

HOW AUSTRALIA COMPARES

AUSTRALIAN
ADVANCED
MANUFACTURING
COUNCIL



Contents

1. Executive Summary
2. Methodology
3. Australia's Innovation Competitiveness
4. National Tax Regime Comparison
5. Business Scenario
6. Recommendation
7. Appendices with Glossary

1. Executive
Summary

AUSTRALIAN
ADVANCED
MANUFACTURING
COUNCIL

Executive Summary

This Report

- The Australian Advanced Manufacturing Council (AAMC) is focused on making Australia truly competitive on the international scene, specifically in its ability to provide an attractive location not only for Australian business to thrive in but also to attract international advanced manufacturing businesses, and innovative businesses more widely
- This report commissioned by the Australian Advanced Manufacturing Council considers the competitiveness of Australia's corporate tax regime, and opportunities to enhance Australia's ability to attract internationally mobile R&D activity and subsequent commercialisation of intellectual property
- The report compares Australia's corporate tax regime to a group of eleven other countries which we thought made for a relevant comparison to Australia either in terms of geography, a strong advanced manufacturing base, or those countries that are actively using their tax system to promote themselves as strong international business locations to attract mobile international investment in R&D and commercialisation of intellectual property
- As well as a qualitative comparison of the tax rates and incentives, we also provide a business scenario demonstrating how the tax systems translate to quantitative financial impact in each country in a given situation based on an assumed model
- The AAMC recognises that the issue of Australia's international attractiveness to business goes much further than its tax offering. However, given Australia's strong tradition in innovation and its relative strength in the non-tax areas (for example, education, skills, infrastructure, cost of labour, etc.), we consider that Australia's tax system will be critical to ensuring that it strengthens its profile on the international business scene, and we are keen to share and promote our ideas in this respect

Executive Summary

Overview

- Australia provides a generous R&D Tax Credit incentive, and is keen to encourage innovative business within Australia, and to attract innovative foreign companies to locate part of their business in Australia
- There is increasing global competition to attract IP-focussed businesses to locate key functions. Tax is a key component of the competition, with key drivers being headline corporate tax rates, incentives for R&D activity, incentives for IP exploitation and withholding tax on dividends
- Australia's R&D Tax Credits have always been competitive but are not leading and has failed to be competitive in the other key areas with a relatively high headline rate of corporate tax, and no IP exploitation scheme. Consequently Australia has fallen behind in terms of its ability to attract international business activity, and many innovative Australian companies look to restructure offshore for IP exploitation purposes
- This situation is costing the Australian economy
- Canada, Ireland and the UK have successfully reduced their total tax take on companies to a fair and competitive level to support the country with increased R&D and foreign business investment. The UK's supportive regime has enabled them to deliver three consecutive years of record foreign inward investment, even when flows into Europe shrunk 12% last year
- We understand that attracting international R&D investment and commercialisation goes beyond tax: Switzerland is a long-term leader of the Global Innovation Index, but has not historically offered relief directly for R&D or IP exploitation activity
- Australia must dramatically change its corporate tax and incentives landscape in order to compete on the international stage to be attractive to internationally mobile, high-value IP-rich companies and retain Australia's global companies.

Executive Summary

Recommendations

In order to make Australia a more compelling and attractive destination for internationally mobile advanced manufacturing and other companies deeply involved in innovation, we make the following recommendations:

1. The introduction of an Intellectual Property (IP) related tax incentive to complement the competitive R&D tax credit system.
 - Being OECD BEPS compliant (the UK and Ireland have both already announced moves in this direction) would also tie the IP incentive to R&D activity being conducted in Australia, making it a more attractive location in terms of the whole innovation cycle.
 - A study of 12 tax regimes later in this report demonstrates that Australia's tax system ranks 10th based on an assumed business scenario: if the corporate tax rate applying to revenues from Australian generated and registered IP is reduced to 10%, Australia lifts to 1st. If we consider Withholding Tax on dividends Australia falls to 3rd behind the UK and Ireland. We note the Irish IP incentive system will be introduced at a corporate tax rate of 6.25% in 2016.
2. R&D tax credits could be enhanced at the same time as rolling out the Australian generated IP incentive to show that Australia is focused on improving its offering to attract investment in science and innovation.
3. A change of tax rules to allow the tax deductibility of goodwill amortisation. Cross-border M&A now accounts for more than half of all cross border investment flows. Acquisitive Australian manufacturers can be at a disadvantage to their international competitors who treat the amortisation as tax deductible.

Australia needs to promote itself strongly as a centre for innovation. This is an area of increasing competition internationally, and if Australia rests solely on its R&D scheme, it will get left further and further behind.

While the attractiveness of R&D and commercialisation of Intellectual Property (IP) is clearly reliant on a combination of tax and non-tax factors, there is no question an effective Australian programme – well marketed – will create long-term value for both Australian business and our community.

2. Methodology

AUSTRALIAN
ADVANCED
MANUFACTURING
COUNCIL

Methodology

In order to compare Australia's tax competitiveness on the international scene, specifically in the context of innovative advanced manufacturing companies, we have undertaken the following analysis:

- Reviewed publically available information and data relating to Australia's attractiveness as an investment location, and its relative performance in terms of R&D and IP exploitation – allowing us to draw headline conclusions about Australia's competitiveness
- Prepared a narrative comparison of Australia's tax offering with those of a selection of other countries that we consider relevant to the discussion – enabling us to observe at a high level how Australia's tax regime compares internationally
- Prepared an illustrative business scenario to demonstrate how Australia's tax system translates into a tax burden for a given circumstance, and how this compares to the other countries. This allows us to draw conclusions about how internationally mobile R&D and IP companies will conclude on assessing the Australian tax system to alternative locations

We draw high-level conclusions, and make our recommendations as to how Australia can adapt its tax system as a tool to make Australia a more attractive and successful location for international (and Australian) advanced manufacturing business

3. Australia's Innovation Competitiveness

AUSTRALIAN
ADVANCED
MANUFACTURING
COUNCIL

Australia compares poorly to leading international investment locations in both the Global Innovation Index and OECD's innovation translation.

Global Innovation Index

Location	2015 Rank	2014 Rank
Switzerland	1	1
UK	2	2
USA	5	6
Singapore	7	7
Ireland	8	11
Germany	12	13
South Korea	14	16
Canada	16	12
Australia	17	17
Israel	22	15
Malaysia	32	33
India	81	76

- According to the Global Innovation Index: *“Recognising the key role of innovation as a driver of economic growth and prosperity, and the need for a broad horizontal vision of innovation applicable to developed and emerging economies, the GII includes indicators that go beyond the traditional measures of innovation such as the level of research and development.”*
- We note Australia's rank in the index against the other countries considered by this report as well countries excluded that would generate similar findings including Netherlands (4th), Luxembourg (9th), Hong Kong, SAR (11th) and NZ (15th).

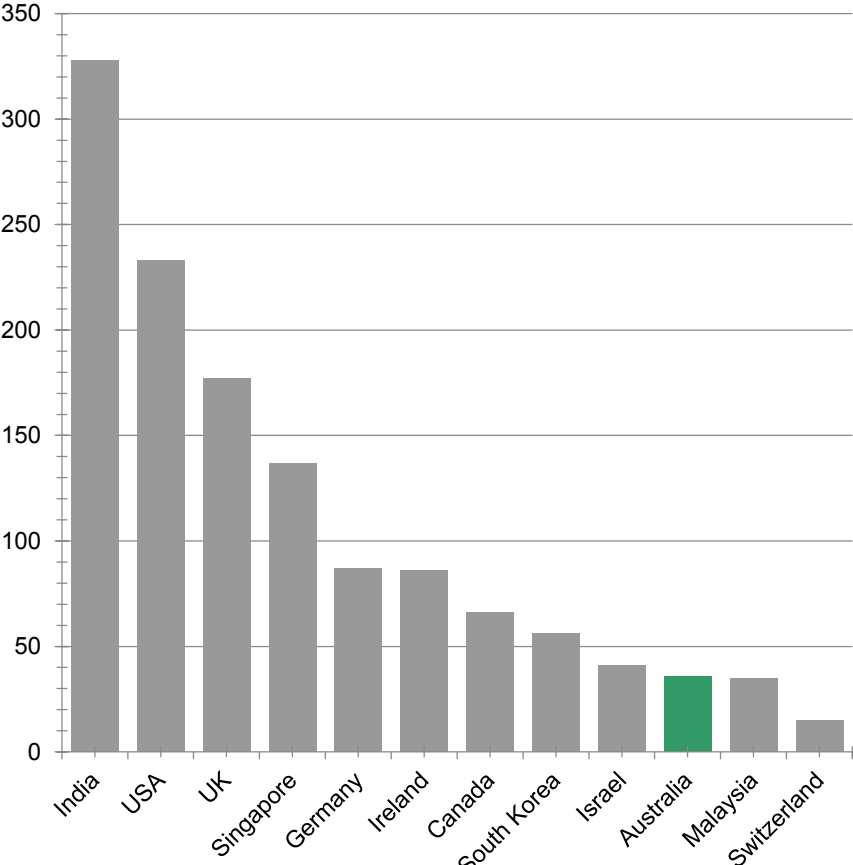
AAMC has collated facts about Australia and how we compare internationally in advanced manufacturing measures. Did you know?:

- When it comes to converting research dollars into innovation and commercial success – Australia ranks 116th out of 142 countries. [1]
- Australia ranks last out of 33 countries in the OECD for collaboration.[2]
- Australians rank 2nd in the world as “problem-solvers” by the OECD just behind Norway and ahead of Japan, Germany, the UK, the USA and South Korea, on complex problem-solving measures
- Recent research from the UN Conference on Trade and Development (UNCTAD) reveals that Australia's participation rate in global value chains is lower than that of 22 of the 25 largest-exporting economies
- In 2011, Australia spent just .227% of Gross Domestic Spending on R&D in manufacturing. This compares to the US, which spent 1.29% and Germany, which spent 1.33% – almost six times Australia's level
- The Australian government spends \$9 billion a year on research, through grants to the higher education sector (60%), to research institutions such as the DSTO, NHMRC and CSIRO, and through tax incentives

Source: <https://www.globalinnovationindex.org/content/page/GII-Home>; 1. World Economic Forum Global Competitiveness Report 2013-2014; 2. OECD 2013; 3. OECD Skills Outlook Report 2013; 4. Pettigrew, A. G. (2012) Australia's Position in the World of Science, Technology and Innovation, Occasional Paper Series, Issue 2. Office of the Chief Scientist, Canberra.

**Australia is underperforming in attracting internationally mobile R&D projects.
 Australia's generous tax credits are not sufficient to attract international R&D to Australia.
 Australia's R&D activity is predominately funded by domestic Australian business.**

Number of greenfield* R&D Foreign Direct Investments since 2003



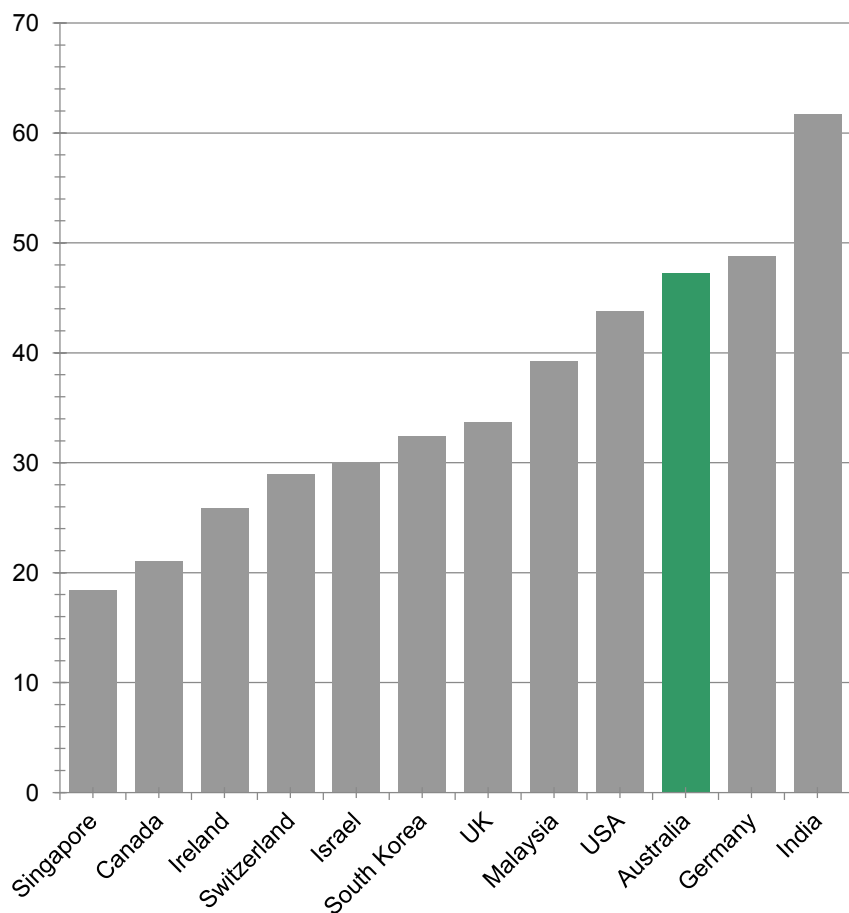
- Australia is underperforming in attracting international R&D projects, even compared to smaller countries in both population and GDP such as Singapore, Ireland and Israel
- Singapore, Canada and Ireland all outperform in attracting international R&D projects and have attractive R&D tax relief
- USA and Germany underperform given their substantially larger GDP, population and proportion of R&D in % GDP

Location	Rank	Data	R&D % of GDP
India	1st	328	0.81%
USA	2nd	233	2.79%
UK	3rd	177	1.72%
Singapore	4th	137	2.10%
Germany	5th	87	2.92%
Ireland	6th	86	1.72%
Canada	7th	66	1.73%
South Korea	8th	56	4.04%
Israel	9th	41	3.93%
Australia	10th	36	2.39%
Malaysia	11th	35	1.07%
Switzerland	12th	15	2.87%

Source: FDI Projects Since 2003: FDI Benchmark.com from Financial Times; % of R&D in GDP: Source: World Bank World Development Indicators: Science & Technology. <http://wdi.worldbank.org/table/5.13>
 *Greenfield: an investment project has created at least new direct jobs and capital investment. http://unctad.org/en/PublicationChapters/WIR2012MethodologicalNote_en.pdf

Australia's total corporate tax rate measured by the World Bank suggests that it is not a competitive destination for international business returns.

Total tax rate and mandatory contributions as % of profit borne by business (World Bank, Doing Business)



- Australia's Total Tax Rate is 10th out of 12 in the sample
- Australia is 47.3% compared to the average of 35.9%
- Singapore leads at 18.4% with Canada (21.0%), Ireland (25.9%), Israel (30.1%) and the UK (33.7%) providing attractive locations for corporate R&D
- Only Germany (48.8%) and India (61.7%) tax their corporates more than Australia according to the World Bank Doing Business Survey

Location	2009	2010	2011	2012	2013	2014	2015
Australia	11th	11th	11th	11th	11th	10th	10th
Canada	8th	8th	1st	1st	2nd	2nd	2nd
Germany	10th	9th	10th	9th	9th	11th	11th
India	12th	12th	12th	12th	12th	12th	12th
Ireland	2nd	2nd	3rd	3rd	3rd	3rd	3rd
Israel	5th	5th	6th	5th	4th	5th	5th
Malaysia	7th	6th	7th	7th	7th	8th	8th
Singapore	1st	1st	2nd	2nd	1st	1st	1st
South Korea	4th	4th	4th	6th	6th	6th	6th
Switzerland	3rd	3rd	4th	4th	5th	4th	4th
UK	6th	7th	8th	8th	8th	7th	7th
USA	9th	10th	9th	10th	10th	9th	9th

Australia incurred an intellectual property use deficit of US\$3.1 billion in 2014. With above-average investment in R&D, Australia accrued a US\$3.1 billion opportunity cost as business activity and profits are transferred offshore reducing Australia’s industrial capacity and tax revenues.

- World Bank reports Australia’s R&D activity as a proportion of GDP (%) is above the global average of 2.39%. We believe this is indicative of Australia’s attractive R&D tax credits encouraging R&D activity to occur in Australia by Australian business
- The same report evidences Australia accrued a Net Deficit for use of Intellectual Property in 2014 as Australian business received US\$891 million in IP fees and paid out US\$4,052 million in IP fees
- This suggests Australian Intellectual Property is possibly commercialised through offshore locations where tax regimes may be more favourable
- For example, “Double Irish” tax treatment may explain the extraordinary IP payments by Irish-based companies being larger than the USA. “Double Irish” enables tax deductible expenses for the use of Intellectual Property from a related company that is not considered taxable income in the receiving entity and thereby generate nil corporate profit and a “0%” effective tax rate. To comply with BEPS, the Irish have announced this will close in 2020 and are introducing a Knowledge Development Box.
- We note US, UK, Germany, Switzerland and Israel all generate IP surpluses

Incentives	GDP (US\$ billions)	R&D as % of GDP (2005-2012)	High-tech exports as a % of exports	2014 charges for use of Intellectual Property receipts (US \$ millions)	2014 charges for use of Intellectual Property payments (US\$ millions)	Net charges for use of Intellectual Property (Receipts – Payments)
Australia	\$1,454	2.39%	12.9%	891	4,052	-3,161.00
Canada	\$1,787	1.73%	14.1%	3,974	10,230	-6,256.00
Germany	\$3,853	2.92%	16.1%	13,797	8,122	5,675.00
India	\$2,067	0.81%	8.1%	659	4,849	-4,190.00
Ireland	\$246	1.72%	22.4%	5,287	46,407	-41,120.00
Israel	\$304	3.93%	15.6%	1,281	1,136	145.00
Malaysia	\$327	1.07%	27.1%	101	1,419	-1,318.00
Singapore	\$308	2.10%	43.6%	3,151	22,230	-19,079.00
South Korea	\$1,410	4.04%	47%	5,151	10,369	-5,218.00
Switzerland	\$685	2.87%	26.5%	16,628	12,351	4,277.00
UK	\$2,942	1.72%	7.6%	20,003	10,993	9,010.00
USA	\$17,419	2.79%	17.8%	130,361	42,124	88,237.00
World	\$77,869	2.13%	17.0%	201,284	174,282	-20,782.00

4. National Tax Regime Overview

AUSTRALIAN
ADVANCED
MANUFACTURING
COUNCIL

Tax regime comparison

COUNTRY	Tax payable		Tax incentives		
	Corporate Tax	Withholding tax on dividends	IP exploitation	R&D tax relief	R&D tax credit
Australia	30%	5%	X	X	40%
Canada	25%	5%	X	X	35%
Germany	30%	10%	X	X	X
India	41.2%	17%	X	125%	X
Ireland	12.5%	X	**	X	25%
Israel	26.5%	15%	X	X	X
Malaysia	25%	X	X	200%	X
Singapore	17%	5%	X	*	X
South Korea	24.2%	10%	X	X	40%
Switzerland	18%	5%	X	X	X
UK	20%	X	10%		
USA	40%	5%	X	X	14%

X – Not applicable to this market; * Tax relief limited to \$400k in expenses; ** Ireland announced the introduction of a Knowledge Box to commence in January 2016 applied at 6.25%.

IP tax amortisation comparison

Amortisation periods for different types of intangibles, where permitted:

	<u>Patents</u>	<u>Technology</u>	<u>Trademarks</u>	<u>Goodwill</u>
Australia	6-20 years	4 years	N/A	N/A
Canada	7% per annum to maximum of 75% of value			
Germany	Remaining useful life			15 years
India	4 years			
Ireland	15 years or remaining useful life			15 years
Israel				10 years
Malaysia	5 years	2.5 years	5 years	N/A
Singapore				N/A
South Korea	7 years			5-20 years
Switzerland	Remaining useful life			
UK	25 years or remaining useful life			N/A
USA	15 years	N/A	15 years	15 years

Australia

Overview

The Australian tax system provides generous incentives for qualifying companies that engage in R&D activity. However, there is currently no tax incentive which specifically incentivises the exploitation of IP.

Incentives for R&D

The ATO provides a generous R&D tax incentive to companies who engage in qualifying R&D activity. Since 1 July 2011, a 2-tier R&D tax credit system has been in place.

The R&D regime currently takes the form of either:

- A refundable tax credit equal to 45% of the eligible R&D expenditures (but the expenditures are not deductible) where the eligible entity has turnover of less than \$20 million and is not controlled by exempt entities, or
- A 40% non-refundable tax credit for all other eligible entities

The activity must be registered each year with AusIndustry prior to making the claim.

Incentives for IP exploitation

The ATO currently provides no tax incentives for the exploitation of IP through by an Australian company. IP revenues are taxed at the headline rate of 30%.

Canada

Overview

Canada has a headline rate of federal corporate tax of 15%. This is complemented by provincial taxes ranging from 10-16%, giving a combined tax burden of 25-31%. Canada's R&D incentive, SRED, is generous, although there is no tax incentive for IP exploitation.

Incentives for R&D

Canada's principal R&D incentive is its Scientific Research and Experimental Development ("SRED") scheme:

- Federal tax credit of 20%, and up to 35% for smaller Canadian-owned companies. This is offset against federal tax liabilities, and surplus can be carried forward for up to 20 years
- Provincial tax credit of up to 37.5%
- Certain industries carry their own special tax credit schemes

SRED tax credits are available on a refund basis, although refunds of federal and some provincial credits are limited to Canadian-owned, non-public companies.

Incentives for IP exploitation

There is currently no tax incentive available for IP-related profits in Canada.

Germany

Overview

Germany offers limited incentives for innovative companies, and there are no tax-based incentives. The only support available are R&D-related grants and loans.

The headline rate of corporate tax is 15%, but this is supplemented by the solidarity surcharge and municipal tax (the latter varies depending on location) such that the average total combined tax burden is approximately 30%.

Incentives for R&D

R&D incentives are offered in Germany, but the system is not tax based. Incentives take the form of grants or loans.

- R&D grants are in the form of non-repayable cash, and are awarded on a per project basis. The extent of funding is typically around 50% of the underlying project cost, although SMEs can achieve higher than this. Projects are chosen for grant funding based on the level of innovation being addressed, and the levels of technical and economic risk being adopted
- A range of loans are available under various government programmes

R&D activities must be conducted in Germany, and any IP generated must be retained in Germany.

Incentives for IP exploitation

The German tax system currently provides no tax incentives for the exploitation of IP by a German company. Germany has historically been opposed to IP-related tax incentives, and has been active in challenging schemes registered by other EU countries.

India

Overview

In India, the headline rate of corporate tax for domestic companies is 30%, and for foreign (owned) companies 40%. There are some surcharges, resulting in an effective rate for domestic companies of between 30.9% and 34.6%, and for foreign (owned) companies of between 41.2% and 43.3%.

Incentives are available for R&D activity, but there is no incentive for IP exploitation activity. The R&D tax relief may appear generous however it must be considered in context of the highest corporate tax take in the sample.

Incentives for R&D

R&D incentives are available as follows:

- 200% super deduction for certain sectors (broadly speaking, biotech and manufacturing). Qualifying circumstances are subject to certain rules, and must be approved in advance by the Department of Scientific and Industrial Research.
- 125-200% super deduction for expenses incurred with certain R&D entities in India
- Tax holidays are available for companies located in Special Economic Zones that are engaged in the export of R&D services to foreign companies

In addition to the above, various local grant and financing schemes are available to support R&D-related activity.

Incentives for IP exploitation

There is currently no tax incentive available for IP-related profits in India.

Ireland

Overview

Ireland's headline rate of corporate tax is 12.5%. Historically companies have been able to achieve significantly lower effective rates of tax through tax structuring known as the "Double Irish", although this structuring option is no longer available. However, the introduction of the Knowledge Development Box for qualifying IP revenues will ensure that Ireland remains competitive internationally from a tax perspective. There are also R&D tax credit and grant schemes available in Ireland.

Incentives for R&D

A 25% corporate tax credit is available in respect of qualifying R&D expenditure. There is also a 25% credit available on expenditure on buildings and structures used for the conduct of qualifying R&D activity.

R&D grants are also available in Ireland.

Incentives for IP exploitation

Although to date the Irish tax system has not provided an incentive for IP exploitation, it has proved an attractive location for IP-rich companies due to the low headline rate of corporate tax (12.5%), and the tax structuring arrangement commonly referred to as the "double Irish" which enabled companies to reduce their effective rate of corporate tax to significantly less than this.

However, under international pressure, the availability of this structuring mechanism has now been discontinued, although those companies who are making use of it are afforded several years for restructuring.

However, in order to remain a competitive destination internationally from a tax perspective, Ireland has announced the introduction of the Knowledge Development Box", a BEPS compliant tax incentive which will provide for a tax rate of 6.25% on qualifying income derived from Ireland developed Patents and Software Copyright.

Israel

Overview

Israel's headline rate of corporate tax is 26.5%. Incentives are available in relation to R&D activity, and although there is currently no IP-related incentive, this is being actively considered by the Israeli Ministry of Finance.

Incentives for R&D

Israeli companies can qualify for R&D incentives if approval is granted in advance by the Office of the Chief Scientist (OSC) of the Ministry of Industry Trade and Labour upon satisfaction of certain criteria. The incentives take the following forms:

- Reduced tax rates. Companies located in Priority Area A can enjoy a tax rate of 6%, while those outside Priority Area A can enjoy a rate of 12%
- Substantial multinational companies who make significant (>NIS100 million and >250 employees) investments in R&D in Israel can qualify for reduced tax rates of 5% in Priority Area A and 8% elsewhere
- Those companies located in Priority Area A can also qualify for grants towards investment in manufacturing facilities: grants are awarded by the Investment Centre, and contribute 20% to the total investment made

The R&D incentives generally apply to innovative companies working in the Software & Hardware, Pharmaceutical, or Energy & Utilities sectors.

Incentives for IP exploitation

There are currently no tax incentives in Israel that apply to the exploitation of IP. However, the Ministry of Finance is considering the introduction of a 5% rate of tax that would apply to profits relating to patents and other forms of IP. The intention would be to encourage Israeli companies to retain their IP in Israel, but also to encourage multinationals to transfer IP into Israel from elsewhere.

Malaysia

Overview

Malaysia's headline rate of corporate tax is 25%. There are fairly generous incentives available for R&D activity (although pre-approval is generally required), and although there is no specific incentive for IP exploitation, certain companies can qualify for a 5-year (with a possible extension to 10 years) corporate tax exemption, and this can be applied to IP revenues if Pioneer status is given to an IP company.

Incentives for R&D

Malaysia provides various incentives for companies engaging in R&D activity:

- 200% super deduction on qualifying expenditure (non-capital) for companies undertaking R&D in-house. Advance approval from the Minister of Finance is required
- Investment Tax Allowance equating to 50% of qualifying capital expenditure. The ITA is offset against profit to a maximum of 70% in any given year, with the surplus ITA carried forward against future years
- Tax exemption for companies granted Pioneer status by the Minister of Finance. The status can be granted for 5 years, and extended by a further 5 years. Pioneer status is reserved for companies who generate income from certain activities which are considered beneficial to the Malaysian economy. Pioneer status can be granted to companies that participate in a promoted activity or producing a promoted product

Incentives for IP exploitation

The tax exemption awarded to companies with Pioneer status (see above) can act as an incentive for IP exploitation through a Malaysian company, although it is not reserved specifically for IP exploitation.

Singapore

Overview

Singapore does provide tax incentives to companies engaging in R&D activity. There is currently no tax incentive for companies in Singapore who exploit IP, however with Singapore's drive to become the South-East Asia's hub for IP exploitation, something may well be introduced at some point in the near future. Lower rates of tax can be secured on IP income for a period of time under Singapore's Development and Expansion Incentive. The headline rate of corporate tax is 17%.

Incentives for R&D

In Singapore, R&D-related incentives are available as a part of the wider Productivity and Innovation Credit Scheme.

R&D expenditure in Singapore qualifies for a 400% tax deduction up to a cap of \$400,000 per year, or \$600,000 for SMEs. The incentive extends to R&D activity conducted in-house or outsourced, and can be carried out in Singapore or overseas. R&D expenditure over and above the thresholds qualifies for a 150% tax deduction.

Incentives for IP exploitation

In Singapore, there are currently no Patent Box type of tax incentives for the exploitation of IP by a Singapore company. However, the Development and Expansion Incentive, can provide reduced rates of tax on IP income for up to 5 years.

South Korea

Overview

The headline rate of corporate tax in South Korea is progressive, with the lowest rate at 11% and the highest rate at 24.2%. Tax credits are available for R&D activity, but there is no IP-related tax incentive.

Incentives for R&D

South Korea offers a general tax credit based on R&D expenditure. The credit works as follows:

- SMEs: 25-50% tax credit depending on the annual pattern of expenditure. A 30% credit is given on R&D expenditure if incurred in relation to New Growth Engine Industry or Original Source Technology programmes as designated by the government. In certain circumstances, an SME acquiring IP from a third party will be entitled to a tax credit equal to 7% of the purchase price
- Large companies: a credit of up to 40% of R&D expenditure. A 20% credit is given on R&D expenditure if incurred in relation to New Growth Engine Industry or Original Source Technology programmes as designated by the government

SMEs and large companies both qualify for the Investment Tax Credit for R&D equipment: a credit equating to 10% of the total investment in qualifying R&D equipment.

Incentives for IP exploitation

The Korean tax system currently provides no tax incentives for the exploitation of IP through by a Korean company.

Switzerland

Overview

Switzerland offers various R&D-related incentives, and while there is currently no tax incentive for the exploitation of IP, a License Box mechanism is to be introduced. The headline rate of corporation tax varies considerably within Switzerland: a federal rate of approximately 8% is supplemented by cantonal and communal tax which vary, giving a total corporate tax burden of between 12% and 24%. The average rate is approximately 18%. The Swiss corporate tax system is going through a process of reform, which will see changed to the way companies are taxed, and to the incentives available.

Incentives for R&D

There are currently no tax incentives in Switzerland that relate specifically to R&D activity. There are a number of measures which do support R&D activity either directly or indirectly:

- Interest-free loans to fund investment in Switzerland
- Tax holidays: the ability to negotiate relief from profit and capital taxes at a communal, cantonal and federal levels. 100% relief can be secured for up to 10 years

Incentives for IP exploitation

There is currently no tax incentive available for IP-related profits in Switzerland. However, as part of Switzerland's corporate tax reform process, a License Box incentive is to be introduced, providing reduced rates of tax on IP-related profits. The draft License Box wording suggests that the mechanism will be closely aligned with the UK Patent Box, in terms of the IP that qualifies (broadly limited to patented IP), the revenue types that qualify, and the IP ownership requirements.

It is expected that the License Box will afford a total tax rate (inclusive of federal, cantonal and communal taxes) of around 10%.

United Kingdom

Overview

The UK has a generous R&D tax credit system, and the Patent Box rewards those UK companies that exploit patented IP with an effective 10% rate of Corporation Tax.

Incentives for R&D

A UK company or organisation can claim R&D tax credits if it is liable for Corporation Tax. There are 2 schemes, depending on the size of the company:

1. SME scheme (SME: fewer than 500 employees and either >€100 million turnover or >€86 million balance sheet total)
 - Grants additional deduction against taxable profit with the tax relief on allowable R&D costs is 230% – that is, for each £100 of qualifying costs, a company will have its taxable profit reduced by an additional £130
 - The R&D relief can be taken as a payable credit if the company is loss making, which can equate to 33% of the qualifying R&D expenditure.
2. Large company scheme (for non-SMEs)
 - The tax relief on allowable R&D costs is reduced to 130%. There is an alternative “Above the Line” (ATL) treatment, which becomes mandatory from April 2016: a 11% taxable credit which provides an after tax benefit which represents 8.8% of the qualifying R&D expenditure
 - Benefiting from the UK’s R&D tax credit system is straightforward: the claim is incorporated into the annual Corporation Tax Return
 - No pre-registration is required, but adequate records must be maintained regarding the qualifying R&D expenditure for which a claim is made

Although R&D relief is only available for “revenue expenditure” (generally, day-to-day running costs, as opposed to capital expenditure), capital expenditure on assets used in R&D qualifies for 100% first-year capital allowances.

United Kingdom IP exploitation: Patent Box

In April 2013, the UK introduced the Patent Box, which enables companies to apply a lower rate of Corporation Tax to profits earned after 1 April 2013 from its patented inventions.

The benefit:

The relief is being phased in between 1 April 2013 and 1 April 2017, at which point the lower rate of Corporation Tax to be applied will be 10%.

How does it work?

- To qualify for Patent Box, a company must be liable to Corporation Tax, and must also own or exclusively license-in the patents, and must have undertaken qualifying development on them
- If a company is part of a group, it may qualify if another company in the group has undertaken the qualifying development
- Patent Box can apply to worldwide profits, and a variety of income types: the sale of patented products, license income relating to patent rights, and the sale of patent rights

The future

- Following recommendations made by the OECD as a result of its review of harmful international tax practices, the rules relating to Patent Box qualification will be changing from 1 June 2016: from that date,
 - IP entering the Patent Box regime must have been developed (or partially developed) in the UK
 - IP qualifying before that date will continue to enjoy the benefit of Patent Box until 2021, when it will be reassessed according to the new R&D requirement

United States

Overview

US federal tax in the US ranges from 15% to 35%. State and local governments also levy taxes, which are deductible from a federal tax perspective – the result is a maximum combined effective rate of tax of approximately 40%.

The US tax system does allow for R&D tax credits, but there is no incentive for IP exploitation.

Incentives for R&D

In the US, tax credits are available in relation to qualifying research costs. The credit can be calculated by one of the two ways:

1. A straightforward “traditional” 20% credit, calculated on qualifying research expenditure over and above a base amount.
2. An alternative “simplified” 14% credit.

There are computational adjustments that result from claiming these credits, which are likely to reduce their eventual value to the claimant company.

Incentives for IP exploitation

The US tax system currently provides no tax incentives for the exploitation of IP by a US company.

5. Business Scenario

AUSTRALIAN
ADVANCED
MANUFACTURING
COUNCIL

Business Scenario

The following business scenario illustrates the commercial trade-offs facing a business deciding on international locations for investing in R&D and subsequent IP commercialisation

Australia is compared against a group of competitor countries to demonstrate the financial impact of relevant tax regimes in assessing one year's operating profit

Australia's R&D incentives within the Australian tax regime are not sufficient to redirect international corporate investment in R&D to Australia

This business scenario demonstrates the value impact corporate tax regimes including:

- R&D tax incentive comparison
- Corporate tax comparison
- Impact of an IP Incentive on Corporate Tax
- Withholding tax on dividend comparison

Business Scenario 1: R&D investment decision comparison for corporates

Indicative operating profit after tax comparison Assessing locations for R&D.

ABC Ltd is an aerospace manufacturer with customers in defence and civil aviation. With facilities located around the world, the company has now narrowed its choice to invest in a \$10 million R&D programme to deliver prototypes to test with their customers to support an upgrade in the user interface of the technology.

The company is assessing 12 locations aligned to their production facilities.

Financially, ABC's facilities are standardised meeting optimal efficiency, each facility generating A\$200 million in turnover with operating profit standardised around 25% excluding R&D and taxation impacts.

The table below illustrates the after tax impact of operating in each region and the R&D incentives available for a large corporate.

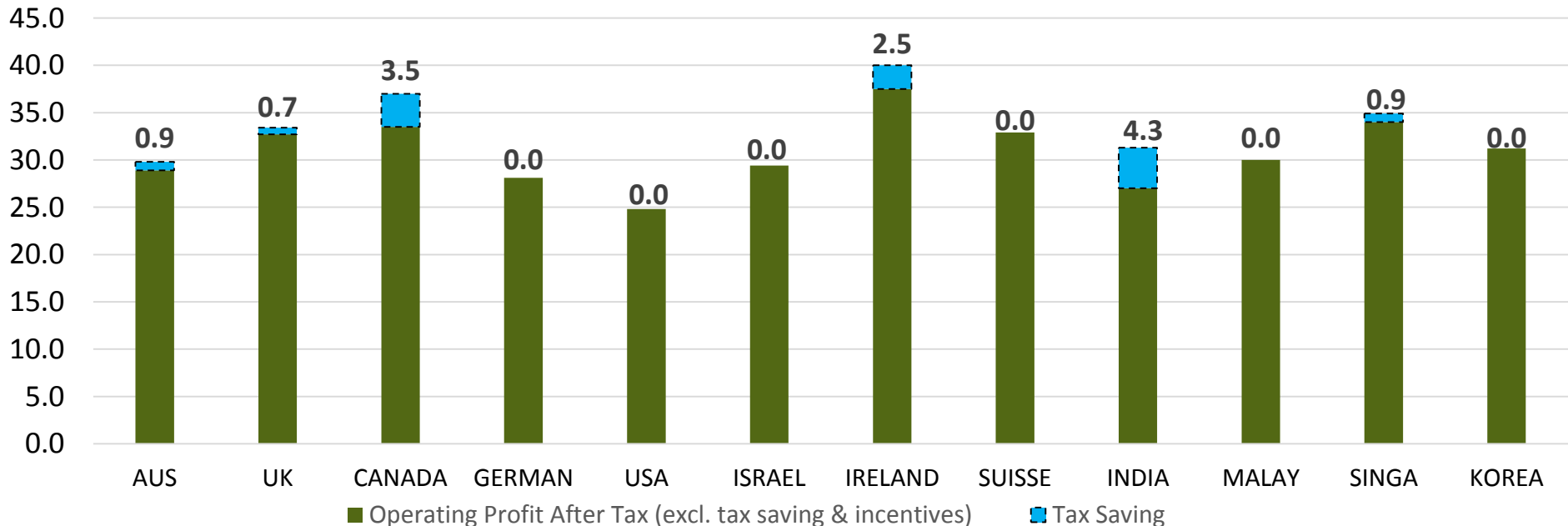
ABC Ltd (\$M)	AUS	UK	CANADA	GERMAN	USA	ISRAEL	IRELAND	SWITZ	INDIA	MALAY	SINGA	KOREA
Revenue	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0
Operating Profit ex R&D	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
-R&D expenses	-10.0	-10.0	-10.0	-10.0	-10.0	-10.0	-10.0	-10.0	-10.0	-10.0	-10.0	-10.0
Op. Profit Before Tax	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
-Corporate tax (%)	-12.0	-8.0	-10.0	-11.9	-15.2	-10.6	-5.0	-7.1	-17.3	-10.0	-6.8	-8.8
-R&D Tax Relief	0.9	0.7	3.5	0	0	0	2.5	0	4.3	0	0.9	0
-Tax for IP Exploitation	0	0	0	0	0	0	0	0	0	0	0	0
Tax Payable	-11.1	-7.3	-6.5	-11.9	-15.2	-10.6	-2.5	-7.1	-12.9	-10.0	-5.9	-8.8
Op. Profit After Tax	28.9	32.7	33.5	28.1	24.8	29.4	37.5	32.9	27.0	30.0	34.0	31.2
<i>Withholding Tax Payable</i>	<i>-1.4</i>	<i>0</i>	<i>-1.7</i>	<i>-2.8</i>	<i>-1.2</i>	<i>-4.4</i>	<i>0</i>	<i>-1.6</i>	<i>-4.6</i>	<i>0</i>	<i>-1.7</i>	<i>-3.1</i>
Net Dividends to Parent	27.5	32.7	31.8	25.2	23.6	24.9	37.5	31.2	22.4	30.0	32.3	28.1

Business Scenario 1: R&D investment decision comparison for corporates

Australia's R&D tax incentives are not competitive against leading locations and their value is eroded by 30% corporate tax rates.

- The difference in profit after tax is driven by the relevant tax regime focused on corporate tax and R&D incentives
- Australia ranks 8th out of 12 international locations on Indicative Profit After Tax for ABC Ltd's assessment
- Australia is only one of six locations providing R&D tax incentives, however the financial value from Australia (\$0.9 million) is not competitive compared to India (\$4.3 million), Canada (\$3.5 million) and Ireland (\$2.5 million) and is lost in the higher corporate tax rate.
- Corporate tax differentials create a larger financial impact on indicative operating profit after tax relative to R&D tax relief
- Total corporate tax payable ranges from \$2.5 million in Ireland to \$15.2 million in the USA. Australia has the fourth highest tax \$12.0 million
- Australia lags the most profitable locations by a material margin compared to Ireland (23%), Singapore (15%) and Canada (13%)

Indicative Operating Profit After Tax Including R&D Tax Incentive Value

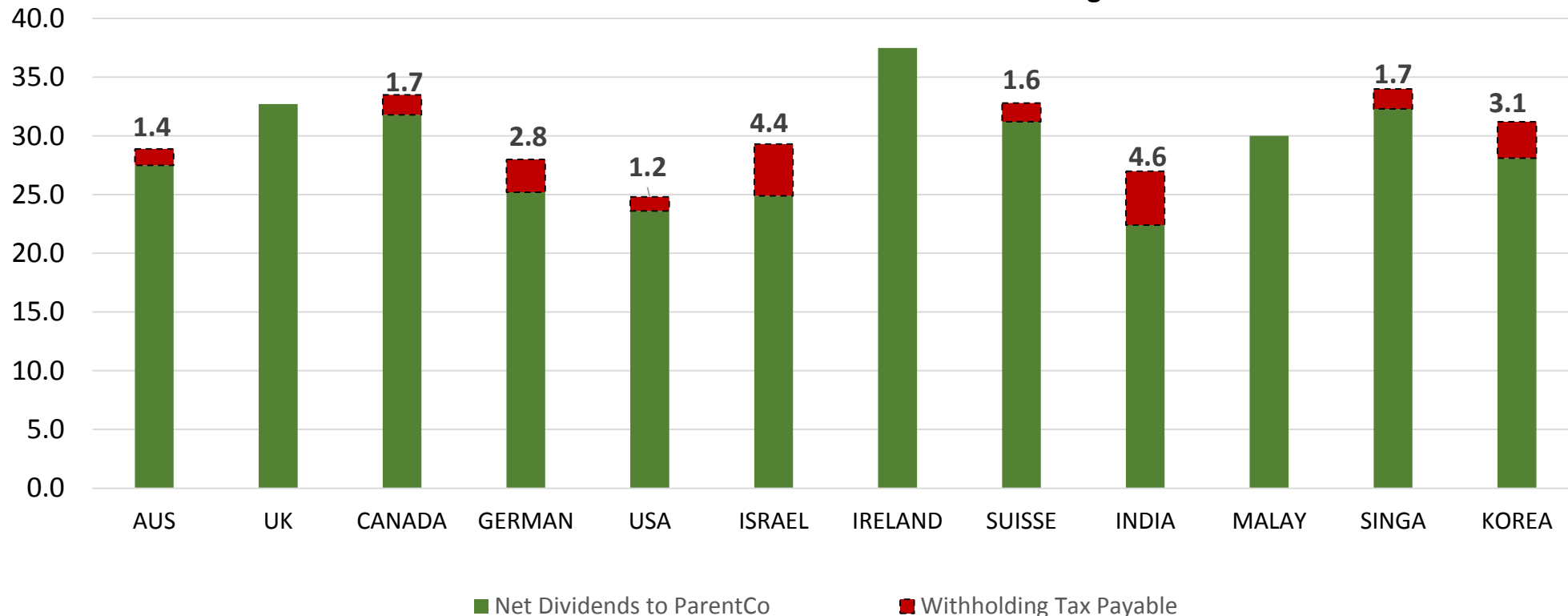


Business Scenario 1: R&D investment decision comparison for corporates

Withholding tax further diminishes Australia's competitiveness on shareholder returns assessment compared to leading locations.

- ABC Ltd assesses the investment decision based on cash flows from repatriated dividends to their offshore ParentCo
- Dividends to international shareholders will attract Withholding Tax from some tax regimes but not UK, Ireland and Malaysia
- The chart below illustrates the impact of Withholding Tax if ABC Ltd's profit is fully repatriated as dividends
- Withholding Tax values range from A\$4.41 million in Israel to nil in the UK and Ireland with Australia deducting A\$1.4 million
- Withholding Tax on dividends to offshore ParentCo have a greater financial impact on after tax returns than R&D incentives
- Australia moves ahead of Israel to 7th from 8th however Australia falls further behind Ireland (27%) and the UK (16%) for ABC Ltd

Net Dividend Available to Shareholders After Withholding Tax



Business Scenario 2: Production investment decision comparison for corporates

Indicative Operating Profit After Tax Comparison Assessing Locations for the Commercialisation of Intellectual Property

ABC Ltd's R&D investment was a success with customer signing up to the prototype for delivery.

A specialised production unit will now be established to commercialise the contracts and keep production in-house owing to the sensitive nature of the intellectual property and patents involved. The company is assessing 12 locations aligned to their production facilities.

Financially, ABC Ltd's new facility will share similar financials expected to generate A\$200 million in turnover with operating profit standardised 25% excluding taxation. All profits related to the new investment are related to the patent of the new hardware.

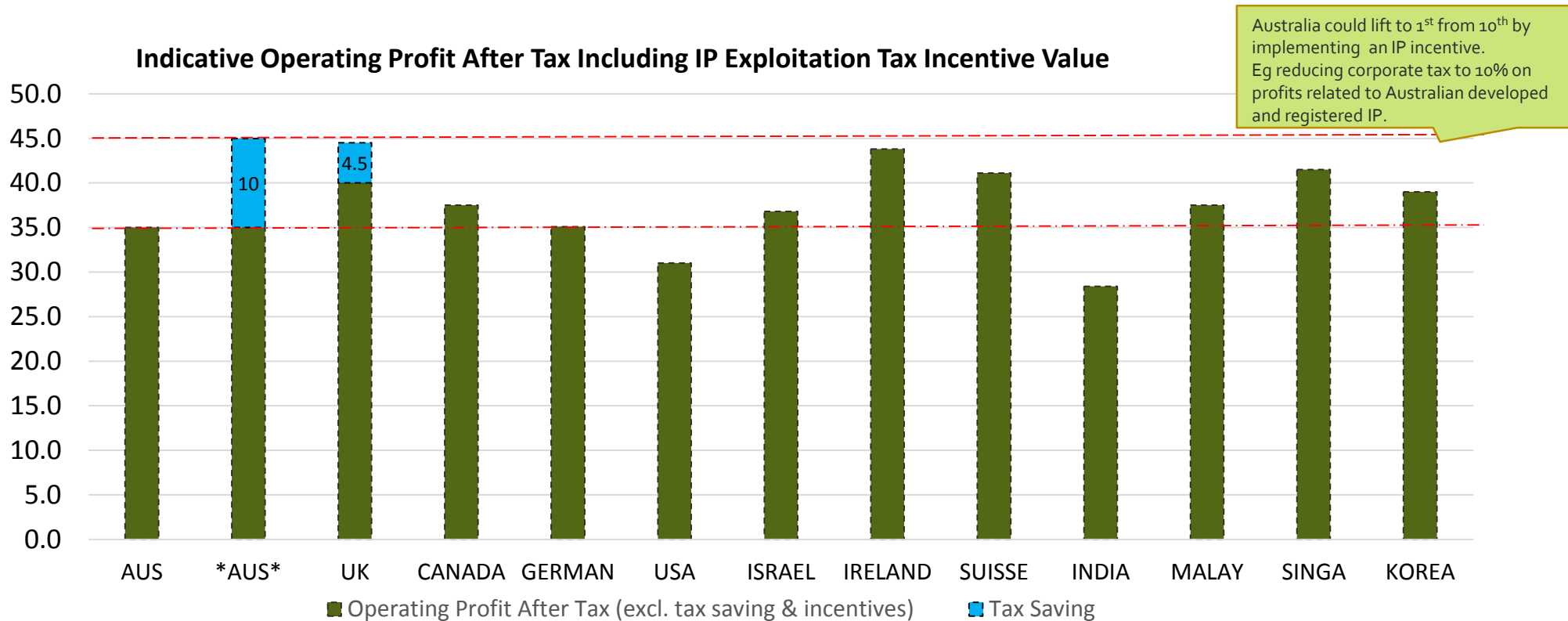
The table below illustrates the after tax impact of operating in each region and the intellectual property exploitation incentives available in the UK. Australia is shown under the current corporate tax structure ("AUS") and again to highlight the scenario if Australia introduced an IP incentive of 10% corporate tax for profits derived from Australian developed IP. ("*AUS*")

ABC Ltd (\$M)	AUS	*AUS*	UK	CANADA	GERMAN	USA	ISRAEL	IRELAND	SUISSE	INDIA	MALAY	SINGA	KOREA
Revenue	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0
Operating Profit ex R&D	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
-R&D expenses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Op. Profit Before Tax	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
-Corporate tax	-15.0	-0.0	-1.0	-12.5	-14.9	-19.0	-13.3	-6.3	-8.9	-21.6	-12.5	-8.5	-11.0
-R&D Tax Relief	0	0	0	0	0	0	0	0	0	0	0	0	0
-Tax for IP Exploitation	0	-5.0	-4.5	0	0	0	0	0	0	0	0	0	0
Tax Payable	-15.0	-5.0	-5.5	-12.5	-14.9	-19.0	-13.3	-6.3	-8.9	-21.6	-12.5	-8.5	-11.0
Op. Profit After Tax	35.0	45.0	44.5	37.5	35.1	31.0	36.8	43.8	41.1	28.4	37.5	41.5	39.0
<i>Withholding Tax Payable</i>	<i>-1.8</i>	<i>-2.3</i>	<i>0.0</i>	<i>-1.9</i>	<i>-3.5</i>	<i>-1.6</i>	<i>-5.5</i>	<i>0.0</i>	<i>-2.1</i>	<i>-4.8</i>	<i>0.0</i>	<i>-2.1</i>	<i>-3.9</i>
Net Dividends to Parent	33.3	42.7	44.5	35.6	31.6	29.45	31.3	43.8	39	23.6	37.5	39.4	35.1

Business Scenario 2: Production Investment Decision Comparison for Corporates

Australia could improve its international financial competitiveness to 1st from 10th by implementing a “Patent Box” style IP incentive.

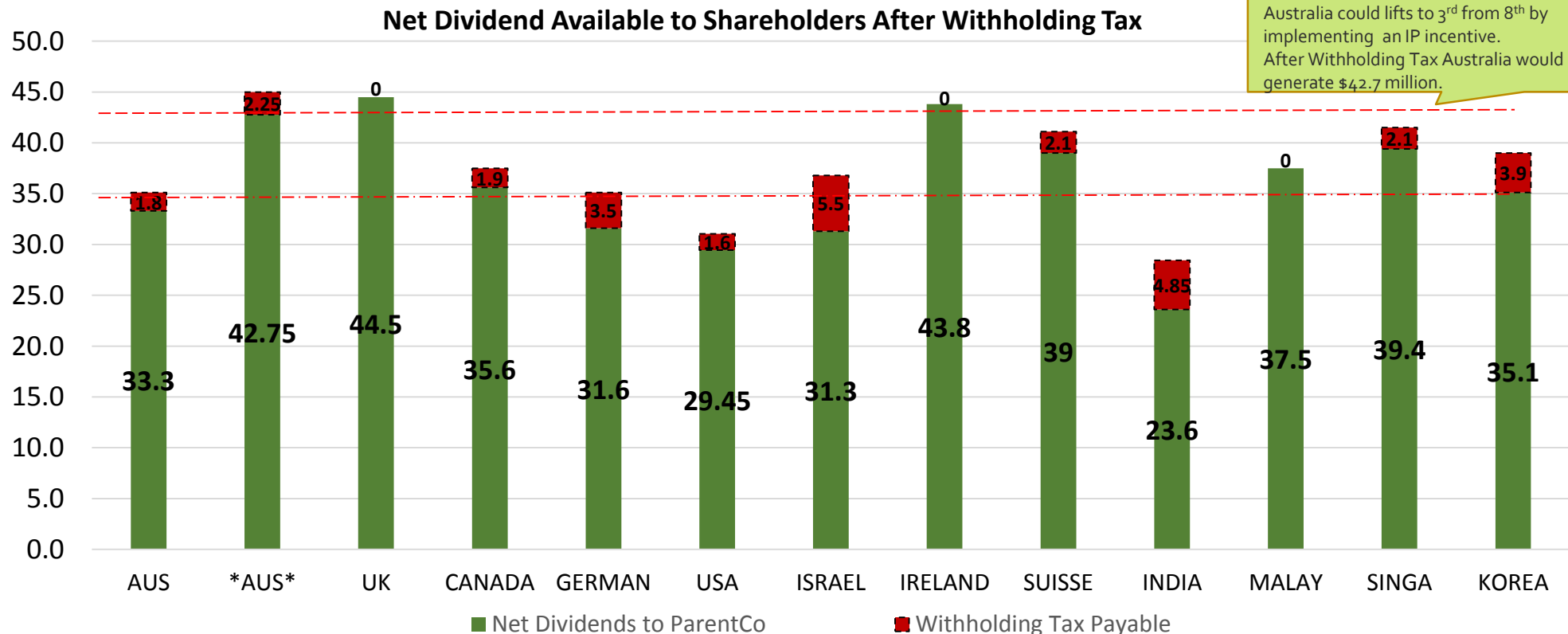
- The difference in profit after tax is driven by the relevant tax regime for each country.
- For ABC Ltd, Australia (\$35m) ranks 10th out of 12 international locations on Indicative Profit After Tax.
- ABC Ltd would focus on the UK as the only location providing an IP Exploitation tax incentive, valued at an estimated \$4.5 million per annum.
- The value of the UK Patent Box to ABC Ltd is greater than the benefit of even the most generous R&D tax incentive (\$4.3 million)
- For ABC Ltd UK (\$44.5 million) leads financial returns over Ireland (\$43.8 million), Singapore (\$41.5 million) and Switzerland (\$41.1 million).
- Australia’s corporate tax rate impacts Australia’s financial competitiveness placing only above India and the USA.
- If Australia applied a corporate tax of 10% for profits derived from Australian developed IP it would lift returns to 1st, generating \$45.0 million.



Business Scenario 2: Production investment decision comparison for corporates

Australia requires an IP incentive to be short listed as an attractive business location for shareholder returns on repatriated dividends.

- ABC Ltd assesses the investment decision based on cash flows from repatriated dividends to their offshore ParentCo
- The chart below illustrates the impact of Withholding Tax if ABC Ltd's profit is fully repatriated as dividends
- Dividends to international shareholders may attract Withholding Tax within some tax regimes but not UK, Ireland and Malaysia
- Withholding Tax values range from A\$5.5 million in Israel to nil with Australia at A\$1.8 million
- Withholding Tax on dividends to offshore ParentCo can impact after tax returns greater than the value of IP incentives
- Australia currently moves to 8th ahead of Germany and Israel, however, falls further behind the UK (25%) and Ireland (24%) for ABC Ltd
- In the IP Incentive scenario Australia lifts to 3rd position with \$42.7 million, outperforming locations such as Canada and Switzerland.



6. Recommendation

AUSTRALIAN
ADVANCED
MANUFACTURING
COUNCIL

Recommendations

In order to make Australia a more compelling and attractive destination for internationally mobile advanced manufacturing and other companies deeply involved in innovation, we make the following recommendations:

1. The introduction of an Intellectual Property (IP) related tax incentive. A reduction in corporate tax to 10% for commercialising Australian developed IP will bring Australia into a competitive financial comparison to leading international locations and compliment a competitive R&D tax credit system.
 - Ensuring the incentives is OECD BEPS compliant (the UK and Ireland have both already announced moves in this direction) would also tie the IP incentive to R&D activity being conducted in Australia, making it a more attractive location in terms of the whole innovation cycle
 - A business scenario of 12 tax regimes in this report demonstrates that Australia's tax system ranks 10th based on an assumed business scenario. If the corporate tax rate applying to revenues from Australian generated IP (a common approach with countries offering IP exploitation incentives) is reduced to 10%, Australia would lift to 1st. After Withholding Tax on dividends Australia would rank 3rd and ahead of Korea, Singapore and Switzerland. However, we note the Irish system will be introduced at 6.25% in 2016.
 - Consideration should be given to provide an opportunity to expand the scheme to re-shore existing international commercial arrangements of Australian created IP
2. R&D tax credits could be enhanced at the same time as rolling out the IP incentive to show that Australia is focused on improving its offering to attract international investment in science and innovation.
3. A change of tax rules relating to the non-tax deductibility of goodwill amortisation.
 - Cross-border M&A now accounts for more than half of all cross-border investment flows pre-financial crisis according to UNCTAD (*UN Conference of Trade and Development*).
 - Acquisitive Australian manufacturers seeking to develop their IP portfolios or market activity are likely to be at a disadvantage to their international competitors who treat the amortisation as tax deductible

Recommendations

The financial, social and industrial loss to Australia of Australian business moving offshore with Australian developed IP can be regained by reshoring Australian business activity and attracting new international investment.

Attracting new international investment and retention of Australian-owned activity will create a growing number of high-value jobs, greater industrial capacity and a more diversified and therefore resilient Australian industry.

Australia needs to promote itself strongly as a centre for innovation. A high profile government initiative, promoting the tax incentives as well as holistic aspects of Australia's strength of offering, is required to improve Australia's profile on the global scene.

This is an area of increasing competition internationally, and if Australia rests solely on its R&D scheme, it will get left further and further behind.

While the attractiveness of R&D and commercialisation of Intellectual Property (IP) is clearly reliant on a combination of tax and non-tax factors, there is no question an effective Australian programme – well marketed – will create long-term value for both Australian business and our community.

7. Appendices

AUSTRALIAN
ADVANCED
MANUFACTURING
COUNCIL

Appendix 1: Benchmarking costs for international financial analysis comparison

Australian labour cost is compared against the sample group of competitors based on FX rates in October 2015.

This section includes:

- Indicative labour operating costs

Labour cost comparison reports Australia as 9th on cost but within 5% of both the median and average labour cost.

Labour cost overview

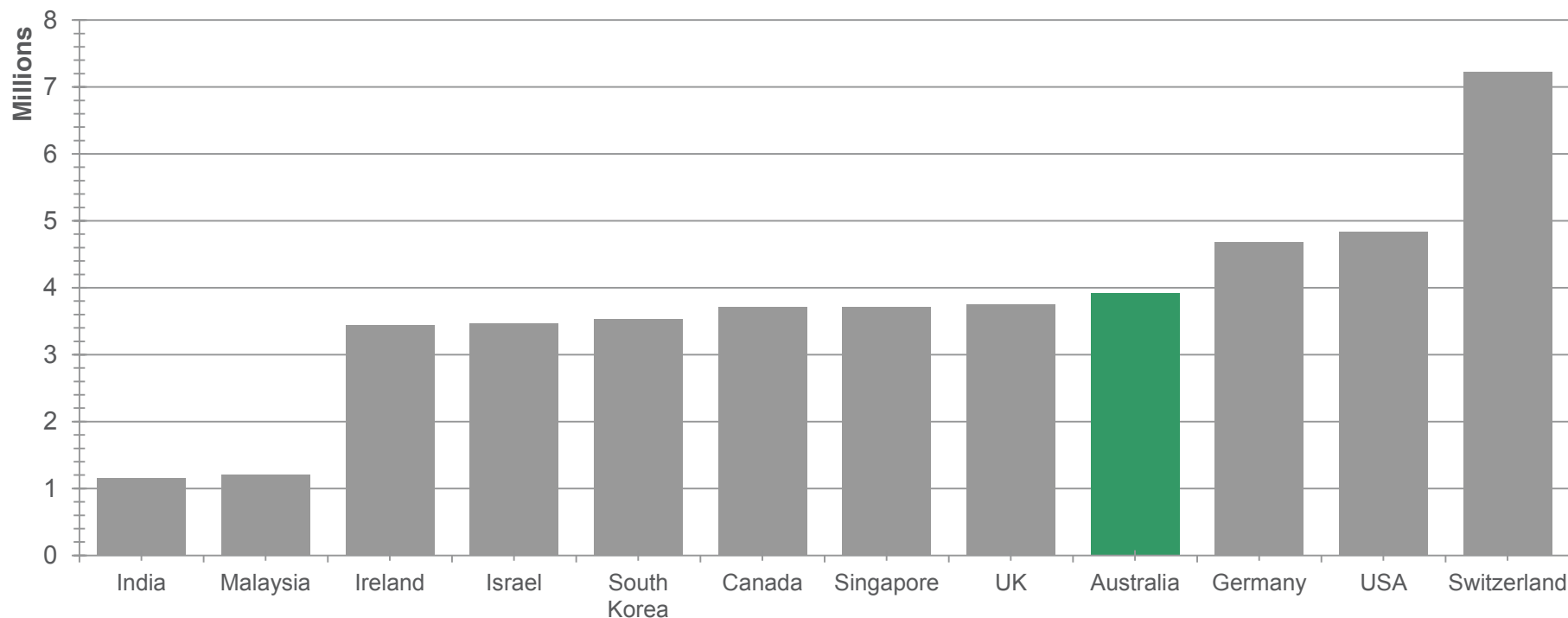
- This is the overview of the annual labour costs results for an aerospace R&D facility
- The costs are based on a head count of 40 across 11 different job functions as detailed below
- The average total labour cost per annum across the selected locations is A\$3.72 million
- Australia ranks 9th in the cost ranking for labour at A\$3.916 million
- The location with the lowest labour costs in the current study is India (A\$1.159 million), closely followed by Malaysia (A\$1.200 million) before a large jump to Ireland (A\$3.445 million) and Israel (A\$3.461 million)
- The most expensive location is Switzerland at A\$7.224 million

Job title	Head count	Job title	Head count
Engineer	18	Technical Drawer	2
Assistant Engineer	4	Chief Engineer/Technical Manager	1
Senior Engineer	4	Head of Research and Development	1
Software Development Engineer	3	Senior Technical Drawer	1
R&D Team Leader	3	Trainee/Apprentice Engineer	1
Technology Engineering Specialist	2		

Location	Rank	Total cost
India	1st	1,159,658
Malaysia	2nd	1,200,471
Ireland	3rd	3,445,352
Israel	4th	3,461,453
South Korea	5th	3,534,123
Canada	6th	3,707,129
Singapore	7th	3,713,873
UK	8th	3,747,489
Australia	9th	3,916,612
Germany	10th	4,685,420
USA	11th	4,834,211
Switzerland	12th	7,224,707

Total labour costs are clustered for competitors including Australia. Tax regimes drive a larger variance on financial returns.

- The graph below shows the rank and total labour costs of each location
- Australia reports the highest cost base in Asia
- Australia is competitive with the Northern Hemisphere more recently owing to the exchange rate correction



Appendix 2: Glossary

BEPS (“Base Erosion Profit Sharing”): a study undertaken by the OECD, examining harmful international tax practice, and making recommendations in relation to overcoming such practices. The [15 BEPS Actions](#) equip governments with domestic and international instruments to address tax avoidance and ensure that profits are taxed where economic activities generating the profits are performed and where value is created. (<http://www.oecd.org/ctp/beps.htm>)

Corporate Tax: tax applied to a company’s taxable profit.

Corporate Tax Regime: refers to the corporate tax framework within a particular company, including its system of incentives and specific tax treatments.

Domestic (owned) company: a company whose ultimate effective ownership resides in the same country as the company itself.

Double Irish: an informal expression referring to a tax structuring mechanism which can be implemented in Ireland to dramatically reduce the corporate tax burden for a group of companies by allowing a tax deduction for one related entity that is not considered taxable income in the receiving related entity generating a “0%” tax rate.

Federal Tax Rate: the rate of tax as levied by a country’s national government – as opposed to a state or city tax rate, which is set and levied on a localised basis.

Foreign (owned) company: a company whose ultimate effective ownership resides in a different country/countries to the location of the company itself.

Global Innovation Index: an annual report which ranks the world economies’ innovation capabilities and results. The report is co-published by Cornell University, INSEAD, and the World Intellectual Property Organization (WIPO, an agency of the United Nations).

Headline rate: a country’s basic rate of tax, before any incentives or other adjusting factors are considered.

Incentive/tax incentive: an aspect of a country’s tax regime designed to incentivise, or encourage a particular economic activity.

Intellectual Property: intangible property that is the result of innovation – such as patents and copyrights

Intellectual Property Exploitation: the process of generating revenues from Intellectual Property.

Knowledge Development Box: see License Box definition.

Licensed Box: a tax incentive system which captures certain types of IP profits, and applies a reduced rate of tax, with the intention of promoting IP exploitation in that country.

OECD: the Organisation for Economic co-operation and Development. An organisation which “provides a forum in which governments can work together to share experiences and seek solutions to common problems”

Patent Box: see License Box definition.

“Qualifying” R&D Activity: R&D activity which falls within the definition of activity which is covered by an R&D-related tax incentive.

R & D tax credits: adjustments to a company’s tax charge which are generated through an R&D-related tax incentive.

R & D grants: amounts of cash awarded to companies to fund R&D, which generally relate to specific R&D projects undertaken by the recipient.

Tax Holiday: a period of time during which a company is exempted from a specific tax.

Tax Incentive: a tax-related incentive which is applied to a certain type of activity, with the intention of rewarding and promoting that type of activity.

Withholding Tax on Dividends: a tax which is applied to the payment of dividends. The tax is treated as withheld from the shareholder, and paid over to the tax authorities on their behalf.

Appendix 3: Authors and Key Contacts

JULIAN CHRISTMAS

Julian Christmas is the Director of In-Ops Ltd, an international business expansion specialist.

Julian was a Partner at The Norton Practice after being a manager at EY in both Australia and Europe and a former Director of High Street Partners and Nair & Co.

Julian obtained his Chartered Accountancy in England and holds a Bachelor of Economics from Exeter University.

PAUL WEBSTER

Paul Webster is CEO of International Investment Service, a consultancy supporting businesses to deliver their international ambition.

Paul was previously Director, Australia and NZ for UKTI Inward Investment following a career in Australian financial services.

Paul is a Director of Institute of Economic Development and member of both the Institute of Directors and ICAEW.

Paul obtained his Chartered Accountancy in Australia and holds the Oxford Advanced Management & Leadership Program (2009), WHU European MBA Summer Institute (2004) and University of Western Australia's Advanced MBA in International Management (2004).

For further details on the report please contact

Jennifer Conley

Executive Director

Australian Advanced Manufacturing Council

Ian Wark Laboratory

Bayview Avenue

Clayton 3168

Email: jennifer.conley@aamc.org.au