

NEW ZEALAND FIRMS-REACHING FOR THE FRONTIER

Submission Paper from Mark Fuller to the New Zealand Productivity Commission- AUG'2020

I am commenting on the New Zealand Productivity Commission's Issues Paper – “*Reaching for the Frontier*” and Dr David Skilling's MAY 2020 report prepared for the New Zealand Productivity Commission - “*Frontier firms: An international small advanced economy perspective*”.

I am commenting as an individual rather than a member of any group or organization. I am a Project Engineer having worked throughout New Zealand and Australia for several Frontier Firms in the Oil & Gas, Ship Building, Heavy Engineering and Manufacturing industries for over 40 years. I'm also a part-owner in a food manufacturing business which employs 12 people. I have a keen interest in New Zealand's productivity (or lack of) and feel compelled to offer my opinion.

THE DR DAVID SKILLING FRONTIER FIRMS REPORT

Skilling advocates two important issues in his report. The first is that NZ compare itself with 12 other Small Advanced Economies rather than the entire 37 OECD member countries. (*Skilling defines small advanced economies as IMF advanced economies, with populations above 1 million and below 20 million people; and with a per capita income above USD30,000*). The second is that NZ needs more “Frontier Firms” operating at scale, internationally and generating export income for NZ.

Skilling suggests that NZ's lack of Frontier Firms is the primary reason that our ‘GDP/per-capita’ productivity figures are the lowest of all the other small advanced economies (SAE's) and in the bottom half of the entire 37 OECD member countries.

Although Skilling himself states that every small economy has distinctive features; by analysing the Frontier Firms of other SAE's we can identify similarities, differences and themes that can be applied to NZ's situation.

SINGAPORE AND HONG KONG

Obvious similarities can be drawn between two SAE members Singapore, Hong Kong and New Zealand with our population and small Island Nation statuses except that their productivity rates are 25%-50% higher than NZ. Their economies have developed completely differently to NZ by establishing themselves as shipping hubs to South-East Asia and banking/financial centres that NZ is unlikely to replicate. Their frontier firms are predominantly banks and financial institutions so there are probably other international SAE's that we can better compare ourselves with.

IRELAND

Similarly, Ireland has a population almost identical to NZ but a productivity rate almost double and a land area only 1/3 that of NZ. Ireland has made huge advances in ‘GDP/per-capita’ (and therefore measured productivity) rates over the last decade with transformative corporate tax changes that have attracted large, foreign Frontier Firms to domicile there, although most Kiwi's wouldn't recognize the names of many in the list of top 10 Irish Firms. Perhaps there is a lesson here in corporate taxation advantages for the NZ government to implement?

SWEDEN

Another one of Skilling's 12 SAE's – Sweden, with a productivity of 25% more than NZ and a population of only 10 million, has several easily recognizable Frontier Firms including, Volvo, Scania, Ikea, Husqvarna, Electrolux, Sandvik, SKF, H&M Clothing, Alfa Laval etc. Although Sweden

is often considered a model of excellence in Democratic Socialism, the majority of these Frontier Firms are over 100 years old and expanded dramatically between 1850 and 1950 when Sweden's biggest social and economic successes developed during a period of traditional right-wing Libertarian, 'laissez-faire' politics. Once again, perhaps there is another taxation conditions lesson here for the NZ government to implement?

FAVOURABLE TAXATION ENVIRONMENTS

The Swedish and Irish examples above suggest that significant and measurable GDP/per-capita gains can and have been made with favorable corporate taxation environments. Indeed many of the other successful 12 SAE's in Skilling's report have also developed 'sweetheart deals' with numerous International Frontier Firms. In addition to Apple with Ireland, there is Fiat & Amazon with Luxembourg, as well as Starbucks & Nike with Netherlands and several others. Although these deals are currently under investigation by the European Commission and/or General Court of the European Union for legitimacy and legality, they do flow revenue through these countries and create high-paying jobs which in turn raises GDP/per-capita statistics. Whether they generate *real* productivity gains, or whether they would be acceptable to the NZ public's social conscience is another matter, but the point is that some countries have used available tax levers to help Frontier Firms to flourish and prosper. The issue is to be skillful and innovative with the tax reform implementation so that it walks the very narrow central path that satisfies the corporates and the public at large as well as generating measurable productivity growth.

NEW ZEALANDS ALTERNATIVE PATH

By looking at the 12 other SAE's that Skilling identifies, it becomes clear that they have mostly followed the same path that other larger OECD success stories have – that is to move from an agricultural based economy to an industrial or financial services based economy (or a combination of the two). Even with the head start of abundant resource wealth like Australia and Norway, these countries have still generally developed into strong industrial focused economies.

New Zealand, on the other hand has always been an agricultural and primary produce based economy. It started out with whale blubber and Kauri gum, then came lamb and wool, before transforming into timber, wine & dairy. New Zealand has never really been able to gain advantage from the added value of large-scale manufacturing industries or financial services.

NETHERLANDS

Probably the closest comparison that can be made to NZ 's agricultural economy within the other 12 SAE's is Netherlands. Although Netherlands is still primarily a strong industrial nation with export revenue over \$US700 Billion, their population of over 17 million is more than triple that of NZ, but their agricultural exports are 10x that of NZ with a land area only 15% of NZ. Their phenomenal agricultural output (\$US110 Billion in 2019) is nearly 3x greater than the entire NZ export total (\$US38 Billion), all from an area about the size of Canterbury, with very little natural resources, substantial parts of their land at or below sea level, and in some places only 1500km from the Arctic Circle.

For example, Netherlands tomato yield at 55,000 tonnes per square km, when compared to all the other tomato growing nations of the world is 600% better than 2nd placed Spain and 3rd placed USA. Likewise with Capsicums and Cucumbers; no-one even comes close to the yields that the Dutch can achieve. Additionally, these productivity outputs are being achieved while concurrently *reducing* water, fertilizer, pesticide and energy consumption. Even 'in-ground' crops of potatoes, carrots and onions are achieving staggering yields with hi-tech innovation including drone devices that measure nutrient and water requirements, autonomous vehicle harvesting and ultra-efficient pest & disease control.

Netherlands have done this with a relentless drive to continuously innovate and develop, aided by a whole-of-government approach that supports this improvement. Netherlands Wageningen University and Research Centre is the premier agricultural university in the world and has deep links to both industry and government.

As an example, 50 years ago, Jan Koppert was growing cucumbers on his land and using toxic chemical sprays to fend off pests. When a physician declared him allergic to pesticides, Koppert set out to learn all he could about the natural enemies of insects and arachnids. Today Koppert Biological Systems is the global pacesetter in biological pest and disease control, with 1,330 employees and 26 international subsidiaries marketing its products in 96 countries. Koppert's firm can provide you with cotton bags of ladybug larvae that mature into voracious consumers of aphids. Or how about a bottle containing 2,000 of those predatory mites that hunt down spider mites on plants and suck them dry? Or a box of 500 million nematodes that mount deadly assaults on fly larvae that prey on commercial mushrooms? Koppert's legions make love as well as war, in the guise of enthusiastic bumblebees. No form of artificial pollination matches the efficiency of bees buzzing from flower to flower, gathering nectar to nourish their queen and helping to fertilize the ovaries of plants along the way. Each Koppert hive accounts for daily visits to half a million flowers. Farmers using the bees typically report 20 to 30 percent increases in yields and fruit weight, for less than half the cost of artificial pollination. By every measure, Koppert Biological Systems is a Frontier Firm that Skilling is advocating for NZ.

I believe that it is no coincidence that Dr Skilling has now established himself in Netherlands and is probably better placed than most to comment on the productivity of nations when he is living among one of the most productive and prosperous nations in the world.

The Netherlands may provide an agricultural example to compare with but it is fair to point out that they have had a bit of a head start on NZ. Since becoming independent from Spain in the 1500's they have continuously been at the front of international trade development, with by far the largest merchant fleet in the world during the 1600's, then pioneering the East India Companies that became the modern day stock markets. And today Royal-Dutch Shell has consistently been ranked one of the top 10 companies by revenue in the world for the last several decades and still has its headquarters in Netherlands. Even Husqvarna, the Swedish Frontier Firm mentioned earlier was established in the late 1600's as a gun manufacturer. This highlights the history of some of Europe's Frontier Firms and the deep roots that they have established compared to NZ's relatively short history.

IS THE FRONTIER MODEL THE ANSWER?

So where does NZ fit into this picture and how do we raise our productivity? Although we like to consider ourselves full of "Kiwi Ingenuity" and "Number 8 wire mentality" the evidence paints a different picture. Other nations from Skilling's 12 SAEs like the example above of Netherlands, Sweden and Ireland have been far more successful at innovating ideas and converting them into commercial enterprises that generate jobs, wealth, and prosperity for their people and their country. New Zealand must decide where it's skills, attributes and comparative advantage lies.

There are several emerging firms showing global promise of reaching 'Frontier' status such as Rocket Lab which employees over 600 people spread across NZ, California, Australia and Canada with a valuation of approximately NZ\$2 Billion. Although Rocket Lab was founded in NZ in 2006, it has now moved its registration and head office to California and future expansion is likely to be faster in USA than NZ. As mentioned in two other submissions to the Productivity Commission on this issue (John Turner-pg11-re PDL VSD's to Schneider-France and Tertiary Education Commission-item35) this is typical of many former NZ Frontier firms that have ended up exiting NZ completely.

For this reason, there is an argument that perhaps supports an alternative to the ecosystem structure of the Frontier Firm model, so that when one large Frontier Firm departs, it doesn't result in total collapse of all the other ecosystem support businesses around them. This issue is particularly relevant currently with the eminent closure of the Tiwai Point Aluminium Smelter, the probable downsizing of the Marsden Point Oil refinery and the future viability of the Glenbrook Steel Mill also in question. Depending on how "Frontier Firm" is defined, all these businesses could fall into the category and all have a network of support businesses that form an ecosystem to allow diffusion of specialized knowledge. This view is supported by the Chris Boxall submission (pg1) *"What is the point of increasing the productivity of today's leading firms if they are a "Kodak" and the world is changing around them."*

EMERGING WEIGHTLESS ECONOMY-2 EXAMPLES

Skilling advocates a "weightless economy" where knowledge based products and services are exported directly to foreign markets via the internet. Although he highlights Frontier Firms like Xero & Datacom, there are many small enterprises that are already doing this that could perhaps be duplicated NZ wide.

An example is Steph Green the legally blind author who self publishes her own fiction electronically to the world through the web. Last year (2019) she earned over NZ\$200,000 in royalties writing from her off-grid Northland property on the shores of the Kaipara Harbour. Her only connection to the outside world is exceptional internet.

Or another example is "Chloe" (not her real name for privacy reasons) the Chef in her late 20's with 2 young children and a disabled husband. Chloe and her family switched to a Wholefood, Plant-Based, Vegan diet several years ago to reduce her husband's medical problems and improve the health outcomes for her whole family. She has now become an expert in preparing Vegan Food and During Covid-19 level 4 lockdown she setup a monetized YouTube channel linking to her Instagram and Facebook accounts. She now has over 1000 followers (mainly from USA) paying US\$1 per day for her Vegan Weight loss and Lifestyle program. This equates to over half a million NZ\$ in legitimate export income developed in only a few months with virtually no resources where nothing gets 'used up' or wasted, there is no damage to the environment, no supply chain delays, no production machinery breakdowns and no staffing issues. Just a phone and exceptional internet. Needless to say – Chloe has now given up her day job as a chef, providing an opportunity for someone else to be employed at the café that she worked at, therefore creating a perfect example of knowledge diffusion.

If there were 1000 'Chloes' or 'Steph Greens' scattered throughout NZ we could potentially have half a billion NZ\$ flowing into NZ bank accounts 'weightlessly'. Perhaps if developed and encouraged, this 1000-strong weightless 'e-network' could have more resilience and relevance to the NZ economy than the traditional heavy industries of the past? This approach is also supported by the Doug Galwey submission (pg11) *"one or two ocean liners vs. one thousand small speed boats"*. I believe that these small weightless businesses need to be promoted to other young entrepreneurs, but in the near future though, this 'e-network' is only ever going to play a support role to other industries which provide jobs for all.

NEW ZEALANDS AGRICULTURAL STRATEGY

As mentioned earlier, NZ's long-established strength has been agriculture and that is probably still our comparative advantage with temperate climate, adequate rainfall, available land, and industry know-how. Additionally, the supply chains and international market relationships are already well established within our agriculture industry. In order to gain efficiency improvements in this sector as Netherlands has, it is probably time for us to make a conscious shift away from the methods that we have conventionally used to do things, and move further up the value chain to more highly regarded

commodities. It is my belief that we should be focusing on alignment with New Zealand's internationally respected brand of "CLEAN, GREEN, 100% PURE". With this in mind it becomes clear that "NZ Inc." (including agriculture and horticulture) should move to organic, regenerative & sustainable practices that align with the NZ Brand and provide better economic and output returns. Rather than trying to compete with Netherlands and other growers who use intensive hydroponic techniques to increase productivity, there are other more natural methods that are becoming increasingly valued by health conscious consumers around the world.

Skilling suggests in his report that red meat and conventional dairy consumption is decreasing in many developed nations around the world (*pg25- "...as global consumers increasingly focus on lower emissions substitutes for dairy and red meat"*), and that although these products have been a mainstay of NZ exports for many decades, perhaps they are now 'sunset industries'. He points to the success of the A2 milk brand (*pg25- "A2 Milk has become one of the largest listed companies on the NZX"*) as a modern, health focused subset of the traditional dairy industry that is achieving stellar growth due to surging international demand for niche health products. In support of this argument is the World Health Organisation's proclamation in 2015 that Red Meat was a 'Group-2A' probable carcinogen, and processed meats including ham, bacon and salami as a 'Group-1' known carcinogen. The worldwide rise of the environmental green movement also urges consumers to be aware of the impacts that their food choices are having on environmental degradation. Animal agriculture and factory farming are increasingly being seen as a central cause of these issues. A strategic shift in an alternative direction for New Zealand is now very timely. The 'Low-Covid Risk' that New Zealand has generated over the last several months is also a brilliant platform to expand our horticulture exports to the world and this new status enhances our existing "CLEAN, GREEN, 100% PURE" brand.

NEW ZEALAND BUSINESS MANAGEMENT ATTITUDES

A recurring theme in several of the other submissions to the Productivity Commission on this subject is the lack of skill and aptitude of managers in many NZ firms. This view was particularly pointed by:-

- **Xero**-(pg3)- *"New Zealand has a relatively large number of firms with poor management practices"*.
- **Icehouse**-(pg4)- *"...low levels of strategy setting and management capability as the most prevalent hindrances to the latent underperformance of NZ SME's"*.
- **Jonathon Mason**-(pg2)- *"Companies based on the agglomeration of people who have some skills without notable motivational fit, tend to reproduce this inertia at the organizational level"*.
- **MBIE**-(pg2)- *"Can policies be implemented to raise managerial capability...Are inclusive management practices important for frontier firms?"*
- **TEC**-(pg4)- *"Within human capital development, leadership, management capability and entrepreneurship are key enablers"*.
- **Kevin Sampson**-(pg3)- *"The severe shortage of knowledge-based capital in the form of leadership and management is by far the primary reason NZ is failing"*.

The consistent message coming through here is that NZ management is under-performing. Having been involved in more businesses than I have fingers and toes to count them on, from small family enterprises to large multi-national corporations, I fully support this view of NZ management and leadership being generally low quality at developing their staff. There is a culture of traditional business values in NZ that is holding us back as a nation and impacting negatively on our productivity and efficiency. This culture needs to change for us to move forward, in particular the

Employer/Employee dynamic, which in some firms, still has a master/slave feel about it. This issue was well articulated in the following submissions:-

- **Xero-** (pg3&4) *“New Zealand’s leadership and managerial capability requires addressing wellbeing in the workplace culture and new ways of leading people” - “It is clear that more effective, empathetic leadership can materially improve productivity.”*
- **Jonathon Mason-** (pg1) *“Discourse around talent acquisition in NZ (and as it happens, Australia and Singapore) seems to be dominated at present by the notion of the supply of, and demand for skills, rather than the hiring and development of employees based upon their potential”.*
- **Kevin Sampson-** (p6) *“While a certain level of income is essential for workers, they make a bigger effort if they feel valued, are treated as contributors to the business, are listened to in regard to how things are done, and generally feel they are genuine participants in the firm”.*

In my experience, the degree to which these modern and inclusive business practices are embedded into a firm, this is directly related to their productivity increase. I believe this turnaround of NZ business management attitudes is one of our single biggest opportunities to improve productivity in NZ but also one of the most difficult.

This attitude by NZ business leaders is perhaps a reflection of the NZ population as a whole. There is a stoic determination to the economically and productively successful Dutch, Swiss, German and Scandinavian people that seems to be lacking in Kiwis. New Zealanders have many worthy attributes as witnessed by the large numbers of foreigners who move here citing their love of the Kiwi people as well as the country, but changing the culture of the NZ population to accept, embrace and strive for greater productivity and prosperity will be required to raise the affluence for all of us.

TOP DOWN vs. BOTTOM UP APPROACH

As the Productivity Commission and other submitters have noted, the NZ government ‘from the top down’ approach to influence productivity has not worked. For nearly 40 years, successive governments from all angles of the political spectrum have been rolling out initiatives from the OECD prosperity playbook to no avail. Our productivity has flat-lined with no improvement in sight. It has not been for a lack of trying and most of these government initiatives should be applauded for their attempts.

It is becoming increasingly clear that another method is required and that method must include a ‘bottom-up’ transformation of the NZ people including their skills and particularly their attitudes as suggested earlier. Instead of attempting to apply policy to the public directly, a great place to start is within the government itself. Both Central and Local Government Departments have long had a reputation of ‘Productivity Killers’ and sometimes seem more focused on how to obstruct things than solve problems. Although the ‘In-Vogue’ Health & Safety, Financial Accountability and Legal Legitimacy buzzwords are all important aspects of policy; government departments need to be setting the standard in productivity and efficiency for the NZ population to follow. Enhancing productivity and efficiency for the NZ people needs to be at the core of all their decision making.

Nowhere is this more obvious than NZTA where the Rosebank Business Association submission (pg2) points out the lack of coordination of traffic signals, peak flow delays and lack of freight priorities that are hampering their productivity. I’m sure many Kiwis throughout NZ spend time every week sitting at a red traffic light waiting for the non-existent cross-traffic that has the green signal. Most of these issues could be solved with little more than some smart programming. If the government wants the people to be more productive, it needs to be a bit smarter itself and set a better example of how to enhance productivity.

INNOVATION VIDEOS

I believe that another 'bottom-up' technique to change the culture of the people and also offer an educational tool is short (say 15-20min) videos showcasing various businesses around NZ and how they are transforming their productivity. Much like 'Country Calendar' does for the rural and agricultural community, this is a great way to disseminate ideas and channel diffusion. The "NZ on Air" initiative is already setup to support this concept. These kinds of shows are already screening occasionally on "60 Minutes" or "Sunday" but I would suggest a dedicated series on a Sunday evening called "Reaching for the Frontier" (or similar). These videos could also showcase successful overseas examples of 'How the Dutch Grow Vegetables', 'How Ireland attracted foreign firms', 'How Swedish truck manufacture leads the world'. I think it is important that these videos be more than just business oriented but to have wider general appeal. They could also showcase management techniques and staff development success stories from prospective frontier firms. The Stephen MacDonell submission (pg5) suggests – *"Having a shared repository and 'Rapid Reports' type dissemination channel could ensure research outcomes are made available in an accessible way to the practitioner community"*. I believe that these documentary style videos could be an informal way of creating a shared repository of innovation ideas from many different industries.

MINIMUM WAGE

Kevin Sampson in his submission (pg9) makes a compelling argument for – *"... a steady, faster than CPI, increase in the minimum wage"*. Although at a personal level the implementation of this existing policy has affected my own business in a negative way, I acknowledge and support it for the long-term improvements that will come for NZ productivity. Inefficient firms that are trading around the margins based on keeping labour costs low, will be forced to innovate and transform or die.

UNIVERSITY TUITION FEES

I believe that the tertiary education fee structure needs to change to encourage innovators. Australian Education Minister Dan Tehan announced in JUN 2020 that Maths, Teaching, Nursing, Science and Engineering degrees would decrease in cost and that Arts, Commerce and Law courses would double at Australian Universities. I support this policy and believe that it has merit to be applied in NZ. Innovation and productivity is driven by scientists and engineers, not lawyers and accountants.