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Sustainable economic growth for New Zealand: An optimistic myth-busting perspective

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Long-term vision is something we tend to avoid in New Zealand, with the possible exception of Māori, who have greater reason to focus on the development of their assets for future generations of mokopuna. But I will argue here that vision is essential to any strategy aimed at enhancing prosperity. It is my belief that we are poor because we choose to be poor, and that what holds us back are self-serving but dishonest myths.

The first myth is that we are an egalitarian society, a great place to bring up children. But in income disparity, child mortality, imprisonment rates and most other negative social indicators, we are among the worst in the OECD. The second myth is that we are clean and green. In truth, the reality is altogether different. Like other developed countries we have despoiled our environment to eke out a measure of prosperity, and we therefore have no moral high ground from which to preach to others. Our valuable dairy industry severely impacts our rivers and lakes. Our pastoral industries are significant emitters of greenhouse gases. The third myth is that we, as New Zealanders, do not need prosperity, that we have 'lifestyle' instead. But we complain that our health system cannot afford to meet our needs and that our infrastructure is decrepit. Now we face significant economic stress following the Christchurch earthquake. Furthermore, the 'lifestyle' argument is hard to sustain, given New Zealanders are the second hardest working in the OECD. But when we look at how hard we work against how productive we are, in comparison to other OECD countries, we see that New Zealanders are amongst the least productive.

Fifty years ago more Australians migrated to New Zealand than vice versa and the New Zealand dollar was much stronger than Australia's. Now Australia is 35 percent richer than New Zealand, representing a $40 billion per annum GDP shortfall for us. Let me illustrate that in a different way. There are 1.3 million full time equivalent of jobs in New Zealand. In order to maintain our current per capita GDP we need a revenue per job of $125,000. In order to match Australia we need around $170,000. Tourism brings in around $80,000 per job, and while usefully employing unskilled New Zealanders, it cannot provide a route to prosperity. By contrast the dairy industry brings in around $350,000 a job. The problem with dairy is that environmental limitations prevent us from scaling it up at all, let alone by the factor of 5 or 6 we need to make up the $40 billion per annum shortfall.

Interestingly, our largest export-earning sector is manufacturing (contradicting yet another New Zealand myth that everything is 'made in China'). At around $250,000 a job on average, these businesses thrive by producing goods that have a high profit margin and a high ratio of value to weight. The key to this kind of manufacturing is knowledge content, and that in turn is driven by investment in research and development (R&D). The poster child of such business is Fisher and Paykel Healthcare, with $500 million per annum of exports. If we had 100 such companies, our prosperity would be assured and in a manner which is entirely sustainable. Such businesses generate no greenhouse gases, do not require land or energy, and do not dump nitrates into our streams. Out in the larger global economies, there are even more startling examples of sustainable businesses which are highly productive. Apple Inc. earns around $2,000,000 per job while Google and Samsung around $1,400,000.

The obvious and the politically fashionable products will undoubtedly be addressed by much bigger players than New Zealand in the world economy. Where we will be successful is in the technology niches. Because we are only 0.2 percent of the world's economy, we are subject to a 500 times multiplier which can make such niches highly profitable bases for businesses which are large on the New Zealand scale. Fisher and Paykel Healthcare dominate the world market for respiratory humidifiers. Rakon are world-class players in crystal-controlled oscillators. And if we can, as we do now, have ten such companies exporting between them nearly $4 billion per annum, why not 100? Indeed, we have grown such companies despite a complete lack of awareness by the New Zealand public that we can do this sort of thing. These businesses are essentially invisible. They do not sell in New Zealand, but internationally. They do not sponsor the ballet or children's soccer. They make weird products that our kids and their parents do not understand.

But we have it in our power to change all that. We have an excellent education system, as good as the Danes or Swedes. If we care for our environment and create a just, equitable and creative society, a 'place where talent wants to live', then we can attract the best in the world, and provide an opportunity for our most talented Kiwis to see their future here. Imagine what we could achieve if we built a strategy around, and made central to our thinking, the existing success of our emerging knowledge sector, gearing our education system accordingly. One hundred inspired New Zealand entrepreneurs can turn this country around. That is the challenge for us all.

Sir Paul Callaghan (GNZM, FRS, FRSNZ) is Kiwibank's 2011 New Zealander of the Year, for his service to science in the fields of nanotechnology and magnetic resonance. He holds a Doctor of Philosophy from the University of Oxford, was made Professor of Physics at Massey University in 1984, and was appointed Alan MacDiarmid Professor of Physical Sciences in 2001. Sir Paul is the founding director of both the multi-university MacDiarmid Institute for Advanced Materials and Nanotechnology and of Magritek. He is past president of the Academy Council of the Royal Society of New Zealand and the current president of the International Society of Magnetic Resonance. The distinctions he has received include: becoming a Fellow of the Royal Society of London, Ampere Prize, Rutherford Medal, Principal Companion of the New Zealand Order of Merit, KEA/NZTE World Class New Zealander Award, the Sir Peter Blake Medal, James Cook Research Fellowship, the Günther Laukien Prize for Magnetic Resonance and in 2010 he shared the New Zealand Prime Minister's Science Prize.