



## R&D, venture capital and your tax dollars

Here are a couple of big statements. First, the Australian government gets a very poor commercial return on its annual \$9 billion investment in R&D programs and initiatives. Second, the Australian venture capital community has historically failed to be profitable as an asset class and is now on its knees, despite over 30 years of government incentives and investment.

You might ask, why bother making these statements? In recent times, our economy has been benefiting from very high commodity prices, and this has taken the pressure off other export segments, such as intellectual property (IP), manufacturing and IT services. So who needs commercial returns from government R&D expenditure, and who needs venture capital? The answer is that Australia may not be able to rely on commodity prices forever remaining buoyant and it may make sense to invest into technology and IP-related sectors while we have the capacity to do so. Also, in the context of global warming and rapidly depleting natural resources, the world will increasingly be looking to the technology sectors to provide answers; these will provide national security solutions as well as large export opportunities.

Investing into R&D and venture capital today could be likened to putting a five-year bet on Greater Western Sydney

(with a young and talented player list, experienced coaching staff and plenty of financial incentives from the AFL) to get into the AFL Grand Final. That is, not a bad bet, and in relative terms it wouldn't cost too much. However, I wouldn't make such a bet on the R&D and venture capital sectors today because very little of the R&D expenditure by government is tailored towards creating high-value commercial technology solutions, and the government investment in the venture capital industry historically has had terrible returns; as a result the player list is depleted, the coaches are amateurs, and there is chronic under-investment. Unless there are significant changes in policy we cannot expect different outcomes from yet further government investment.

Roughly half the R&D expenditure by government goes to universities, CRCs and the like. Approximately another quarter goes to CSIRO, DSTO and other research agencies. The rest goes to R&D tax incentives and grants for industry. Very little of this money is 'at risk'; that is, very little needs to be repaid if commercial outcomes are not achieved. Also, universities and the research agencies are not given many 'positive incentives' to create commercial returns. By 'positive incentive' I mean that the annual income it receives from government would be

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substantially *increased* if an organisation could show high commercial returns.

What we actually see today is a rearguard action by the universities and the research agencies to avoid having income tied to commercial outcomes. Without such a positive incentive, universities and the research agencies do not seriously invest in commercial technology or commercialisation, which would require senior management focus, changing the hiring profile of researchers (to be more industry-aligned, more entrepreneurial by nature, and focused on chosen industry sectors), hiring the best and most expensive commercialisation experts, and changing IP policies to enable entrepreneurial researchers to get serious financial benefits from technology commercialisation.

If we want universities and research agencies to be hot-beds for commercialisable technology, then we simply have to view these organisations as funded sandpits for technology entrepreneurs, and then fund them appropriately, get rid of any red tape, and get out of the way! However, many of the current universities and research agencies already have an honourable mandate (education, pure research capabilities and industry support) and are too entrenched in their current ways to make the change, even if they wanted to. My suggestion would be to first ignore all the useless benchmarking exercises, and instead pick one of the younger institutions in each of the larger states and focus all the commercialisation/technology dollars into those institutions in a competitive fashion, with a concomitant change in their funding strategy.

The venture capital sector in Australia is in many ways a very sad story. For many years government has continued to invest in this sector in an effort to kick-start a local version of the Silicon Valley venture capital model. This hasn't worked, and it looks more like white-collar welfare than anything else. The

world doesn't need another Silicon Valley – one is enough. We would need to develop our own model based on local conditions, recalling that the Silicon Valley 'partnership/limited partner' model evolved according to their local conditions and noting that their model is more than a little broken right now in any case. However, there is no use creating such a local venture capital model unless there is a higher quality and quantity of 'deal flow' (technology investment opportunities), which won't happen until government realigns the R&D expenditure with more commercial returns in mind (noting that it is not going to come from our private sector, now is it?).

Once such changes in R&D investment policy have been implemented, I doubt that government investment into the venture capital sector would even be needed to kick-start things. Where there are genuine high-value commercial opportunities, we will find investors coming out of the woodwork in no time. If the flow of commercialisable opportunities remains reliable, then we will see a local venture capital model emerging. This model would take into account all the unusual features of being in Australia. Namely, the distance from large markets for products that are venture capital friendly (i.e. high-growth markets, quick to get to market and requiring low capital investment), the distance from the corporations that might absorb young high-growth companies, the distance from tech-friendly IPO exchanges, and the selection of whatever odd technology sectors we decide that we can be the best at. There is very little use aping Silicon Valley; we will always be second rate if we try.

The rest of the problems that currently plague the venture capital industry in Australia will be solved quite quickly once there is a much larger and higher-quality deal flow. Typically these problems relate to the quality of people (investors, entrepreneurs and start-up employees) and the access to appropriate levels of investment funding. These will be solved once it is clear that sufficient high-quality and high-return investment opportunities are in existence. Our best and brightest will be attracted to the sector and investment funds will flow, hopefully from local sources since investment funds do not travel too well for the illiquid investment classes (take note, policy-makers!).

The moral to the story is that there is not much point for further government investment into the venture capital sector unless there is also a substantive realignment of how the government investment into R&D is both made and measured. If this isn't going to happen, then government would be better off cutting out the venture capitalists and their fees, and just giving the money directly to the small number of *successful* technology entrepreneurs and incubators that manage to eke out a living here in Australia.



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