

Supporting entrepreneurship in New Zealand agriculture.

A report for Nuffield New Zealand

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Executive Summary

New Zealand has very high rates of entrepreneurial activity by international standards, but this has not translated into the expected numbers of large and high growth businesses. The result is significant loss of opportunities for growth. This phenomenon has been attributed to cultural influences (primarily lack of aspiration) and a possible lack of finance at a transitional stage in business development. Agriculture is not immune to this problem, as it is not performing to its potential in a number of areas. The goal of this study was to find companies or industry sectors in other countries that had experienced growth, identify factors that they had found helpful during the process and then relate those experiences back to the situation in New Zealand.

Three themes have emerged. They are firstly the use of alternative sources of funding, secondly the value of networks and mentoring and lastly the potential of new strategic tools such as business model generation. These represent effective responses to problems often associated with growing businesses: the need for finance, the need for information, confidence and role models and the need to continue the process of innovation over the long-term. These factors were reported as critical for success and/or may also relate to commonly identified problems here in New Zealand.

As regards alternative sources of capital, crowdfunding was identified as a tool with potential value for agriculture. This form of finance involves large numbers of people who each invest a small amount of money in a business, as opposed to the more traditional methods, which depend on smaller numbers of investors providing large sums. A universal element of crowdfunding is the use of internet technology, to reach many potential investors cheaply and easily. This and other characteristics make crowdfunding particularly suited to the needs of small and medium-sized businesses, which currently make up the bulk of the New Zealand economy. Crowdfunding has its roots in the United States during the 1990s, adopted primarily by the creative and technological sectors. It has now become a significant source of funding, with US\$2.7 billion invested in 2012. This figure is forecast to top US\$5 billion for the first time in 2013. Governments in Italy and the US have passed legislation to facilitate the practice, seeing it as a valuable aid to economic development. New Zealand has now also passed laws designed to encourage crowdfunding, which will be implemented in April 2014.

Until now, the primary sector has had limited involvement with crowdfunding, but this is beginning to change. Agribusinesses in Europe and the US are now taking advantage of the opportunities that it provides. Limited access to sources of ongoing investment remains a problem for business in this country. This is forecast to worsen in the primary sector, with a future finance gap of \$210 billion predicted for agriculture between now and the year 2050. Therefore, despite some (relatively minor) risks associated with it, crowdfunding may prove a helpful tool to remove some of the barriers to entrepreneurial growth in New Zealand.

Another theme that emerged from case studies was the use of networks and mentoring.

Networks have long been known to support business performance and are considered particularly important for their role in enabling the flow of information, that core building block of innovation. However, they often remain under-utilised. New Zealands failure to grow large and high growth businesses from a base of early innovation has been attributed for the most part to culture. Innovation is also a largely psychological process, so measures designed to improve entrepreneurship practices must engage the minds of those involved. As demonstrated by the case studies, one of the most effective ways to do this is through networks.

Some of the characteristics of effective networks were identified as follows -

- A successful network speaks to the identity of the participants. The best examples become participant-led, allowing them to take ownership of the process.
- A successful network is also topical and changes with the feedback of the network members. It must be based on a genuine need. Over time, as issues and demands change, the network will alter. At some point, it may look quite different to what it was in the beginning, with different participants, focus and even function. This is to be expected and is not a failure.
- ▲ Different forms of network may preform different functions, so the goal of the network determines in part the form that it should take. For example, to promote radical innovation, global networking should be encouraged. To foster better links across the value chain, an annual meeting of all interested parties in a sector has been shown to be very effective. If the goal is to increase the performance of grassroots businesses, while they may benefit from a large annual gathering, they derive greatest value from regular local meetings and peer mentoring.
- A Finally, networks are vital to building and maintaining the performance of any sector and should be actively fostered at all levels.

The third theme involves the use of a strategic tool known as business model generation. The core assumption behind this technique is the requirement for continuously re-inventing your business model, in order to preserve and strengthen your competitive position. The reasoning behind this is as follows.

A gradual decline in rates of innovation (and subsequently performance) is perhaps the single biggest risk to mature businesses. It is now almost universally recognised that innovation must be ongoing and companies must be preparing to reinvent themselves, even when times are good and they are under no immediate pressure to do so. In this way, they protect their competitive position and ensure the survival and growth of the business in the long run.

Simple as this sounds, it has proved remarkably difficult to achieve. In an effort to provide tools to help the process, a number of strategic approaches have been explored, of which

business model generation has proved an effective example.

Business model generation is based on a number of other assumptions that have their roots in innovation theory. These include -

- A description of the business model provides this.
- As people process visual information faster than any other kind, business models are best described graphically. No one person is in possession of all the pieces of the business model. Therefore, multi-disciplinary teams are required to achieve the process of describing current and future models.
- A The current business model must be outlined, before any further work can be done, such as assessing weaknesses and strengths, comparing your model to that of competitors or creating new and innovative business models.

The process of business model generation, its relationship to related theories and role in promoting innovation and growth are described. Although it has been successfully adopted by some of the world's most innovative companies, it remains an emerging field in agriculture. As earlier outlined, New Zealand has difficulty in translating high levels of innovation and early entrepreneurship into large and high growth businesses. Once larger businesses appear, continuous innovation is widely recognised as necessary to ensure survival and encourage further growth. Some commentators have also described agriculture in New Zealand (dairy excepted) as showing many of the signs of a mature industry, with slowing productivity and use of longstanding business models. By aiding the production of novel and more competitive ways of doing business, business model generation has resulted in increased growth and sustained performance in companies that implement the process. Therefore, it may be of significant value if applied more widely in New Zealand agriculture.

To conclude, we have an opportunity to grow the primary sector in this country, building on our already high level of early stage entrepreneurship and innovation. The message of this report is that we need to create the right environment for agribusiness to maximise this potential. We already have the most difficult element in place . innovation. Now we need to correct the weaknesses in our innovation system. One way we can do this is by encouraging use of new tools in finance and strategy and by taking advantage of the benefits of networking. This will strengthen our industry, ahead of what could be an extremely exciting and rewarding period for agriculture.

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1. Introduction

Entrepreneurship is an elusive thing. We intuitively know what it looks like, yet professionals have struggled to define it for over a century. Perhaps the most famous description remains that of the economist Joseph Schumpeter, who in 1942 coined the phrase 'creative destruction'. This neatly captures both the disruptive effect of entrepreneurship on existing business models and its net positive effect, through one of its most important attributes - innovation.

It is almost universally agreed that entrepreneurship and innovation are essential in the modern economy, providing a means of both renewal and progress. Their effect is seen in the generation of new and better ways of doing business, while without the renewal that entrepreneurship provides both businesses and the economies they contribute to ultimately stall.

In New Zealand, the consensus of opinion is that we have very high rates of £arly stage' entrepreneurship.² We have in fact been described as the most entrepreneurial country in the developed world, and the third overall, behind Thailand and Venezuela.³ It has also been reported that we have the most innovative agricultural sector on the planet.⁴

This is excellent news, because entrepreneurial activity is closely related to economic performance.⁵ However, somewhere in the process we seem to trip up, as the larger and high growth firms that should be growing out of all that innovation have not turned up in the numbers that the statisticians say they should.⁶ Some have even connected this phenomenon to New Zealands falling relative GDP and living standards over the last sixty years.⁷ Agriculture is not immune to this problem, as it is not performing to its potential in a number of areas.⁸

This uniquely New Zealand problem has been the subject of study by international and local researchers, who have put forward broadly similar theories to explain it. In a nutshell, they point the finger at cultural influences; studies have cited national characteristics (such as not wanting to stand out from the crowd and being content with a modest lifestyle) as reasons for our relative lack of larger and high growth businesses. While these character traits are generally admired in the individual, the effect on the nation is a smaller and

¹ Schumpeter, J. (1942). Capitalism, socialism and democracy.

^{2 &#}x27;Early stage' entrepreneurship here describes activities typical of young businesses less than 4 years old. Frederick & Chittock, 2006.

³ Frederick & Chittock, 2006.

⁴ Jayne, 2007; Rinne & Fairweather, 2011b.

⁵ Frederick & Monsen, 2009

⁶ MED, 2010; MSI, 2011; NZTE, 2009.

⁷ Frederick & Chittock, 2006; NZTE, 2009. In 1951, New Zealand was the third wealthiest country in the developed world on the basis of GDP per capita. In 1955 it had slipped to eighth and by 1991, NZ was 22nd on the list, a position that has not significantly changed since (OECD STI Scoreboard, 2005).

⁸ ANZ, 2012a: Federated Farmers, 2013

⁹ Frederick & Monsen; 2009; MSI, 2011; NZTE, 2009

weaker economy than might otherwise be possible. 10

There has also been a suggestion that lack of finance at a transitional stage may inhibit business growth. This gap occurs after early commercialisation and is significant enough in its effect on growth and survival to be described as the ¥alley of deathq A recent study of the technology sector also found an early stage finance gap, where businesses are about to make that leap from being a small operation to becoming something of a more significant size. Any accountant will tell you that if you starve a growing business of cash, especially at that crucial moment, at the very least you will lose momentum and at worst the company will die. The same paper reported that technology companies found it difficult to source funds for growth, in part because their main assets were intellectual property, which banks were reluctant to consider as security.

So the question remains, is finance potentially an issue for the agricultural sector, which has more traditional forms of security to borrow against, in the form of land? Apparently, the answer is a resounding yes, with some in the banking sector estimating a future funding gap of NZ\$210 billion emerging between now and the year 2050. Without these extra funds, they hypothesise that valuable opportunities for growth will be missed, with resulting negative effects on the country. At the same time, a strong desire among farmers and growers to increase the size of their businesses has been identified, even though access to finance can be a problem.

To summarise, while New Zealand has high rates of entrepreneurial activity, for various reasons this has not translated into the expected numbers of large and high growth businesses, with significant resulting loss of opportunities. The goal of this study was therefore to find companies or industry sectors in other countries that had experienced growth, identify factors that they had found helpful during the process and then relate those experiences back to the situation in New Zealand where possible. Put more simply, I was looking for tools and ideas that had been used to solve similar problems internationally and had potential to be useful in this country.

The aim of this report is to promote debate by introducing ideas for discussion. I do not pretend to have all the answers, or even all of the questions. While a number of groups have tried to solve elements of this problem, it is extremely complex and to date remains a feature of New Zealands economic landscape. However, signs are encouraging. Not only has the problem been identified, but government and industry bodies are now beginning to

¹⁰ Frederick & Monsen, 2009

¹¹ NZTE, 2009.

¹² MSI, 2011.

¹³ At the \$1-5M level, Deakins, van Dijken & North, 2012.

¹⁴ It has also been noted that international exits are currently a barrier to innovation in some industries, as businesses sell too soon and for not nearly enough to foreign buyers (Deakins et al, 2012; MSI, 2011). This results in a loss of innovation potential to New Zealand, as research and development decision-making goes overseas (Deakins et al, 2012; MSI, 2011). Business owners report that they would prefer to stay in New Zealand, for practical as well as sentimental reasons, but find a lack of both finance and connectivity/community make that more difficult (Deakins et al, 2012; MSI, 2011). 15 ANZ, 2012a.

¹⁶ ANZ 2012b, which contains results from a survey of 750 farmers/growers.

work towards solutions. This is a positive trend. This report should be viewed as a small contribution to the effort and a starting point for further discussion.

2. Crowdfunding

As already mentioned in the introduction, the ability to source investment is a barrier to growth for many companies. A major shortfall in funds is forecast for agriculture, which if left unresolved will likely result in lost commercial opportunities and a worsening competitive position for New Zealand. Cash flow is the lifeblood of any business. Growing businesses in particular are known for being cash-hungry, as expansion requires such things as the hiring of new staff, building or extension of facilities and funding of marketing initiatives, usually before any pay-off is seen. Having available sources of funding is obviously vital in determining if a business can move on to the next stage. Likewise, if a business is starved of investment, it can prevent growth or put the business at risk of collapse.

Money can come in many different guises. At the level of a business sector, it might mean the entry of new players into the market. For the individual business, however, there have been limited options; provide the funds yourself, borrow from friends and family, take out a bank loan or look for outside investors in the form of angel funding or venture capital. This last option is particularly difficult in New Zealand, which has a very small number of wealthy individuals who can provide the required funds and a tiny venture capital market, forcing many businesses to look offshore. 18

A theme that emerged during my travels was the use of alternative sources of funding by growing businesses. (Details of case studies follow). For most of them, the conventional methods described above were not an option, but they remained committed to the future of their business and so were forced to look for investment in other ways. You could describe these as variations of the concept known as crowdfunding. This is where a large number of people each invest a small amount of money, as opposed to the more traditional methods of finance, which depend on smaller numbers of investors providing larger sums. A universal element of crowdfunding is the use of internet technology, to reach large numbers of potential investors cheaply and easily. Two broad forms of crowdfunding exist; donation and more commercial arrangements involving debt and equity.¹⁹

For the first type, investors simply give money to a cause or project that they believe in. In addition to enjoying the feeling of contributing to something they care about, they may receive other rewards, in the form of regular updates or newsletters, tickets to events, private tours of the facility, back stage passes, early access to new technology, free gifts and the like.

In other forms of crowdfunding, investors invest directly in the business they choose and receive interest and/or a share in future profits, without a bank or financial advisor acting as a facilitator between them. Alternatively, investors receive a stake in the company or

¹⁷ An example of this is the influx of urban refugees who bought up abandoned farms, thereby bringing in much needed investment that helped kick start the growth of the dairy industry in Vermont, New England. 18 Deakins et al, 2012.

¹⁹ www.ukcfa.org.uk/what-is-crowdfunding provides a useful overview.

project and are exposed to all the usual risks and rewards associated with equity or share ownership, as the value of that stake fluctuates.

Crowdfunding began in the United States during the 1990s and has grown with the increasing use of the internet and social media. The first recorded instance involved a group of musicians, who funded their concert tour by asking fans to support them. Since then, a plethora of online platforms has developed to connect would-be investors with businesses seeking support. The first such online facilitator began in 2001, but in 2012, this number had grown to over 500. While online platforms now perform some of the functions of a traditional bank by connecting investors to businesses, use of the internet means they can do it more directly, faster, cheaper and across international borders with relative ease. It is now possible for individual projects to raise seven figure sums through this medium. After nearly twenty years of development, the concept is proven and is now growing rapidly in influence. A recent report highlighted this, finding that crowdfunders invested US\$2.7 billion in 2012 and forecasting this figure to top US\$5 billion for the first time in 2013. Governments have also paid more attention to the potential of crowdfunding in the wake of the Global Financial Crisis, in part because of the sudden drying up of bank loans necessary to provide cash flow to business.

As with any new industry, regulation initially lagged somewhat behind development, but platforms now provide codes of conduct that all parties agree to before transactions can occur. Legislation is also providing a robust legal framework to work within (further details of legal provisions follow).

Crowdfunding is most prominent in the artistic and technical sectors. As an example, 10% of films entered in Sundance film festival in 2012 were crowdfunded.²² Crowdfunding is still not considered mainstream (although it is quickly heading that way) and has been used very little by agricultural businesses. There are however increasing numbers of examples. In the United States, crowdfunding became more popular in some rural communities following the Global Financial Crisis. Having lost their money in large investment companies in the city, some rural people wanted to invest a little closer to home. like in the factory down the road that needed cash for new machinery. An added bonus was that they could feel good about investing in their own communities, all while able to know exactly where their money was being used (and to go in for a yarn if they felt like it).²³

Case studies

The following are some international examples of crowdfunding in an agricultural context, each quite different and experiencing varying degrees of success.

Case 1 is a non-profit trust and associated development company, who have been developing and commercialising disease-resistant potato varieties for 14 years. They have

²⁰ www.ukcfa.org.uk/what-is-crowdfunding

²¹ Crowdfunding Analysis Report, 2013, retrieved from Massolution.com

²² Dvorkin, 2012.

²³ Becky McCray, author of the online blog &mall Business Survivalq

now largely saturated the British organic market and are frequently oversubscribed for seed potatoes. They have supplied potatoes into Europe and have some perspective clients in the developing world, who they are at the moment unable to service (lacking the volume of production), but who are particularly interested in potato varieties that require fewer sprays and therefore lower input costs. They are in the process of raising £250,000 for major expansion through crowdfunding, having successfully used it as a tool to raise much smaller sums of money in the past (£10,000). Crowdfunding is attractive as the trusts main equity is in the form of intellectual property. As banks are reluctant to lend against such collateral, accessing funding in the form of a bank loan would require the key personnel to mortgage their homes as security. Equity partnerships are being pursued, but a previous experience resulted in the permanent loss of rights to one popular variety, so they are understandably wary of this option. Government grants have also been useful, but while such money comes with little cost, these are typically short-term and tied to particular projects or goals. The trust/company uses an online platform to facilitate their fundraising, as well as their own mailing list of interested parties who have given previously. In their experience, one issue with crowdfunding has been that they use the type where, unless enough people buy in and pledge the complete sum sought, none of the transactions proceed and the funding does not eventuate.²⁴ Nevertheless, for this group, crowdfunding is a natural fit and may well prove crucial in enabling them to scale the business and allow them to pursue their international opportunities.

Case 2 is a social enterprise and mixed farm in the English Midlands. Following the death of their father, a pair of siblings (then aged 19 and 21) were able to mobilise community support and use crowdfunding to raise £800,000 over a period of six months. This was then used to buy their tenant farm. They chose to set up a form of community land ownership and the land is now owned by the nearly 8000 contributors.

The brother is now able to run a growing farming operation, thanks to a secure tenure in the form of a 99 year lease. The sister, 20 staff and hundreds of volunteers in a given year, now run an educational trust from the property, under the guidance of a 14 person board. They run a cafe and farm shop, as well as hosting events for the community on site. The farm has around 400 visitors a week.

In this model, the farm is a £ommunity land initiativeq in particular an £industrial and provident societyq one of many possible forms of community ownership in the United Kingdom. The owners were recruited from the local community and internationally, their motivation being to keep the family on the land they had farmed for generations, to support their sustainable farming practices, provide a community asset and prevent the loss of productive farmland, as a neighbouring manufacturing facility wanted to extend their site. For this family, there were no reported negatives to crowdfunding, other than the initial intensive effort that had gone into recruiting investors, which monopolised the time of a core team of three people over the first six months, as well as involving numerous other volunteers. The ongoing work to maintain relationships with contributors later simply became part of their normal business, while the separate farm operation runs as a normal

²⁴ This tall or nothingqmodel is dominant, but not universal (Mollick, 2013a).

tenant farm, with no reported difference between having one or multiple landlords. If fact, as the trust exists in part to facilitate the farm operation, the farming side of the family feels more secure. Apart from the wide support they achieved, with investors from 18 countries, a key help had been the early facilitation of a group who were at the time researching different ownership models of community-based projects. The group were able to guide a crucial public meeting of future shareholders, by showing them what different ownership models entailed, their positives and negatives. This helped the family and community to the best fit for what they were trying to achieve. Crowdfunding was considered to be their only practical means of meeting their objectives, as the family on their fathers death had almost no collateral (eleven cows, six pigs and six sheep in fact) and their youth and perceived inexperience counted against them when it came to getting a bank loan. Once most of the money had been raised through crowdfunding and they were able to get a small grant, the bank was comfortable with covering the relatively small shortfall and the purchase of the farm could go ahead. Further investors then contributed funds which were used to pay down the loan. Crowdfunding was also later used for subsequent development projects on the property.

Case 3 is a sheep and beef operation in southern Scotland. For a number of years, they used the internet to promote the concept of 'adopt-an-animal', where the general public (mostly school-aged children) could 'adopt' a named animal by paying a small sum and then receive regular updates and photographs. The farmers set up and ran their own website to solicit customers, which proved the eventual undoing of the project. They found that maintaining the website and tracking the animals took significant time and eventually gave up, preferring to concentrate on other parts of the farming enterprise. However, while it ran, the project was successful and growing. It provided them with an extra source of investment of global scope, with 40% of their customer base located outside the United Kingdom.

There are increasing numbers of other international examples of the use of crowdfunding in agriculture, including an online group in the United States called Slow Moneyq named after the global food movement known as Slow Foodq This group advocates a closer connection between the public and both their local food culture and farmers. Slow Money was founded by the head of a network of over 200 angel investors and aims to use crowdfunding to finance small food businesses and farmers. It has been very successful; this rapidly growing network has invested more than US\$30 million in the last three years and reaches nine countries. A similar enterprise is now being set up in Australia.

Crowdfunding in New Zealand

In the past, New Zealand companies could use overseas platforms like the US-based Kickstarter, ²⁵ but only if they engaged an American business partner. There are a limited number of other players in the crowdfunding scene here in New Zealand, including PledgeMe and new kiwi entrant Snowball Effect. This last has been set up to take advantage of recent changes in the law, which are expected to greatly increase the use of

²⁵ Kickstarter is the largest crowdfunding platform and the dominant player in the market, founded in 2009 (Mollick, 2013a).

crowdfunding in this country. Until recently, while you could solicit donations, the law prohibited the more conventional forms of investment involving interest and equity arrangements, unless costly and difficult compliance requirements were adhered to. This proved something of a barrier, especially to small and medium-sized businesses (SMEs). In September 2013 however, new provisions in the Financial Markets Conduct Act were passed into law, allowing anyone to raise up to \$2 million in a calendar year without the previous complex and expensive requirements.²⁶ These have until now included governance arrangements and disclosure obligations, including a prospectus (this last item alone can cost \$200,000 to prepare). The new regulations will be implemented in two phases, beginning on April 1 2014, and are expected to make crowdfunding suddenly much more accessible.

New Zealand is something of an early adopter in the development of this legislation. While crowdfunding has been a presence in the European Union for a number of years, provisions for the equity type (where investors are allowed to purchase a shareholding in the business), have been slower coming. Italy now allows equity funding²⁷ and the United States recently passed a law designed to improve access of business to funding, including all forms of crowdfunding.²⁸ Meanwhile, the Australian government published a discussion document in September 2013,²⁹ on options for facilitating crowdfunding, with the same aim as the USA. to improve access to capital for SME businesses. Nearly twenty years after the concept was developed, governments around the world are now showing a growing enthusiasm for crowdfunding, with President Obama describing the Act that facilitated it as a potential game changer for small businessq when he signed it in April 2012 (Mollick, 2013a).

As in the rest of the world, most crowdfunding in New Zealand has involved artistic projects, such as film and music. For example, crowdfunding financed the release of well-known kiwi movie 'Boy' into the USA. There is not a single agricultural business on the PledgeMe site at the time of writing (December 2013), but there is no reason why agriculture could not be at the forefront of the approaching massive increase in crowdfunding options in this country.

The risks

Crowdfunding is not without its detractors and a number of risks and downsides have been described. Perhaps the most important is the potential for fraud.³⁰ One factor that might suggest a higher risk of fraud is that until lately, there was little regulation specifically

²⁶ For details see http://www.med.govt.nz/business/business-law/current-business-law-work/financial-markets-conduct-act

²⁷ http://www.chapmantripp.com/publications/Pages/Crowd-funding-and-peer-to-peer-lending.aspx

²⁸ This was the ±umpstart our Business Start-ups Actq(JOBS), which contained provisions designed to make crowdfunding easier and more accessible; Traeger, Kassinger & Kaufman, 2013.

²⁹ A copy of the discussion document can be found at http://ict-industry-reports.com/wp-content/uploads/sites/4/2013/09/Crowd-Sourced-Equity-Funding-Discussion-Paper-Australia-CAMAC-Septmber-2013.jpg

³⁰ Traeger et al, 2013.

designed for it. Another is that some forms of crowdfunding employ the technique of pre-sellingor promising rewards at a future date in return for investment, yet the strength of any legal obligations to provide these rewards has often been unclear. This argument appears to have merit, but until very recently little hard evidence was available to either support or contradict the view that crowdfunding could be more prone to fraud than other forms of investment.

Investor representation in the governance arrangements of crowdfunded businesses can be lacking. However, as already mentioned, legal provisions have been put in place by a number of governments, to protect investors as well as encourage crowdfunding. The European Union has allowed the practice for a number of years, yet there have been surprisingly few cases of fraud reported. Finally, in perhaps the first major academic study of crowdfunding to date, involving 48,500 crowdfunded projects with a combined budget of US\$237 million, little if any evidence of fraud was found. Although three quarters of projects were late delivering on targets, the study concluded that ±he vast majority of founders seem to fulfil their obligations to fundersq³² The potential for fraud remains an issue, as for any form of investment, but it seems that (so far at least) fears of widespread fraudulent practices have proved unfounded. The introduction of tailored regulation to the sector over the last two years should help ensure that this remains the case.

It has also been suggested that investors may be inexperienced amateurs, which may put both them and the businesses they fund at a disadvantage, compared to other forms of investment. Inexperience may lead investors to make unwise decisions about which projects to fund, or give them unrealistic expectations. It is argued that the professional services of an intermediary (such as a bank or investment company) provide them with much needed protection. The crowdfunded business, on the other hand, misses out on the advice, contacts and reputational benefit, which other forms of investment can provide. This is particularly clear when comparing crowdfunding to venture capital, where the managerial experience and networks of the financier, as well as the prestige of being funded by a reputable venture capital firm, may be significant advantages.³³

However, it seems that the investors using crowdfunding may not be as naïve as previously suggested by some commentators. A new study³⁴ indicates that crowdfunders actually use very similar criteria to professional venture capitalists, when assessing the quality of projects. This implies that they are using a comparable skill set to other types of investor and are therefore probably capable of making equally sensible investment decisions. It may be that there is not such a clear-cut division between the characteristics of crowdfunders and other types of investor as was previously thought, particularly as more experienced investors dip their toes in the water as crowdfunding becomes more mainstream. The relatively small investments typical of crowdfunding also limit the degree

³¹ http://www.nzherald.co.nz/business/news/article.cfm?c_id=3&objectid=11137612, Crowdfunding risks can outweigh the benefits, October 10, 2013

³² Mollick, 2013a.

³³ Mollick, 2013b.

³⁴ Mollick, 2013b. See also http://knowledge.wharton.upenn.edu/article/as-crowdfunding-grows-the-rewards-increase-but-so-do-the-risks/ for similar suggestion of mature investment decisions by crowdfunders.

of risk to which individual investors are exposed.

The business looking for funding may still prefer other forms of finance, such as venture capital, which without a doubt provides much added value in the form of advice and assistance. Crowdfunders on the other hand, by virtue of their small stake and the use of the internet over face-to-face contact, are generally not expected to have a hands-on role in the company in the way that a venture capitalist does. But they can make non-monetary contributions, employing their social networks to recommend the project to other funders, for example.³⁵ Successful crowdfunding campaigns also attract significant media attention and in some cases the building of complimentary products by others, so enhancing the value and use of a new product before it has even been released.³⁶ Likewise, a failure to attract crowdfunding support can signal to an entrepreneur that the project is not viable, before too many costs are incurred.³⁷

Those critical of crowdfunding have also suggested that the inevitably fragmented shareholders register could deter subsequent professional investors from seeking to acquire a share of the business.³⁸ However, other commentators have noticed that companies that initially fail to attract venture capital, but then go on to conduct a successful crowdfund campaign, find themselves suddenly back on the radar of large institutional funders, who then invest in the business.³⁹

Perhaps the most persistent risk associated with crowdfunding is that historically it has been most employed by start-up companies, a class of business particularly prone to failure. There is however no obvious reason why mature and established businesses could not use crowdfunding more in the future, to finance either general expansion or individual projects. This is perhaps increasingly likely as the concept becomes more widely known and accepted. This could then provide investors with options that are likely to come with fewer risks.

The benefits

Perhaps the biggest advantage of crowdfunding is its ability to provide better access to funds for small and medium-sized businesses (SMEs), by reducing the cost and difficulty associated with raising capital. Not only does crowdfunding allow SMEs to raise funds relatively cheaply and easily, there are forms of crowdfunding that avoid the necessity for taking on debt or ceding control, both commonly perceived downsides of other types of investment.⁴⁰

SMEs, which make up the vast majority of the New Zealand economy, 41 often miss out on

³⁵ Mollick, 2013b.

³⁶ Mollick, 2013a.

³⁷ Mollick, 2013a.

³⁸ http://www.nzherald.co.nz/business/news/article.cfm?c_id=3&objectid=11137612, Crowdfunding risks can outweigh the benefits, October 10, 2013

³⁹ Mollick, 2013a.

⁴⁰ Deakins et al, 2012; Mollick 2013a&b.

⁴¹ Cameron & Massey, 1999.

opportunities as they may not fit well with the requirements of large scale investors. There are many reasons why a business may fail to secure conventional funding. Not all mean that the business is a bad risk or that the project is flawed. For example, banks have difficulty lending against largely intangible assets like intellectual property. Venture capitalists require frequent face-to-face meetings, so often confine their investments to nearby locations. We have the distribution of government grants has been shown to favour larger businesses. We contrast, crowdfunding seems to be a natural fit with SMEs, providing a means to connect small scale investors with small businesses. (Incidentally, the established definition of an SME in this country is a business employing fewer than 100 people, so size is relative 15. The cumulative effect of those small investors is huge. The end result is a greater opportunity for growth for these smaller businesses, which are the seedbed for the larger and high growth businesses that the country needs.

Another common benefit ascribed to crowdfunding is that it is more £lemocraticq As already discussed, it enables a large number of investors to directly connect with companies, without the need of a paid intermediary. In a recent comparative study of venture capital and crowdfunding, it was also found that crowdfunders exhibited less bias based on gender and geographic location. Both of these biases are understandable in the context of venture capital; the need for funded companies to be close to the venture capitalists base has been mentioned previously, while the gender bias can be explained by both the weighting of the American venture capital market towards the male-dominated technology sector and the tendency of the (overwhelmingly male) funders to rely on their own networks. The presence of such biases illustrates why businesses that do not fit the requirements of one form of investment may well be better served through crowdfunding. Given that the venture capital industry is extremely small in this country and that those few businesses that choose this route must commonly source funds from American and European markets, this apparent geographical bias is of particular significance to New Zealands rural and geographically isolated agricultural industry.

Application to New Zealand agriculture

Farming is an innovative, dynamic sector, with significant capacity for growth. Yet in this country, we have a history of innovative businesses not achieving their full potential. This has in part been attributed to limited access to sources of ongoing investment. This is forecast to worsen, with a \$210 billion funding gap emerging.⁵⁰ The opportunities (both current and future) for the agricultural sector are well documented, yet there remains the issue of where to find the capital to fund this growth.

⁴² Deakins et al, 2012. For an example of this problem in an agricultural context, see Case Study 1.

⁴³ Mollick, 2013b.

⁴⁴ MSI, 2011.

⁴⁵ Cameron & Massey, 1999.

⁴⁶ Two million people invest through Kickstarter in the US (Mollick, 2013b)

⁴⁷ Mollick, 2013a&b. For example, the number of funded firms that included a female founder was 15 times higher in crowdfunding compared to venture capital firms.

⁴⁸ Mollick, 2013b.

⁴⁹ Deakins et al, 2012; MSI, 2011.

⁵⁰ ANZ, 2012a.

Some of the likely sources of funds include internal (self) financing, the banking industry, venture capital and various forms of foreign investment. Each has their own positives and negatives and crowdfunding is no different. The banking sector will probably always retain its dominance, being suitable for perhaps the majority of funding projects, having the advantages of familiarity and established infrastructure. Venture capital too comes with its own solid advantages, in the experience and contacts of the funder and the credibility that being backed by a respected venture capital firm can provide in some circles. Crowdfunding is perhaps most useful where these other options are either not available or where the business owners believe that the unique characteristics of crowdfunding are a better fit for their operation. It has been shown that crowdfunding is a cheaper and less complex way to raise funds for SMEs, which make up the vast majority of New Zealands business community. It allows businesses to tap into a global network of investors, without the geographical limitations associated with venture capital markets.

In addition, other advantages may flow to agriculture as a result of engaging with this new pool of investors. One potential side benefit could be a closer connection between New Zealand agribusiness and the urban/non-farming population, whether that urban population be located in this country or in our international markets.⁵⁴ Imagine a world where the non-farming majority can invest in rural businesses easily and directly, via the internet. They begin to take a closer interest in issues that affect agriculture, now that they have a financial stake in the sector. Through their involvement, they learn more about how farms are run and what forces affect them, be they economic, political or meteorological. These new business partners are able through online communications to contribute a valuable outside prospective, providing agribusiness owners with a window into their urban markets and more direct access to market signals. Imagine all these people with a vested interest in farming and how they might act as advocates here and abroad, both with their peers and their political representatives. And when a crisis occurs, whether it be a disease outbreak, food safety scare or a campaign by an anti-farming lobby group, they are better informed and more likely to be supportive of the sector. Farmers are now a tiny minority of the population in the developed world; around 3% in this country, even less in places such as Canada.55 We are increasingly dependent for our livelihood on people with a very limited understanding of food production. Frankly, farming needs all the help it can get in this area. Allowing ordinary small investors a portal into the farming world and a stake in the outcome can only help.⁵⁶ So picture a crowdfunding platform dedicated to New

⁵¹ Although fewer than 1 in 10,000 businesses currently use the venture capital option, due to the limited size of the local market and the perception among some owners that this is an expensive way to raise capital, Deakins et al, 2012).

⁵² Deakins et al., 2012.

⁵³ Cameron & Massey, 1999.

⁵⁴ Special thanks to Hamish Gow (Massey University) for this suggestion.

⁵⁵ Mike Toombs, Ontario Ministry of Agriculture, Food and Rural Affairs and http://www.stats.govt.nz/Census/2013-census/data-tables/total-by-topic.aspx The New Zealand figure represents agriculture generally, including growers and farm workers.

⁵⁶ As an example of what can be achieved, one of case studies found that 68% of their contributors had little or no experience of agriculture before investing in the project (Charlotte Hollis, from Fordhall Farm, Case Study 2). Another example (although of communication networks, rather than crowdfunding) found that previous active efforts to engage the urban population meant that consumption of Canadian beef actually

Zealand (or Australasian) agriculture, perhaps with a shop frontgraising initial awareness at large events like annual Field Days, allowing visitors already interested in agriculture to buy their own small stake in it. Or platforms dedicated to dairy or sheep/beef or arable farming, where members of the value chain can invest in each other, so strengthening connections across the food production system. These and other scenarios are now becoming possible.

Conclusions

While crowdfunding might contribute towards more than one current problem in agriculture, it still requires a cautious approach. Good regulation must continue to manage the risk of fraud, to build and maintain its profile as a reputable form of finance. While many businesses prefer to be self-financed,⁵⁷ those that do look for outside help will then benefit from having more options available to them. Government has already recommended that business make more use of diverse finance options, claiming them to be a £most potent toolq to improve economic performance.⁵⁸ Crowdfunding could also improve international awareness of opportunities to invest here⁵⁹ and provide a relatively easy mechanism by which to achieve it.

While some remain wary of crowdfunding,⁶⁰ I believe it is simply an extension of the changes that we have seen occurring in other areas, as new technology alters patterns of doing business. Crowdfunding is an innovation which may revolutionise how investments are made, in much the same way as the internet has forever altered the retail industry. Crowdfunding is already changing the finance sector. Although its effect may not yet be very visible or widely known in New Zealand, in countries such as the United States and Britain, it is fast becoming mainstream. I would like to see agriculture, our largest and most innovative industry, take advantage of every available opportunity to grow our economy and maintain our competitive position internationally. Crowdfunding is one of the modern tools which may help us do just that.

increased during the BSE scare, as consumers went out of their way to support farmers at a difficult time (Kelly Daynard, Farm & Food Care Ontario).

⁵⁷ Deakins et al, 2012.

⁵⁸ NZTE, 2009.

⁵⁹ For the need to raise international awareness of investment opportunities see MSI, 2011.

⁶⁰ Especially professional investment advisors, for whom crowdfunding represents a disruptive innovation, Mollick 2013a.

3. Networks & mentoring

Networks have long been known to support business performance. They are considered particularly important for their role in enabling the flow of knowledge. As information is a core building block of innovation, the connection between information networks and innovative behaviour has been the subject of much academic study.

This chapter will begin with some background on network theory, then describe some case studies and how they illustrate what makes a successful or unsuccessful network. Lastly, there will be discussion of how networks might be used to encourage entrepreneurship in the agricultural sector.

Network theory

How networks function to support innovation has been the subject of debate. Theory states that networks act by making accessible resources that are not contained within the firm, making networking an important strategy to overcome resource constraints commonly found in small rural businesses. International networks may be especially important, as they have been credited with promoting (particularly radical) innovation, by providing a method for the transfer and assimilation of knowledge learnt at some distance from the firm. 62

The use of rural networks and social capital to overcome barriers associated with reduced economies of scale and lack of information is a common theme in the literature. Rural networks are most often described as strong and local. While strong ties are important, in that they provide personal support to the entrepreneur, it is the so-called 'weak ties', to people or organisations from outside of the immediate circle, that are most likely to bring in new resources and information. This has obvious implications for innovation; strong local networks may circulate existing information around the group, but inhibit the transfer of new information from elsewhere, unless weak ties are also present. While the majority view remains that extensive networks of weak ties do not exist in rural locations, the occasional study has found evidence to the contrary, with international networks recently found in a highly innovative rural area of Norway - and in the New Zealand agricultural sector.

In this last study of a small group of highly innovative agribusiness owners, ⁶⁷ information was the most important reported source of innovation and this was accessed through diverse and extensive (often global) personal networks. These commonly included peers,

⁶¹ Thornton, Ribeiro-Soriano & Urbano, 2011, p.108.

⁶² Fitjar & Rodriguez-Pose, 2011, pp.556-559.

⁶³ Fitjar & Rodriguez-Pose, 2011; Lambert & Fairweather, 2010, p.7; Onyx & Bullen, 2000, p.32; Ring, Peredo & Chrisman, 2010, pp.172-173; Roper, 2001; Shields, 2005; Virkkala, 2007, p.515.

⁶⁴ Hoang & Antoncic, 2003, p.171.

⁶⁵ Hoang & Antoncic, 2003, p.172-173.

⁶⁶ Fitjar & Rodriguez-Pose, 2011; Harper, 2012.

⁶⁷ Harper, 2012.

the broader industry (including suppliers, distributors and other service providers) and institutions. There was also a suggestion that growth aspirations, global networks and levels of innovation might be positively correlated. It is highly unusual for rural businesses to possess such rich global networks and yet another example of how New Zealand entrepreneurs may behave differently to international norms. There has been little study of the networking of primary sector businesses in New Zealand, so it is not known how widespread the practice of global networking is.

Case studies

Some international examples of rural networks used to support growth and development are given below. Each is a unique case, with its own combination of features and approaches. While none is likely to be directly applicable to this country, they do to illustrate principles that can be applied here.

Case 1: In Vermont (New England, USA), networking along the value chain was cited as a critical factor in the successful growth of the dairy industry in that state. As background, in the early 1980s the dairy industry in Vermont was struggling, amongst other things with low prices for liquid milk. The problem had become so bad that there were many vacant farms. Now, the cheese sector is one of the three most important industries in the State and a major economic linchpin. This was achieved in the first instance by the founding of the American Cheese Society (ACS) in 1983 and the running of an annual conference of stakeholders, which included farmer/cheese-makers, distributors, retailers, training institutions, government agencies and indeed anyone with an interest in the industry. This annual meeting and the informal relationships that were built around it were apparently important in taking the sector (and the American artisan cheese industry generally) from a cottage industry to one of much greater size and economic impact. The ACS now also has an educational role and runs annual industry awards. Groups are created around issues threatening the sector, as required, to perform advocacy functions. Other elements of networking were also important contributors to their success, including a culture of collaboration and the presence of a good food network (more co-operatives and farmersq markets per capita than any other state in the USA).⁶⁹

Case 2: I visited some of the United Kingdomos most successful farm shops and while there were other factors present, the role of the industry body FARMA (the national Farmersq Retail & Marketing Association) in organising training and networking opportunities was cited was a key tool in helping some of those businesses grow to the next level. FARMA is a co-operative of farmers, growers and farmersqmarket organisers and is the largest such organisation in the world. It provides advice, mentoring by other

68 Those who made the most radical changes, were breaking new ground, growing the fastest or with the most ambitious plans for the future all had not just local or national but global networks. Those without international networks included the businesses that reported fewer innovations or less radical behaviour. Growth aspirations may therefore be positively associated with innovation; the more ambitious the goals of a business, the more willing they may be to innovate radically (Harper, 2012).

⁶⁹ Particular thanks go to Peter Dixon, pioneer of the Vermont dairy industry, for much of this information.

group members, marketing and advocacy functions, some financial and other services, but crucially also networking on both national and international scales. Regular gatherings based around a speaker or presentation of interest (such as a retail marketing consultant) provide an opportunity to both be exposed to ideas from outside of their immediate circle and for farmers to compare notes with each other. Often these speakers are of international calibre. Training in retail marketing and an emphasis on being customer-driven are key. Obviously, not every farmer joins, but meetings are well attended, with significant buy-in from participants. FARMA also provides training sessions on subjects of interest, but the speakers in particular were mentioned as both spurs to enthusiasm and a source of continuing innovation and growth. The knowledge was disseminated in one case by a farmer, who attended the seminars and then spread that information to his staff, by way of mottos and easy sayings that encapsulated what he had learnt. The ability to distil and pass on information in this way was probably unique to that business owner (he was also a poet) but proved to be extremely effective in his operation.

Case 3 was WiRE, or Women in Rural Enterprise, run from Harper Adams University in Shropshire. The background was that in the 1990s, the European Union had made funding available to farmers who wanted to diversify their businesses. In the vast majority of cases, it was observed that women from farming families took up this money. Apparently, this was because the men saw their role as primarily that of traditional farming and had little desire to change that. He women did the books and were therefore more aware of the need for increased cash flow. Izzy Warren-Smith, a staff member at Harper Adams, realised that these women wanted an opportunity to talk to someone about the new enterprises they were now involved with. There was some money available at the end of a grant so a mini-conference was set up, a high profile speaker booked and 30-40 people expected to attend. Over 400 arrived and their level of desperation was palpable. So WiRE was born; it has since won many accolades and been extended around the United Kingdom, in the process generating economic growth (through an £ngoing exchange of ideas and advice) and a sense of community (through peer mentoring).

Prior to the full launch of WiRE, the strategy and viability of the project was tested by monitoring trial groups, using a variety of methods including follow-up calls, questionnaires and focus groups. The participants were very specific in their requests and knew what they wanted out of a network. This became a core plank of WiREs strategy, with a key policy being ±lemand driven supportqor ±never providing anything in terms of support that had not been specifically asked for by attendeesq This in turn ensured attendance of members at network events. ⁷²

A feature of the WiRE network was its efforts to deliver services to the participants in a

⁷⁰ Thanks to both Izzy Warren-Smith (Harper Adams University) and Anne Smith (Glasgow Caledonian University) for these observations.

⁷¹ Warren-Smith, 2014.

⁷² Warren-Smith, 2014.

very tailored way. Due to the very traditional culture of many farming families in the region, they invited the women via letters to the men of the household, making use of the wellknown name of Harper Adams in farming society and thereby ensuring the support of the male partner. Because the participants had major problems with transport, childcare and geographical isolation, all these were considered when organising network and training events, with the result that locations were chosen to be those most accessible (up to three locations per county), held by topic one week per month, in such a way that if someone missed one session, they could catch up by attending at a different location on a different day. Meetings were timed for the middle of the day. Lunch was included, as much of the value in these events was seen to be the informal interactions over the meal. The participants often had an aversion to anything smacking of bureaucracy, as a result of the heavy burden of compliance in the farming business, which the women usually bore the brunt of. To get around this, participants were kept at a distance from the networks requirements for outputs and paperwork (which were driven by initial funding conditions). This also affected the choice of speakers and the form of mentoring that evolved within the groups. Speakers at the annual large networking conference were chosen from within the network, to provide aspirational role models. The participants were so sensitive to bureaucratsq telling them what to do, that self-mentoring within the group became a prominent feature of WiRE.

The organisers learnt that the networks had to be needs-based and local, to meet the particular needs of their target audience. Over time, networks inevitably changed as needs changed. Existing members drifted away and were replaced with new ones with perhaps different needs, who then drove the organisation in a different direction. This they came to expect as normal. WiRE also found that the mentoring process was most effective when mentors were no more than six or twelve months ahead of those they were trying to encourage; ‡ust ahead of you' became the motto and those who were encouraged were soon in a position to help new entrants coming along behind them.

This understanding of the participants, coupled with sales skills, proved important to the success of the network. \pm ust as any business that attempts to sell a non-customer-focussed product or service will fail, so it is with products that attempt to generate economic growth that are not established with an understanding of the market. \vec{q}^3

The following is an example of how WiRE worked in practice. Training in marketing was identified as a need. As a result, WiRE began providing help with the logistics of taking products to trade fairs and shows. This help originally included the booking of subsidised floor space at fairs, tied to participation in preliminary training in visual merchandising. Each participant was then taken through the details, from planning for electrical supply at the show to evaluating their success after the event. By providing such intensive mentoring, the participants grew in confidence and skills and were then able to mentor

⁷³ Warren-Smith, 2014.

others. This system proved so effective that it was adapted for use by businesses making the transition from local to export markets; it was adopted by trade missions, in partnership with United Kingdom Trade and Investment.⁷⁴

WiRE is an example of a spectacularly successful network, which has more than repaid the initial investment and has long been self-supporting through membership fees. Yet over time, WiRE has evolved and increasing numbers of in-migrants to rural areas are now members, with the result that the focus has turned more urban and indeed some of the indigenous rural members have now moved on. This is a reflection of changing needs and the changing character of the group it serves. Another point stressed by organisers was that networks will only succeed if there is demand i.e. some hardship or problem that it exists to solve. To remain effective, therefore, the networks goals and processes must follow demand.

Case 4: many of these international networks were set up by local government organisations and development agencies, with access to funding that we in New Zealand can probably only dream of. Because public money was involved, detailed impact analyses were expected and one organisation (Rose Regeneration) had recently done these assessments on a dozen British and European farmer networks. They found that numerous benefits were generated, including a raised profile for agriculture, capacity and confidence building, and the spread of good technical practice. Like WiRE, they found that the most effective networks were farmer-led, adaptable, locally focussed and provided a tailored service (dealing with any challenge raised by participants). They calculated the return on investment in three of these farmer networks, which was in excess of 300 and 400 percent.⁷⁵

Case 5 was the activity around a local food magazine, originally called £aste of Lincolnq This example shows that networks can appear in a variety of forms. It began as a tourism initiative after the foot and mouth crisis, in an effort to show that the country was open for business. A group of local farmers and food producers got together with the regional council to produce a magazine for advertising purposes. It grew in popularity and a number of important, and in many cases unexpected, benefits accrued to the participants. A core function of all networks is to develop a sense of community; Taste of Lincoln did this primarily by publishing profile articles on local businesses. At the same time, these success stories provided leadership, thereby increasing the performance of all the network participants. This positive atmosphere encouraged other businesses to start up, while the growth in membership quickly repaid the initial investment. The credibility and profile created by this group of businesses increased rates of investment into the region's food and farming sectors, attracting money from other parts of the country and internationally. The success of the network was put down to two things; firstly being at the start of a trend

⁷⁴ Warren-Smith, 2014. 75 Rose Regeneration, 2013.

and secondly the fact that it spoke to their identity.⁷⁶ This encouraged buy-in and ownership in a way that perhaps nothing else could have done as effectively.

It is often the case that you learn more from failures than from success, so as a footnote to these case studies, here is a final example; a contact in Canada gave a useful insight into what not to do in the context of networking. This was based on his experience of a failed farmer network in another country. Their mistakes included ineffective communication, including too few members or the wrong members, (so not representing the industry adequately and/or asking people not directly involved with it for buy-in) and lastly having overly ambitious goals. All of these points were also cited by other case studies as dangers to be avoided.

Conclusions

New Zealands failure to grow large and high growth businesses from a base of early innovation has been attributed in large part to culture. This has many elements, but probably the most relevant is lack of aspiration. Innovation, creativity and initiative are psychological processes q^{78} this means that measures designed to improve entrepreneurship practices must also engage the minds of those involved. This idea was captured by a contact who described his role of fostering leadership and improving economic performance in rural areas as simply Inelping people to think differently. q^{9} As demonstrated by the case studies, one of the most effective ways to do this is through networks.

So what makes an effective network? Some of the key points are listed below.

- Networks perform an essential function. They foster cohesion, confidence and community, while allowing for the flow of information, that core building block of innovation. These are vital to building and maintaining the performance of any sector and should be actively fostered at all levels, from grassroots to industry chiefs.
- A successful network speaks to the identity of the participants. Organisers should talk to participants in their own language and in a context that they understand. Fundamentally, the network is offering a service and participants may be regarded as customers, so market awareness and sales skills are vital for success. The best networks become participant-led, allowing them to take ownership of the process.

⁷⁶ Both themes were also found in other case studies.

⁷⁷ Al Mussell, George Morris Centre.

⁷⁸ NZTE, 2009.

⁷⁹ Julian Pace, Scottish Enterprise.

⁸⁰ Networks may also solve other problems identified in New Zealand, such as a lack of connectivity and the need to build confidence and skills (ANZ, 2012a; MSI, 2011).

- A successful network is topical and changes with the feedback of the network members; buy-in can only occur if a network continues to offer something of value to the participants. A network will only be successful when it is based on a genuine need. Over time, as issues and demands change, the network will alter. People will enter and leave it as they develop. At some point, the network may look quite different to what it was in the beginning, with different participants, focus and even function. This is to be expected and is not a failure.
- Different forms of network may perform different functions, so the goal of the
 network determines in part the form that it originally takes. For example, to promote
 radical innovation, global networking should be encouraged. To foster better links
 across the value chain, an annual meeting of all interested parties in a sector has
 been shown to be effective. If the goal is to increase the performance of grassroots
 businesses, while they may benefit from a large annual gathering, they derive
 greatest value from regular (perhaps monthly) local meetings and peer mentoring.

Finally, the fact that networks are a valuable tool is not new information. Common sense alone dictates that any human system is more efficient and effective when all the elements communicate well. Unfortunately, in reality this is often not the case. In spite of the obvious advantages, it seems we all need reminding of the simple benefits of talking to each other. When this is done well, as the case studies illustrate, the results can be revolutionary. In advocating stronger networking across agriculture, I am not necessarily suggesting that a whole new system be created. It could be as simple as encouraging industry leaders to identify existing networks that are already performing well and support them to extend their activities. The key message is to be strategic; imagine a well-networked agricultural sector and work towards that goal.

4. Business model innovation

Once a business has survived start-up and become a significant size, innovation levels frequently drop off and performance can follow. This then leaves a company vulnerable to competitive pressures. Yet although this is well-documented as perhaps the single biggest risk to mature businesses, the ability to reinvent their company remains extremely difficult for many. It is much easier to continue in familiar patterns than to change, especially when a company is performing well. This is an entirely normal human reaction. After all, the business has achieved success through behaving in a certain way. If it ain't broken, don't fix it, right?

Once this would have been a perfectly legitimate response, but with the expansion of global trade and communication links, it is now possible to buy goods from around the world in a way that would have been impossible as little as half a century ago. The result is hyper-competition and a much more rapid speed of change. Now new competitors can appear virtually overnight and by the time the warning signs are there, it may be too late for the incumbent business to do anything about it. Also, in a related problem inherent to large businesses, increasing organisational size and complexity make it harder to remain agile in the face of changing external circumstances. This compounds the problem of how to maintain innovation in large and mature companies. Despite this, it is now almost universally recognised that innovation must be continuous and companies must be preparing to reinvent themselves, even when times are good and they are under no immediate pressure to do so.81 In this way, they protect their competitive position and ensure the survival and growth of the business in the long run. Simple as this sounds, it has proved remarkably difficult to achieve. In an effort to provide tools to help the process, a number of strategic approaches have been explored. This chapter will briefly describe one of these, a technique known as ±usiness model generationq⁸²

The business model is defined as ±now an organization creates, delivers and captures value 83 or in other words, how a business does business. The process of business model generation involves the creation of new and innovative methods of delivering products and services. The concept began life as a doctoral thesis by Alex Osterwalder in 2004, under the auspices of Yves Pigneur, a professor of management at Lausanne University, Switzerland. Since then, use of these tools has snowballed and they are now employed around the world, across a variety of industries. They have proved a particularly useful aid to the process of continuous innovation in large established companies, being successfully adopted by such giants of commerce as Google, Deloitte and 3M.

⁸¹ As an example, I met an agribusiness that faced a crisis after one of their distributors launched a competing product, which immediately took nearly 40% of their business. They only survived because they had earlier developed another business model around a completely different product. As it happened, not only did the business survive, but the day before I interviewed the owner, they had just bought new premises and were planning expansion.

⁸² For greater detail, see Osterwalder & Pigneur, (2010) and the website BusinessModelGeneration.com.

⁸³ Osterwalder & Pigneur, 2010.

Underlying assumptions and process

Business model generation is based on a number of assumptions that have their roots in innovation theory. It also incorporates and applies ideas sourced from other successful strategic approaches. These include blue ocean strategy (which advocates innovating to create uncontested market space), lean manufacturing (pioneered by Japanese car manufacturer Toyota to improve efficiency and reduce costly wastage, but now applied to start-up companies and entrepreneurship generally) and the design integration school (which brings design skills to bear in the conception and development of new products and services).⁸⁴

Business model innovation is based on the following key assumptions -

- The requirement for continuously re-inventing your business model, in order to preserve and strengthen your competitive position.⁸⁵ ±nnovative business models are sought not simply because they prolong the life of a business by preventing irrelevancy, but because they can open up opportunities for growth that traditional or existing models may not offer.⁸⁶
- The need to look holistically at the entire system of doing business and its context. A description of the business model provides this.
- People process visual information faster than any other kind, so business models are best described graphically.
- No one person (with the possible exception of the owner/manager of a small business) is in procession of all the pieces of the business model. Therefore multidisciplinary teams are required to achieve the process of describing current and future business models.⁸⁷ Dnly by mapping out each specialists knowledge can you develop a shared understanding of your environmentq⁸⁸
- The current business model must be outlined, before any further work can be done, such as assessing weaknesses and strengths, comparing your model to that of competitors or creating new and innovative business models.

The tool that visually illustrates the business model is called the business model canvas

⁸⁴ Fraser, 2012; Kim & Mauborgne, 2005; Markides, 2008; Martin, 2009; Ries, 2011.

⁸⁵ A pre-requisite for successful innovation is for management to continuously question their current business model, redefining what business they are in and who their customer isq(Markides, 2008). See also Martin, 2009.

⁸⁶ Osterwalder & Pigneur, 2010.

⁸⁷ This is supported by work showing that solving of complex problems is best achieved by multidisciplinary groups (Ries, 2011). Such teams are also recommended as best practice when performing innovative tasks for a large organisation, such as product development or forming strategic direction (Fraser, 2012).

⁸⁸ Osterwalder & Pigneur, 2010.

(see appendix for detail). This breaks down the business model into nine different elements, which together describe the £ustomers, offering, infrastructure and financial viabilityqof a business. ⁸⁹ These are listed below, with examples;

- 1) customer segments (mass or niche market, multi-sided platform),
- 2) value proposition (brand, performance, price),
- 3) channels (wholesale, web-based),
- 4) customer relationships (self-service, automated, personal assistance),
- 5) revenue streams (rent, sale, licensing),
- 6) cost structure (fixed or variable, economies of scale)
- 7) key resources (physical, human, intellectual property)
- 8) key activities (production, problem-solving)
- 9) key partners (distributors, suppliers)

The business model canvas is a template, to be employed as follows. A group will place the blank canvas on the wall or table and then stick large post-it notes on it to map out the business model. No more than one idea per post-it note is used (so that they can easily be moved around during discussions) and they may be colour coded to highlight different elements. Teams should ideally consist of 4-8 people (or multiples of this) and strategy sessions should last no more than 2-4 hours.

The canvas becomes a starting point from which to create new or prototype business models, redesign the current model or come to a better understanding of the business models of your competitors, amongst other strategic uses. Often people experience light bulb moments, just by seeing the whole business model on the wall for the first time (most people only see parts of the business, rarely the whole thing). They see gaps, literally, and experience insights into the way they do business. Mapping the business models of competitors can be insightful as well; you may find that the newcomer who has been eating into your market share is actually running a different (and more competitive) business model from you altogether. In teams, the canvas becomes a kind of shared language to facilitate strategy development, while individuals may use it as a tool to better structure their thinking. 91 The canvas is also a convenient way to communicate the business model (or changes to it) to others; the authors recommend putting up a blank business model canvas and then narrating the story of the business, while placing one post-it note at a time, to complete the picture in on average about 2 minutes. This can be a quick method of communicating ideas and strategies to other members of the organisation.

⁸⁹ Henriksen, Bjerre, Alamasi & Darngaard-Grann, 2012.

⁹⁰ For a more complete description of the process, see Osterwalder & Pigneur, 2010.

⁹¹ Alex Osterwalder

The same visual techniques can be used to map out the macro-environment that the business functions within, including trends, market forces, the needs of customers, competitors and so on. You can then ask how these external factors will influence your business model, develop scenarios based on key trends and a business model for each. Different business models can be spun off into different companies or retained within the parent company as individual business units. Alternatively, a business may choose to slowly evolve from one model to another. Any one company may run a portfolio of business models, although small and medium businesses may be most effective when running a single model.

Another canvas, developed by the same group, describes the value proposition or product-market fit, which they use to help design and refine market offerings/products (see appendix for details). The process starts with direct and careful observation of customers, to determine their needs. Direct observation is preferred over other methods, as often customers may not know what they need or may unconsciously respond in the way that they think you want, rather than reflecting reality. The value proposition is then described in terms of £ustomer jobsq their painsqand £gainsq⁹² Then these are related back to the products or services, as they become £gain creatorsqor pain relieversq Questions to ask when developing such models are £What are our customer jobs?qand £What are their biggest pains and the expected gains that the value proposition offers them?q³³

Business models and market offerings developed by these techniques may still fail, for a variety of reasons. They may solve a problem that is trivial or irrelevant to the customer, be overtaken by external threats or be poorly executed, amongst other flaws.⁹⁴ The authors of this approach point out that the newly created business model remains only a set of hypotheses, until it is put into practice. To avoid costly mistakes, they recommend that each hypothesis that supports the business model be identified and tested with customers, with results that are measurable. Their favourite method to achieve this has much in common with the theories known ±ean start-upqand ±lesign integration' entrepreneurship, among others.⁹⁵ Here prototypes are developed and tested on customers in such a way that minimal costs are incurred. Rapid prototype development, testing, refinement and retesting cycles allow for quick and cheap product development and more importantly prevent large amounts being invested in products that turn out to be unvalued by customers and therefore unsuccessful.

92 For use and development of these concepts, see also Blank, 2007 and Fraser, 2012.

⁹³ Osterwalder & Pigneur, 2010; see also BusinessModelGeneration.com. Another effective way of comparing your market offering with competing ones is to map the attributes of each product and how they perform against each. Again, if one or more business models are being used by competitors, it quickly becomes obvious. Perhaps of even greater value, is the chance to radically change your offering by changing your weighting on one or more of the attributes, to give customers a truly different and hopefully better option. For details of this approach, see Kim & Mauborgne, 2005.

⁹⁴ Osterwalder & Pigneur, 2010.

⁹⁵ Blank, 2007; Ries, 2011.

It may also be worth elaborating slightly on the use of small multi-disciplinary teams to conduct the processes described. It has already been mentioned that they are considered best practice when encouraging innovation in large businesses. It is necessary for teams to be diverse (including customers and representatives from across the supply chain), so that together they have knowledge of all sides of a problem and are able to quickly find solutions. However, they should share goals and values. Some other tips for maximising their effectiveness include the provision of secure but scarce resourcesq along with independent authority and executive endorsement. They should have strong or rotating leadership, some stake in the outcome for the team members (which does not have to be financial), a way of measuring results and a set goal to provide accountability. Management should be aware that individual team members may feel uncomfortable at the start, as the efficiency of individual specialists is compromised in the interest of achieving the joint purpose. A principle proponent of this approach suggests forming teams suited to individual projects and disbanding them when the goal is reached.

Overall, business model generation appeals for several reasons. Firstly, it integrates elements of a number of other respected theories. It is based on principles known to promote innovation; the visual approach, enabling a complete view of the business environment and facilitating the use of multi-disciplinary teams. Lastly, it has been found useful by some of the most innovative firms in the world.

If there are any negatives, they are that business model generation and its supporting concepts often depend heavily on the language of start-ups. Another issue is that while aiding innovation, it is probably not as useful during the equally important implementation phase. ¹⁰¹ While relatively simple, it still requires some experienced guidance to use effectively, at least in the first instance. These criticisms however are minor, when compared with its overall value.

Application to agriculture

Business model generation has been used across many industries, including information technology, retail and manufacturing. While it remains an emerging field in agriculture, with relatively few practitioners as yet, this is set to change. For example, in October 2013 during Dutch Design Week (an annual exhibition of more than 2000 designers), a group met called Agri meets Designq This was made up of farmers, policy makers and designers with the goal to exchange ideas and come up with innovative solutions to farming problems. Although this involved the closely related design approach to business, rather than business model generation in particular, it was one of the first attempts in the world to

⁹⁶ Fraser, 2012.

⁹⁷ Ries, 2011.

⁹⁸ Fraser, 2012; Ries, 2011.

⁹⁹ Ries, 2011.

¹⁰⁰ Martin, 2009.

¹⁰¹ Bart Doorneweert, writing on valuechaingeneration.wordpress.com

¹⁰² Comment by Bart Doorneweert, Dutch agribusiness expert and facilitator of business model techniques.

expose the agriculture sector to these types of ideas.¹⁰³ Another event, this time specifically teaching business model generation to agribusiness leaders, was organised at the Ryan Academy in Ireland last May. In New Zealand, reference to the business model canvas was also made recently in a planning document for the meat sector.¹⁰⁴ Awareness of these tools is apparently growing in agriculture.

Conclusions

This report earlier outlined the difficulty that New Zealand faces in translating high levels of innovation and early entrepreneurship into large and high growth businesses. Once larger businesses appear, continuous innovation is widely recognised as necessary to maintain competitive position and encourage further growth. Some commentators have also described agriculture in New Zealand (dairy excepted) as showing many of the signs of a mature industry, with slowing productivity and use of longstanding business models. Business model generation meanwhile has been given credibility by its increasing use among some of the worlds most innovative companies. By aiding the production of novel and more competitive ways of doing business, it has resulted in increased growth and sustained performance in companies that implement the process. Therefore, business model generation may be of significant value if applied more widely in New Zealand agriculture.

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¹⁰³ Meanwhile, design-based techniques have been promoted by Trade and Enterprise New Zealand, through their mentoring programme Better by Designq which aims to integrate design skills into business processes to improve innovation, competitiveness and efficiency. This approach has been highly successful (MSI, 2011) but is not focussed on agriculture.

¹⁰⁴ Federated Farmers, 2013.

¹⁰⁵ ANZ, 2012a.

¹⁰⁶ Perhaps the most famous example of business model innovation to date is Nespresso, which revolutionised how coffee was sold, with the result that it became Nestlés fastest growing brand, averaging 30% growth per annum since 2000. Nestle.com/csv/case-studies/AllCaseStudies/Pages/Ecolaboration-Nespresso-platform-sustainable-innovation.aspx

5. Summary

New Zealand has high rates of entrepreneurial activity by international standards. However, for various reasons this has not translated into the expected numbers of large and high growth businesses, with the result that significant opportunities for growth have been lost. The goal of this study was therefore to find companies or industry sectors in other countries that had experienced growth, identify factors that they had found helpful during the process and then relate those experiences back to the situation in New Zealand where possible.

Three themes have emerged. They are the use of alternative sources of funding, the value of networks and mentoring and lastly the potential of new strategic tools such as business model generation. These represent effective responses to problems often associated with growing businesses; namely the need for finance, the need for information, confidence and role models and the need to continue the process of innovation over the long-term. These factors were reported as critical for success and/or may also relate to commonly identified problems here in New Zealand.¹⁰⁷

While the focus has been on these three key themes, each case study was unique and depended on a number of influencing factors. Taking the dairy industry in Vermont as an example, the effect of networking along the value chain was highlighted, as it was described as a vital impetus to the growth of the sector. Another element was the injection of capital by urban refugees who bought up vacant farms, which was particularly important given that banks were not lending to local farmers for development. However, there were other influences; an increasing interest in local and traditional foods among their future urban customers, a collaborative culture, supportive government policy and willingness of local institutions to provide training programmes to support that growth. This combination of factors provided the prefect storm and farmers in Vermont were able to take full advantage of it. In the process, they revitalised their industry and changed their economic landscape for decades to come.

We now have a similar opportunity in this country. Thanks to increasing global demand, it has been estimated that New Zealand could more than double the value of agricultural exports between now and 2050, capturing an extra NZ\$0.5-1.3 trillion. This will only happen if agriculture is adequately funded and supported. The message of this report is that we need to create the right environment for agribusiness to maximise its potential. We

¹⁰⁷ There was only one other major theme mentioned by participants that is not covered in this report. This was that in each of the most successful examples of growth, the enterprise was started at the beginning of a trend. This was true whether you were talking about businesses which took advantage of changing customer preferences or those who were early adopters of technology. The advantages of being on trend are fairly obvious; the business is able to grow as demand grows. Also, customers will tolerate lower quality at the start of a trend, because demand outstrips supply. If the experiences of these businesses are anything to go by, an important precondition for major growth is that the business or sector be £n trendqand grow with that trend.

already have the most difficult element in place . innovation. Now we need to correct some of the weaknesses in our innovation system. One way we can do this is by encouraging use of new tools in finance and strategy and by taking advantage of the benefits of networking. This will strengthen our industry, ahead of what could be an extremely exciting and rewarding period for agriculture.

6. References

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8. Appendix



