

The missing step, where is Australia's national industrial policy?

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On 4 August in her speech to the AICC, Catherine Livingstone, President of the Business Council of Australia, suggested that “Government must design policy in a purposeful way so that as many sectors as possible can be as globally competitive as possible... Had government collaborated with the automotive manufacturing sector a decade ago, to facilitate the transition to a business model based on supplying niche products into global supply chains, we may now have a viable sector.” And she concludes with the observation that “The latest unemployment figures speak for themselves.”

Sadly, Ms Livingstone's plea comes at a time when Australia's political elites appear to be focused exclusively on cutting spending, redistributing debt from the public to private sector, “securing our borders” from asylum seekers and removing any meaningful incentives for sustainable development. Whatever your politics, the absence from this list of anything even remotely resembling a long term strategy for economic growth – “creating jobs”, if you will – must surely cause pause for reflection.

So I ask simply: once we've cut spending, seen private debt increase and our international reputation destroyed - all just in time for the mining boom to hasten its downward trend – what then?

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My own area of expertise is in research and development and the provision of higher education, mostly in Europe, but for the last few years in Australia, and I must say I find the political and policy debates in Australia curiously different to those in other developed nations. One of the biggest differences lies in the seeming disconnect here between the higher education sector and the industrial sectors they are supposed to supply, build and/or create. Australia has an excellent higher education system and our graduates are highly skilled and respected. Why, then, do we miss the next step to strategically develop adequate employment opportunities for those graduates?

Many governments see long term, strategic development and investment as one of their priorities for providing their citizens with a prosperous, safe and happy future. They aim for high and stable workforce participation; and they try to avoid the so-called “brain-drain” whereby their country’s sharpest minds move abroad, taking their ingenuity and skills with them to benefit another nation. Not only is that highly skilled graduate taking their good ideas with them, but they may also be taking “embedded” Commonwealth investment with them. In other words, if a government fails to support and enable existing and new industries, that government has also failed in its higher education policy. Wouldn’t it be better to give our graduates the opportunity to put their skills and knowledge to the benefit of the nation in the form of both innovation and taxes?

Not surprisingly, closing the gap between producing highly educated graduates and fully exploiting their skills and ingenuity for Australian industry relies on a mix of long term and strategic foresight, political commitment, funding, and a dollop of good luck. Let’s look at two examples, regrettably though not surprisingly both from overseas.

The first and perhaps most recognizable example is that of Silicon Valley. In 1947, the National Aeronautics and Space Administration (NASA) established Moffett field, a joint civil-military airport located between southern Mountain View and northern Sunnyvale, California as the centre for aeronautics research in the US. Data processing was a logical next step from aeronautics, and although semiconductors are still a major component of the area's economy, Silicon Valley has been most famous for innovations in software and Internet services, but all of these innovations are the cumulative result of earlier commitments from the US government. For example, using money from NASA and the United States Air Force, and while at Stanford Research Institute International, Doug Engelbart invented the mouse and hypertext-based collaboration tools in the mid-1960s. In the 1970s and 1980s, Xerox's Palo Alto Research Centre (PARC) played a pivotal role in object-oriented programming, graphical user interfaces (GUIs), Ethernet, PostScript, and laser printers. GUI was a major innovation leading to Apple’s success but this is just one example of how technologies like this “ride the wave” of past federal research investments, and the latter has remained above the recommended 3% of GDP even through the GFC. In the case of Silicon Valley and the strategic thinking that spawned it, everyone won: the researchers who dedicated their lives to their science; the entrepreneurs and venture capitalists who made a buck out of it; the highly skilled graduates who had a job commensurate with their skills to go to; and the Federal government which saw revenue in the form of corporate tax increase.

The second example hails from my home country, Germany. As a high wage / high value export country, Germany has developed a sophisticated interlinked and integrated set of policies: to enhance the competitiveness of its industry through innovation, to keep

unemployment figures low through a highly differentiated education system and to provide financial incentives for **priority** industries. The renewable energy sector is a recent success story but one which, like the previous example, didn't emerge from thin air. 40 years ago Germany led nuclear power generation and the research that underpinned it but Chernobyl put an end to these ambitions, and most recently the Fukushima disaster put an end even to nuclear power production in Germany (by 2020). This political decision spawned the "Energiewende" (clean energy transition) which demands the transformation of Germany's energy supply system - a complex process that requires systemic intervention on a range of fronts. The government established an "Energiewende Research Forum" to coordinate the process in all sectors and German research universities and institutions like Max-Planck and Fraunhofer are encouraged to produce research to enable society to cope with this change. The research is in both the natural and social sciences, because Germany recognises that this is a technical and social challenge. The "Energiewende" has created 400,000 new highly skilled in the renewable energy sector and one particular statistic staggers me: in 2013, Germany produced 93% of Australia's total electricity demand (146 TWh in 2013/2014) from renewable sources. Certainly, in the early days, the German government subsidised both the research and development of renewable energy technologies, but now they are reaping the rewards for their long term vision. In contrast, uncertainty about Australia's Renewable Energy Target just shelved the 100-megawatt Silex Mildura solar power station which would have provided electricity to 40,000 homes and provided many hundreds of highly qualified jobs in this future-oriented industry. Time and again Australian business has supported efforts on climate change with the caveat that the policy interventions must provide business certainty: innovative industries can and will adapt, but they need to know the policies will endure beyond the politicking.

And so I return to Catherine Livingstone's call for the government to set clear goals and strategies for those sectors that have a deep competitive advantage and which therefore offer the most promising prospects for economic growth. I would add an additional plea: that our political elites move beyond debates about fiscal constraints and deregulation and move instead to a public debate about what Australia could look like in 20 to 30 years, based not on simplistic, binary choices between mining and agriculture, but rather on how we can create and support a portfolio of industries that will employ both skilled and unskilled graduates and make us the envy of the world.