New Zealand Productivity Commission Submission

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1. Do you have views on how the Commissions should define frontier firms?

I believe the Commission's definition of frontier firms should put greater emphasis on three aspects:

- Industry in which NZ has a current comparative advantage: whether in terms of market, technology, academia or natural resources.
- Areas of global importance in the next 10-20 years: cybersecurity, 5G, AR/VR/XR, etc.
- Supply chains in which NZ has a significant stake in or has a likelihood of expansion across.

Fundamentally, Frontier Firms need to exhibit characteristics of an "extended/continual" profitability/growth.

2. Are there particular barriers to innovation, diffusion, and reallocation that you think the commission should focus on?

I believe the commission should focus on particularly barriers within innovation and diffusion.

- Often potential innovators (with relevant skills) hold back from the process because demand/supply information is very opaque. There is a lack of "ignition" programs that will allow the country to "kickstart" a market-focused/centric innovation trend, which innovators can piggy-back off for the weak initial stages.
- Diffusion – Many firms don't know how to approach the problems of a technological or business nature, particularly when they are small and unable to employ professional help (e.g. consultants). There is a lack of assistance programs, let alone credible ones.

3. What do you think are the most important drivers of productivity?

There are three most important drivers:

- Market condition – particularly existing demand within specific industries, whether domestic or international. Entrepreneurs, Innovators and Optimizers need to be able to clearly identify potential demand in order to justify innovation and improvement. However, this information is rarely publicly available or easily accessed. This is

particularly the case for new products/technologies, for grassroot entrepreneurs, and also for firms wanting to accessing new markets.
- Technological Innovation – in most cases, firms can often be optimized just by raw automation/optimization technologies. Manufacturing/agriculture/service needs to be further optimized by learning from the international standard, in manufacturing cases – industry 4.0, and similar principals can be applied for other fields as well. A particularly good example is Australia's Wagyu Beef exports, which grow approximately by 15% per year by some sources, and a key part of that is the application of genetic and other cutting edge tech.
- Management/Industrial Practices – Employing state of the art, appropriate business practices including LEAN Manufacturing, 6 Sigma, Amoeba Management, etc.

4. Are there barriers opportunities that are unique to Maori frontier firms?

Unfortunately, I have not had any direct personal experiences with Maori firms. If given the opportunity to make contact, I would be glad to make a thorough investigation.

5. What are the main challenges for New Zealand firms that strive to be world-leading?

I am going to list 3:

- Lack of domestic/local demand – for most firms, domestic/local demand is critical for the initial stages of the business, and it is often insufficient/not obvious to elicit entrepreneurship.
- Lack of ability to access international markets – information is opaque, especially in the process of "discovering" international demand and benchmarking against international competitors.
- Lack of technology-market integration. While NZ has some cutting edge technologies. Few can actually enter the market and grow into a sustainable business.

6. How can the government:
    a. Help to encourage the growth of new and emerging firms?

Four Suggestions:

- Increase information transparency, both from a governmental level, as well as encouraging private firms to do so – revealing the key "pains" and sourcing solutions from grass-root/small or medium sources and promoting these sources into independent firms.
- Increase industry-academic-governmental collaboration. Encouraging industry/academia collaboration to utilize respective expertise in R&D and profit; The government (particularly the foreign ministry) can collaborate with private firms in helping to provide information about foreign markets, and helping the firms negotiate business deals with foreign companies and governments. A particularly interesting

case study is Israel's approach to the cybersecurity industry. The collaboration between IDF, universities and businesses, and the flexibility and fluidity in which talent and funding flows can serve as a template to NZ's approach. The Belt and Road Initiative may also serve as a template on how governments can aid private firms in expanding into foreign markets.

- Provide investment/grants – Self-explanatory. Even with existing market demand, most companies in the hi-tech industry still must overcome the initial research cost barrier.
- Source foreign talent, particularly in high-tech areas.

b. Support diffusion of technology, ideas and practices between firms?

Two options:

- Encourage/incentivize the formation of consultancy firms, making these firms publicly available for visitation (a map for business "clinics"), create government grants to cover part of the consultancy cost.
- Create a government department focused on directly consulting for private businesses.

c. Support the movement of resources from lower to higher productivity firms?

This is often case specific. Can't comment unless more information is provided.

7. What action can/should the private sector take to support innovation, diffusion and reallocation in New Zealand?

This is case by case problem.

8. What are three outcomes you would like from this inquiry?

Beyond anything, I would like to see clearly identified "pain points" from private firm leaders, especially those with a medium sized firm background.