing facilities elsewhere) in Australia is testament to the availability of skilled staff, the sound research base, the other endowments of the Australian economy. It also reflects valuable assistance from Australian governments.³⁴ In large part, however, the new investment in Australia provides contract manufacturing services rather than entrepreneurial manufacturing. As a result, the Australian contract manufacturer neither owns, nor generates taxable profits on, the value of CSL's IP, which is the main driver of the value of the products.

CSL, as a global company with a choice over where to invest, can meet the expectations of its shareholders using this model of contract manufacture to expand capacity of existing products in Australia. Most multinational firms are similarly placed. But the Australian economy misses out on some of the additional benefits that advanced manufacturing in Australia based on Australian IP (i.e. entrepreneurial advanced manufacturing) can deliver.

CSL therefore determined to set out prospective changes to Australian corporate tax, the main impediment to new investment in advanced manufacturing, which, based on CSL's own investment experience, would place Australia on a reasonably level playing field with locations such as Switzerland, the UK, Ireland and Singapore.

4.3. Why not broaden its application?

As noted in section 3 above, there is compelling evidence that corporate taxes, and high corporate taxes in particular, are a drain on economic activity and growth. This is the central rationale behind the global trend towards lower corporate tax rates. But taxation is an inevitable compromise between the need to encourage economic activity and the need to collect revenue to pay for essential public services.

CSL doubts that across-the-board reductions in the corporate tax rate, sufficient to make Australia a competitive location for large scale new advanced manufacturing, are affordable or politically tenable. A 5% reduction in corporate tax would probably reduce Commonwealth annual revenues by \$13bn, or in excess of \$50bn over the budget and forward estimates horizon. This is neither affordable in the absence of much more radical

³⁴ For example, CSL constructed Biotechnology Manufacturing Facility ('BMF') at Broadmeadows capable of manufacturing recombinant proteins for clinical trials and early commercial development, for which CSL received both Victorian State and Commonwealth support.

tax reform, nor sufficient to attract footloose advanced manufacturing investment aimed at supplying goods to global markets.

CSL is also mindful that, as a global company with a choice of suitable locations for investment, its investments are likely to be particularly sensitive to jurisdictional differences, including tax rates. For firms such as CSL, the decision is less about whether to invest or not, but where to invest. The benefit to Australia for lower taxes for the types of investment that firms like CSL may make is not that they will encourage greater overall levels of investment globally, but rather that Australia will gain a greater share of what is a very large pool of footloose investment.

Two of the sectors of the economy that were identified as Industry Growth Centres by the Prime Minister³⁵ are characterised by high levels of footloose investment: medical technologies and pharmaceuticals; and advanced manufacturing sectors. As a result, Australian investment in these sectors is likely to be particularly responsive to the incentive.

Investments in many other sectors of the Australian economy such as local services and primary industries, even those sectors where Australia currently has a distinctive advantage, are likely to be considerably less sensitive to corporate tax rates. Bluntly, investment in these sectors is often tied to, or largely tied to specific Australian endowments. Three of the sectors of the economy that are identified as Industry Growth Centres have more in common with this second group of industries: food and agribusiness; mining equipment, technology and services; and oil, gas and energy resources. They would be likely to be less responsive to the incentive.

Australia will achieve much better economic outcomes (for a given requirement for government revenues to support public services) if this reality is recognised in the design of corporate taxes.

³⁵ Prime Minister of Australia (14 October 2014) *An Action Plan for Australia's Future*.

5. Likely impact of an Advanced Manufacturing Tax

CSL is not well placed to comprehensively determine the impact of an Advanced Manufacturing Tax on Australia's economic growth and tax revenues. However, CSL believes that there are some indications that it will deliver significant benefits to the Australian economy. CSL also expects that the incentive will result in a net increase in tax revenues and very little diminution of revenues in the near term.

5.1. Potential near term revenue losses

The IFS estimated the UK Patent Box model would reduce government revenues by approximately £0.7bn³⁶ in 2015/16 (or around \$1.4bn). However, it is important to note that the UK Patent Box, while phased in over time, applied to all income derived from eligible IP, a much broader category than CSL is suggesting should be eligible for the incentive.

The tighter eligibility criteria for the incentive, namely a tie to valuable IP developed or substantially enhanced in Australia and a tie to new advanced manufacturing investment, would be likely to reduce or eliminate revenue losses.

5.2. Medium-term increases in government revenues

In addition, CSL would expect greater levels of advanced manufacturing investment to take place in Australia than is currently the case, although in the absence of a clear definition of what constitutes advanced manufacturing in Australia, it is difficult to forecast precisely how large that effect might be.

Adopting the broad Department of Industry definition set out in section 3.3.1 above; as at June 2013 the sector comprised around 19,000 actively trading businesses, employing directly around 250,000 persons, generating \$30.6 billion gross value added in 2014 and export revenues of around \$11.2 billion. Although the sector grew at 1.1% per annum in the 5 years to 2014, this was less than the growth in the economy as a whole, and insufficient to offset the decline in the broader manufacturing sector. Furthermore, this growth did not give rise to additional employment (see Table 2).

It is possible to develop an indication of the possible impact of the incentive scheme by making the following relatively strong assumptions: long-run semi-elasticities of investment with respect of tax changes identified by De Mooij and Ederveen discussed in section 3.1 above of between -0.4 and -0.65; an advanced manufacturing in Australia as set out in Table 2, the output and employment of which are linearly related to the quantum of

³⁶ IFS (26 February 2015) *£8 billion giveaway used to boost corporate tax competitiveness* available at <http://www.ifs.org.uk/publications/7609>.

advanced manufacturing investment; and fixed investment as a proportion of gross value added for the advanced manufacturing sector reflective of the rate of fixed investment in the economy as a whole (at around 28%).³⁷

Table 2. Advanced manufacturing performance indicators

	2013-14	Average growth (5 years)	Deviation from national average growth (ppts)	Deviation from rest of manufacturing growth (ppts)
Gross Value Add (\$b)	30.6	1.1%	-1.6	2.5
Employment (000)	250.2	-0.4%	-1.7	1.6
Labour Productivity (\$/hr worked)	66.5	2.2%	0.3	0.2

Source: ABS cat. no. 5204.0, 5206.0, 6202.0, 6291.0 (customised request) and Department of Industry calculations

On these assumptions, the incentive might lift the aggregate growth rate of the advanced manufacturing sector from 1.1% per annum to around 7½% per annum. Over a 5 year period, the gross value added of the sector might be expected to reach \$45bn, with employment increasing by 35% to around 330,000.

5.3. Multiplier effects

The advanced manufacturing sector, which is characterised by high value products, R&D intensity, high wage employment and knowledge spillovers, generates economic activity in the broader economy. CSL periodically estimates the contribution of its Australian operations to the economy. It exhibits output and income multipliers close to 3, and employment multipliers in excess of 4; with close to \$1bn of output and 1,800 employees, this could translate into output as high as \$3bn and employment as high as 8,000.³⁸

Although rigidities in the economy, such as limitations on the rate at which the supply of skilled employees can increase, can reduce multiplier effects, it remains the case that advanced manufacturing has large multiplier effects. As a result, more rapid growth in the advanced manufacturing sector will generate substantial economic activity in other sectors of the economy. If Australian IP is not commercialised here but offshore, Australia misses out on many of these multiplier benefits which, instead, accrue elsewhere.

³⁷ For a comparison of rates of capital formation across countries see World Bank, *Gross capital formation (% of GDP)* available at <http://data.worldbank.org/indicator/NE.GDI.TOTL.ZS>.

³⁸ A multiplier represents the degree to which activity in one sector results in (or requires) additional activity in other sectors. CSL understands the limitations of these types of multipliers based on input output analysis. For example, the full multiplier effects depend upon there being adequate labour so growth in one sector is not at the expense of other sectors of the economy (i.e. the assumption that there is no competition of inputs). The estimated multiplier are presented solely to illustrate the high multipliers of advanced manufacturing and R&D of the type undertaken by CSL.

5.4. Australia's perennial commercialisation challenge

Australia has a poor track record in commercialising IP. As AAMRI stated, in respect of the medical research sector:³⁹

Australia has a proven ability to produce world-class biomedical research; we are among the top five countries when measuring scientific articles produced per capita – well ahead of the UK and US – and produce 3% of the world's medical research publications....However, Australia's commercial translation of government funded research is poor by international standards.

CSL believes that the high corporate tax rate in Australia represents a particular impediment to the commercialisation of IP through advanced manufacturing which, under standard tax accounting, is characterised by high profit margins. The Advanced Manufacturing Tax incentive would, CSL believes, markedly increase commercialisation from Australia.

5.5. Summary

CSL believes that investment in the Australian advanced manufacturing sector is uniquely sensitive to corporate tax rates due to its large returns on intangible assets, particularly intellectual property, and to high levels of global footloose investment. It is therefore reasonable to expect that the Advanced Manufacturing Tax, which reduces the tax rate from 30% to 10% on new investment in the sector, would yield substantial growth and high wage employment, and markedly improve the prospects of commercialising Australian IP into global markets.

If the incentive is effective in applying only to new footloose investment, it would not reduce revenue to the Treasury. Rather, the increased growth in output and employment in the sector might be expected to increase government revenues.

³⁹ Association of Australian Medical Research Institutes (July 2012) *Enhancing the Commercialisation Outcomes of Health and Medical Research*.

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