

Australian Innovation Issues

Submission to Innovation Review

There is little disagreement that Australia's wealth has been created, by and large, by the exploitation of our abundant resource base rather than the development of new industries built on innovation. There is less agreement on the reasons for this, even less on whether it matters to our long term prosperity, and no consensus on whether we can do much about it.

The cases presented in this book are a valuable contribution to an important debate. Examining the causes of success and failure at the level of individual companies adds insight to aggregated comparisons between different economies. It is instructive to observe, as the authors do, that the external factors determining a firm's ability to innovate create more difficulty in Australia than in the world's major innovation centres. But, we are still left with three basic questions: why is this so, does it really matter, and what can we do about it?

My own answers to these questions are based on personal observation and experience, rather than comprehensive and systematic analysis. This experience includes 31 years as a strategy consultant to leading international companies, and several involvements as a board member and investor in new businesses. As Under-Secretary of the Victorian Premier's Department between 2003 and 2005, I observed closely the State's Innovation Strategy. As Vice-Chairman of the Bio-Melbourne Network, I come into regular contact with innovative companies. I will endeavour to outline my answers as an accompaniment to the themes raised in the book.

First is the question of "why is this so?" The answer may be very simple indeed. Necessity is the mother of invention and Australia has had no need to innovate its way to prosperity. Our relative over-endowment of natural resources has meant that we could enjoy a high living standard so long as the proceeds of our good fortune were not squandered frivolously. Geography and tariffs, up until a decade ago, protected local industry from international competition. Sub-scale local companies could license, borrow, copy and adapt technologies from overseas to serve the Australian market. Foreign ownership of half our industrial base by large international enterprises made technology transfer much easier than local development.

With 95% of our economic and corporate history shaped by these factors, it is not surprising that we have not developed the financial, technological, and entrepreneurial infrastructure and networks found in the major innovation centres. Our small domestic market means the investments required to develop supportive infrastructure and the innovations themselves are hard to justify. And, investing to tackle global markets carries greater risk.

The economic reforms that have internationalized the Australian economy are comparatively recent – 10 to 15 years old – so it is understandable that the basis for

wealth creation has yet to change substantially. Indeed, in the last few years, the need for a new model has been postponed by the growth of China and its seemingly insatiable demand for our raw materials.

None of this is meant to say that Australian businesses are not innovative. On the contrary, in many sectors, such as banking and finance, we have led the world in adopting new technologies. And in our minerals and agricultural sectors, we have developed technologies to improve the global competitiveness of Australian producers, as is demonstrated by some of the cases in this book. By and large, however, the Australian economy is not powered by a group of globally competitive innovators selling their leading edge products and processes around the world.

So, we move to the second question: does this matter? Conventional wisdom, including current orthodox economic thinking, would say “not really.” After all, we have enjoyed an unprecedented period of continuous economic growth, unemployment is at a 30 year low, inflation is mostly under control, and Australia is held up as a model of outstanding economic performance. So the words of Barry Jones and Robin Batterham exhorting us to develop an economy based on the fruits of intellectual endeavour might be interesting, but why change when things are going so well?

Perhaps there are two reasons why our innovation performance needs to improve. The first is that resource booms do not go on forever. The growth of economies which buy our resources may continue unabated for some considerable time. But if previous history is any guide, these economies will change to become less resource intensive, new sources of supply for the commodities we sell will come on stream in response to demand and price increases, and substitute materials will inevitably be developed. The second reason is that even in the middle of this resources boom, our external trading deficit is increasing and our international debt is ballooning to unprecedented levels. At some point in time, economies that spend more than they earn, as Australia is doing, will face some kind of corrective action.

Indeed, an alternative view of Australia’s economic performance might well be something like this. Increasing consumer spending on imported goods and local housing construction has created the prosperity we now enjoy. Housing construction – new and renovations – and its spin-off effects create the demand for labour and low unemployment. This consumption is financed by borrowing, much of it from overseas, hence the historically high levels of personal indebtedness and the record level of overseas borrowings as a percentage of GDP. Overseas financiers are happy to lend to us because our resource riches mean that we are able to meet our interest obligations.

If this view of our economy is plausible, then one would question the sustainability of our economic model. We do know that throughout the history of civilisation, sustainable economic growth and increasing prosperity have principally been the products of higher productivity, driven by innovation. And, long term, the innovators are the biggest winners. Australia is not in this game. We are taking a huge long term risk by not being a player.

This brings us to the third question: can we do something about it? The answer is “probably yes” – but it requires a fundamental change in the risk tolerance for innovative businesses from Australia’s largest companies and investment institutions.

The impediments to successful innovation identified in the case studies are related, among other things, to our small scale and distance from markets. However there are many examples of small economies that have strongly performing “innovation economies”. Israel and the Scandinavian economies are the best known examples. Moreover, the Scandinavians have made the transition from resource based economies to technology leaders and innovators. Indeed, one of the most respected technology innovators in the world, Nokia, is based in Finland and is itself a “transformer”, starting as a forest products company, and becoming to a global leader in mobile telephony, via commodity manufacturing and a period as a struggling conglomerate.

Nokia and Finland have done this from a small resource based economy, distant from major markets – particularly America. It is interesting to speculate where Pacific Dunlop might be today if it had followed the Nokia path, and stuck with its high technology business, Cochlear, instead of spinning it off and staying with “old economy” businesses, which were subsequently divested in any case. Cochlear’s market capitalization is now higher than any level achieved by its former parent.

The Pacific Dunlop example, and others like it, may indicate that the managements of, and investors in, large Australian companies lack tolerance for technology related new businesses. Pacific Dunlop’s unhappy experience with Teletronics may have “spooked” institutional investors and the PD board and dictated the Cochlear spin-off. But Nokia, too, had its failures – in consumer electronics – yet persevered with a “new economy” business. Nor was there a lack of managerial talent at PD, as evidenced by the success enjoyed by its senior executives since the break-up of PD. For some reason, large Australian companies and new technology businesses seem to be like oil and water – they don’t mix well.

It is instructive that the cases analysed in this book are largely small to medium-sized enterprises. I suspect that this is not coincidence but reflective of the risk intolerance of the large corporate sector in Australia and its institutional investors. The problem this creates is that small businesses don’t have the resources to deal with the impediments to innovation identified here. Large companies do. But it is also instructive to read, in the one large company example provided, that BHP’s Falcon Gravity Gradiometer met significant resistance **internally**, from its largest potential user, the BHP exploration group.

From a public policy perspective, this apparent conservatism of Australia’s large corporates and the institutional investors they answer to is a challenge if we have aspirations to become an “innovation economy.” Federal and State governments have poured money directly into research and development and into “innovation support” programs largely for small and medium-sized businesses. But it is hard to see us becoming an innovation economy without the emergence of a “Nokia” from the ranks of our largest companies. Perhaps the continued growth and success of our few emerging global innovators - CSL, Cochlear, Resmed, and Computershare – might persuade institutional investors that the returns from supporting such companies more than compensate for the risks. However, while there are more than adequate returns to be made from the “old economy” of resources, construction, banking, retailing, media and transportation, the incentives to risk a breakout into the new economy are limited.

What kinds of sensible government interventions might be used to deal with this inherent conservatism towards business creation based on new technologies?

First, I believe that the policy emphasis has to shift to the large corporate sector. As stated above, most government interventions and support are directed at start-ups, small and medium sized businesses. While many worthwhile results have been achieved, it is clear that all of this effort has not produced a transformation to an innovation economy that will be competitive into the 21st century. Indeed there may be a case that many of the plethora of support programs could be rationalized or scrapped and the resources deployed elsewhere. The Innovation Review is much better equipped and informed than I to make specific recommendations here.

Second, we should consider using a small portion of the torrent of new funds flowing into superannuation to create an “Innovative Industries Development Fund.” One percent of the annual \$40 billion or so of new superannuation savings means \$400 million per year could go into this fund to help create future wealth and prosperity. But it should not be invested into small scale start-up businesses. Rather, it should be made available to larger enterprises that have or can assemble the managerial and financial muscle to create new technology based businesses. The funds could be made available as follows

- loans with a minimum size of \$10 million and a maximum of \$50 million, for a term of 10 years
- Interest at commercial rates, but interest payments deferred for 5 years
- secured by the company’s other assets and cash flows
- principal and accumulated interest repayable after 10 years
- for investment in new technology development with an emphasis on life sciences, medical devices, scientific instruments, ICT, aerospace, nanotechnology, and renewable energy.
- administered by a management and board of qualified and experienced bankers

It is important to note that this fund, which could be worth over \$ 2 billion in 5 years issues loan instruments and is administered by bankers, whose main task is to assess whether the borrower can service and repay the loan. Whilst they may develop expertise in particular technologies, that is not necessarily their main job – it is the borrower’s job. Essentially, this fund provides a pool of low cost capital for creditworthy, well managed, and probably large companies willing to take a technology risk to build a new business. Its objective is to stimulate and accelerate the creation of future Australian “Nokias.”

Third, we may want to reduce the incentives to make “easy” returns from the “re-packaging” of existing businesses, which was responsible for the large wave of private equity investments before the current credit crunch. Such investments usually involve the privatization of public companies while operational fat and underperforming assets are trimmed. This does serve an important purpose in weeding out inefficiencies, but it could also be argued that they divert investment funds and managerial talent away from new business creation. Indeed, quite often one of the bits of “fat” trimmed from operating

budgets is research and development expenditure. These investments are usually highly geared, so the tax deductibility of interest is an important contributor to their economic attractiveness. Indeed, it could be argued that tax deductibility for corporate acquisitions favours “repackaging” of existing businesses rather than creation of new ones. If that is the case, then tax deductibility of interest for borrowed funds used to make corporate acquisitions is a barrier to the growth of an innovation economy and should be abolished.

In summary, my proposals are focused on large corporates to stimulate some behavioural changes to accelerate technology based new business creation.

First, streamline the plethora of small-business oriented innovation programs to improve effectiveness and free up government resources.

Second, create a fund to provide low cost capital to creditworthy large well managed companies willing to create new businesses based on innovative technology.

Third, remove the tax deductibility of interest on loans that are used to fund business “re-packaging.”

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