

Collaborative Patent Grants

A program aimed to increase GDP and boost university collaboration by incentivising patent filing costs

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Executive Summary

- Australia does not have a grant program that funds the production of patents.
- Patent production has a strong link to a nation's Gross Domestic Product (GDP).
- An incentive that adds 1000 extra patents per year may add about \$7 Billion extra GDP per year while costing as little as \$50 Million.
- The proposed incentive could be drafted as a *Ministerial guideline* and not require any legislation to be passed.

Introduction

The Government has invested in the *ideas boom* agenda. Australia requires system-wide intellectual property (IP) reform to ensure that it remains on par with international innovation policy. Investment in patent production strategies will be crucial for the *ideas boom* agenda to succeed.

The Wrays & Swanson Reed Group (WSR Group)

- Wrays is one of Australia's largest Patent Advisory firms
- Swanson Reed is Australia's largest specialist R&D Tax Incentive provider
- Wrays and Swanson Reed have formed a *think tank* on innovation issues (the WSR Group)



Australia needs to increase patent production as a matter of urgency

It is well known that patent production is a key element in promoting economic growth indirectly by stimulating the accumulation of inputs from R&D and physical capital, yet Australia is one of the poorest patent producer in the G20.

In 2005, Australia accounted for only 0.76% of the world share of triadic patent families¹. This particular type of patent is filed jointly with international patent offices to initiate the process to seek IP protection worldwide. Therefore triadic patents are often a more accurate indication of the international impact of an economy as they reflect invention and innovation on a global scale.

¹ OECD (2008). OECD Science, Technology and Industry Outlook 2008. Retrieved from <http://www.oecd.org/australia/41557063.pdf>

There is a direct link between Business Enterprise Research and Development (BERD) and patents. There is a direct relationship between low patent production and decreasing BERD as a proportion of GDP, particularly in the manufacturing sector.²

The CPG aims to reverse this trend by providing an incentive for a business to produce new patents.

The importance of University Collaboration

Economic growth is contributed to collaboration with industry and other public and private entities, yet Australia has one of the weakest levels of patent collaboration in the G20.

The World Intellectual Property Organization (WIPO) has consistently ranked U.S. universities as the most prolific international patent filers worldwide, accounting for 30 of the top 50 institutions. In comparison, Australia has only one university in the top 50.³

In 2013, IP Australia reported⁴ that:

- on average only 12 Australian universities out of 37 showed patenting activity; and
- Australian university patenting activity averaged only 16.58 new inventions per university per year (University of California had on average 177 new inventions per year).

Additionally, in 2008 the OECD reported that *“Australia’s linkages are weak with only around 9% of innovating firms co-operating with an external partner for their innovation activities; only a small number and proportion of patents are developed with co-inventors”*.⁵

CPG aims to boost collaboration by requiring patents filed under the program to name at least one academic from an Australian university as a co-inventor.

² Australian Bureau of Statistics. (2013). Research and Experimental Development, Business, Australia, 2011-12. Retrieved from <http://www.abs.gov.au/ausstats/abs@.nsf/mf/8104.0/>

³ WIPO (2011), International Patent Filings, Retrieved from http://www.wipo.int/pressroom/en/articles/2012/article_0001.html

⁴ Australian Government, Department of Industry, IP Australia (2013) Research Performance of University Patenting in Australia: A Pilot Assessment. Retrieved from http://www.ipaustralia.gov.au/uploaded-files/publications/Research_Performance_of_University_Patenting_in_Australia.pdf

⁵ OECD (2008). OECD Science, Technology and Industry Outlook 2008. Retrieved from <http://www.oecd.org/australia/41557063.pdf>, p104.

Why offer an entitlement grant incentive?

Due to the strong link between general patent production and GDP, the WSR group is of the opinion that a grant model will be a much more workable alternative to a tax incentive in the short-term. Grant models are also easier to implement as a Ministerial initiative. Grant models of this type have been successful in other jurisdictions.

Patent Grant Incentives in Turkey

Turkey provides for *1008 Patent Application Promotion and Funding* program (1008 program) to increase the number of national and international patent applications of Turkey. The program aims to encourage people to make patent applications and to raise awareness about registering intellectual and industrial property rights.

Up to 20 corporate and 5 personal applications are accepted per year under the 1008 program, and amounts are determined in January of every year by the TÜBİTAK Scientific Board.

The 1008 program is used in conjunction with a range of either separate academic R&D support programs, key achievements of the programs include:

- increasing national competitive capacity in international marketing within the framework of prioritized areas; and
- support urgent, short term R&D projects that have a small budget and will be conducted in universities, research hospitals and institutes.

There is evidence to suggest that the 1008 program increases BERD. According to the Innovation Union Competitiveness Report- 2011 the by EU Commission, R&D expenses in Turkey have increased 10% from 2000 to 2009.

Correlation between patent production growth rate and GDP growth

An analysis of data over a period from 1963 to 1993 by Josheski and Koteski⁶ has shown:

- There is a direct causation between patent production and GDP growth.
- There is a positive relationship between the number of patents produced in the economy and GDP growth⁷.
- It is not important whether the patents are produced by individuals, universities, or large multinational organisations.

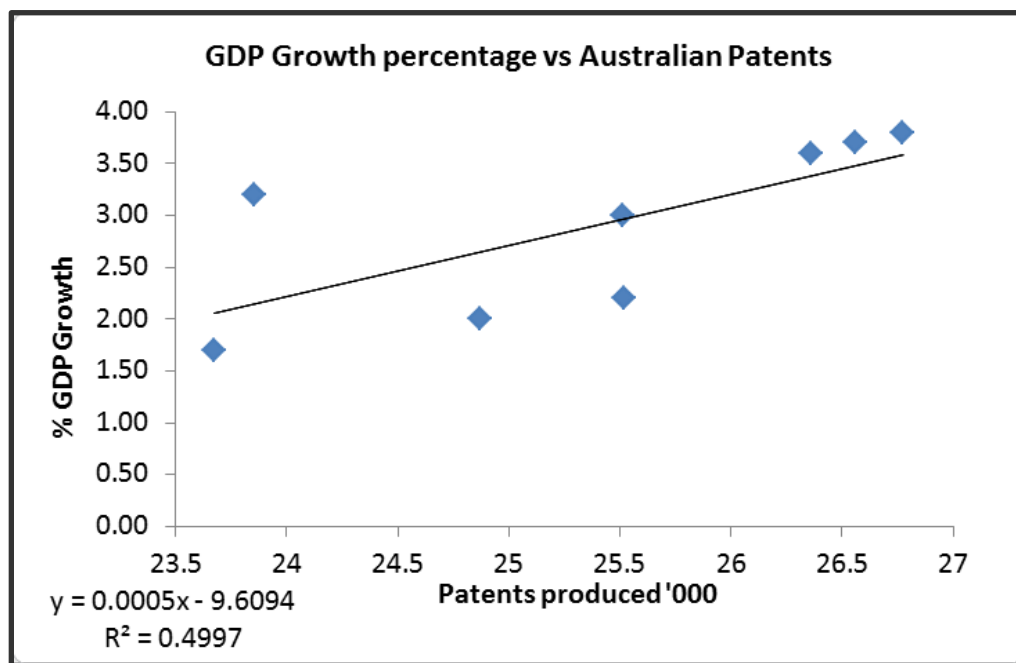


Figure 1: The above graph demonstrates the significant positive effect of GDP growth with patent production in Australia from 2005 to 2012^{8 9}.

For the foreseeable future it is reasonable to expect 0.5% growth in domestic GDP for every one thousand patents registered in Australia (please also refer to Table 1).

⁶ Josheski, D & Koteski, C. (2011). The causal relationship between patent growth and growth of GDP with quarterly data in the G7 countries: cointegration, ARDL and error correction models. Retrieved from <http://mpa.ub.uni-muenchen.de/33153/>

⁷ Chand, X. Et Al. (2013) Patents and Productivity Growth: Evidence from Global Patent Awards. Retrieved from http://papers.ssrn.com/sol3/Papers.cfm?abstract_id=2371600

⁸ World Bank. (n.d.) GDP Growth (Annual %). Retrieved from <http://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG>

⁹ IP Australia. (2013). Australian Intellectual Property Report 2013. Retrieved from: <http://www.ipaustralia.gov.au/about-us/reports/ip-report-2013/>

Our Solution:

Provide a grant to incentivise patents & boost university partnership

The WSR Group proposes that the Government introduce an entitlement based Collaborative Patent Grant (CPG) program, aimed to increase the number of international patent applications originating from Australia.

It is envisaged that the Department of Industry would provide the grant to businesses to offset the in-kind cost and/or professional fees associated with preparing and submitting a valid innovation or standard patent application through IP Australia and international patent applications through the Patent Cooperation Treaty (PCT).

Grants would be capped at \$50,000 per international patent family and businesses would be permitted to claim indefinitely, for the life of the program.

A budget blowout could be avoided by enforcing a first come first serve constraint each year and exhausting the total budget once a target number of patents had been lodged under the program. Table 1 illustrates the cost and benefit of the program if a target of 1000 or 5000 new international patent families was reached in any given year under the CPG.

Number of New Patent Families per year from CPG	GDP increase (%)	GDP increase [^] (\$)	CPG cost per year @ \$50K/Patent Family [#]
1000	0.5%	\$7.2 Billion	\$50 Million
5000	2.5%	\$36 Billion	\$250 Million

Table 1: Relationship between CPG cost and benefit in terms of increase in Australian GDP for 1000 new patent families and 5000 new patent families per year respectively.

[^] assuming 2015 Australian GDP is \$1.62 trillion.

[#] administration costs of the program per year have not been considered.

Offerings available under the CPG

The CPG would be designed to support businesses to carry out the following activities either by themselves or through their chosen registered patent attorney. The Funding chart in Figure 1 is aimed to offset the in-kind time of the applicant or any advisory and legal fees needed to defend the patent application. The grant would cover the following activities.

1. Performance of an international novelty search and initial patentability advice;
2. Preparation and submission of Australian Patent application (including a provisional application if required);
3. Preparation and submission of international application (under PCT); and
4. Converting the international patent application into national applications in foreign jurisdictions (national phase entry).

Each of the above activities has a funding cap (as per Figure 1 below).

Service Offering and Application Fees	Service Type ⁺	Funding Cap
Performance of an international novelty search and initial patentability advice	Mandatory	\$2,500
Preparation and submission of an Australian patent application (including provisional application if required)	Mandatory	\$7,500
Preparation and submission of an international patent application (under the PCT)	Optional	\$20,000
Assistance with National Phase Entry	Optional	\$20,000
Total amount available per patent under the program		\$50,000

Figure 1: Service components available and respective funding cap under the CPG.

⁺Mandatory activities must be performed in order for the applicant to be eligible for grant funding.

Application Process

The application process for each patent application eligible for funding under the CPG is as follows.

1. Prior to engaging in any mandatory activities, the applicant must submit a pre-application form and receive pre-approval from the Department of Industry.
2. The applicant (and where relevant their registered patent attorney) will have 24 months to complete all mandatory activities and submit a patent application with IP Australia.
3. Eligible funding will be paid directly to the applicant on initial acceptance of the patent application with IP Australia (and where relevant the international patent application under the PCT).
4. Any further funding such as legal costs to prosecute a patent application will be paid in accordance to Figure 1 once incurred by the applicant.

Substantiation Requirements of the Applicant

Regulation and audit control will be jointly managed between the Department of Industry and IP Australia.

Similar to registration reviews under the R&D Tax Incentive, CPG audits can occur up to four years from the date of lodgement of a patent application with IP Australia

The applicant will be required to:

1. itemise each activity performed by the company in detail or otherwise demonstrate that the professional services fees paid in respect to the patent application are at arm's length and on normal commercial terms; and
2. provide timesheets and other evidence, where professional fees are incurred to prosecute a patent application.

Although it will be recommended that the applicant engage with a registered patent attorney to apply for the grant on behalf of the applicant, there will be no official requirement.

Who is eligible to apply?

To be eligible, a business applying for funding under the CPG must:

- be a sole trader, company or trust;
- be solvent;
- possess an Australian Company Number;
- be up to date with Australian tax return lodgement;
- have trading activity in both of the preceding two financial years;
- have revenue of no more than \$100 million in the current financial year;
- engage in mandatory activities (as per *Figure 1*);
- demonstrate that by applying under the program, the applicant has increased its two year patent production rolling average (as per *Figure 2*); and
- have had no patent applications ultimately rejected by a Patent Office and then abandoned;
- include at least one academic member of staff from an Australian university as a contributing inventor for each patent application that funding is sought.



Two year patent production running average

The CPG is intended to drive an increase in patent production over time. It must not fund patent applications that would have otherwise already been filed in any given income year.

Therefore, a business applying for a patent under the program must demonstrate the patent application that is subject to the funding increases that business' average patent production over the last two years in whole numbers.

A business will be eligible for CPG funding for all patent applications filed with IP Australia that exceed the running average in the current year i.e. where a business has filed on average two patent applications per year for the last 2 years, the running average is taken to be two. Funding may then be claimed for a third patent application in the current year provided two patent applications have already been lodged in that current year. Figure 2 illustrates four scenarios on how the *running average* would work.

Patent applications filed by applicant in current year (Y_0)	Y_{-1}	Y_{-2}	$Av^{++\wedge}$	Patent applications eligible for CPG funding in Y_0^{**}
1	0	0	0	1
4	3	1	2	2
2	2	1	2	0
1	0	1	1	0

Figure 2: Incremental patent applications that are eligible for funding under the CPG.

⁺⁺ The running average is one half of the sum of the number of filed patents for each of the Y_{-1} , and Y_{-2} years rounded up to the nearest whole number.

^{**} Equals Y_0 minus the running average. Negative numbers are substituted for zero.

[^] Rolling average will include all patent applications filed within the applicant's business and where relevant, any patent applications filed with any member of its consolidated tax group.

University Collaboration Requirement

The CPG is designed to encourage collaboration between university academics and industry during the development of patentable IP.

It is common for a business to consider patentability of a product only once it has been produced, resulting in prior art issues and possible IP theft prior to commercialisation. The CPG aims to reduce this practice by encouraging the consideration of IP protection during the research and development process.

As such, a requirement of the CPG is that each patent application eligible for funding must include at least one academic member of staff of an Australian university as a contributing inventor.

The university academic should normally have:

- been a current staff member of an Australian University at the time the applicant received pre-approval of funding from the Department of Industry;
- some specialist knowledge in the area that the patent application is sought; and
- some involvement in the project that resulted in patentable IP.

Where the same academic is named on the pre-application for funding and the final patent application, the Department of Industry will assume that collaboration took place and will not have any statutory authority to review commercial documents such as memorandum of understandings, contracts, or other documents between the university and the applicant as part of any audit process.

Conclusion

The Government must act now to develop policies that equip the economy to succeed with its *ideas boom* agenda¹⁰.

- Australia has no grant program aimed at increasing patent production.
- For every thousand patents registered in Australia, there is a predicted 0.5% growth in GDP.
- An extra 1000 patents per year may add about \$7 Billion extra GDP per year while costing as little as \$50 Million.
- Budget blowouts could be avoided by enforcing a first come first serve constraint.
- The CPG could be drafted as a *Ministerial guideline* and not require any legislation to be passed.



¹⁰ OECD. (2010). The OECD Innovation Strategy: Getting a Head Start on Tomorrow. Retrieved from Source OECD database.

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