

## **Diversity and convergence in regional know-how: the case of Central Otago Pinot Noir**

Sue Caple, David Ballantyne and Maree Thyne

Contact: [david.ballantyne@otago.ac.nz](mailto:david.ballantyne@otago.ac.nz)

### **Abstract**

The focus of this paper is on how collaboration among competing regional firms contributes to the development of regional *know-how*. The context of research is the Central Otago Wine Region in the South Island of New Zealand. Specifically, we investigate how actors in this region pass on their knowledge. In so doing, they contribute to a cohesive regional reputation for their wines, and at the same time maintain a requisite differentiation for each wine producer's product. The research fieldwork involved interviews with 25 key winery staff in the region. A business to business analytical framework known as the ARA model (Håkansson and Snehota, 1995) was used to analyse interview data in terms of actor bonds (those involved), activities (in which they participate), and resources used (including know-how). We found that the people at each winery exchanged knowledge with others, conducted various trials in their own place and made needed adaptations. A network of collaborative relationships within the region facilitates the circulation of such knowledge. This knowledge (explicit, oral and text based) only becomes *know-how* (tacit, skills and competencies) when it is put to use in a variety of practical ways which are contextual to particular wineries and vineyards. Therefore the need to protect knowledge from competition seldom exists as knowledge becomes modified in use, maintaining the diversity (differentiation) of each winery's skills, methods and outputs. In other words, the idea of helping a competitor by providing unique knowledge does not require deep levels of trust. Yet trust is a foundational requirement for maintaining knowledge exchanges within a regional cluster, according to the marketing literature. We conclude that the convergence of existing knowledge and new learning necessary for developing a consistent regional wine reputation does not interfere with the need for differentiation (diversity of know-how) of each wine producer's product.

## Introduction

Knowledge, including specialised skills, is an important resource in any business, and according to some, it is the fundamental source of competitive advantage (Vargo and Lusch 2008). This paper sets out to show how knowledge in the form of business competencies, or *know-how*, is achieved through collaborating with competing businesses. The *prisoner's dilemma* is often thought to constrain such reciprocal knowledge transfers. While the existence of this paradox is known, there has been little investigation of how it might be resolved (Zhang et al 2008). We see this as an under-examined factor in business today, particularly relevant to wine marketing in gaining a pre-eminent global status for wines from small regions. The context of research is the Central Otago Pinot Noir Wine Region in the South Island of New Zealand. The region has been recognised as one of the top pinot noir wine producing regions in the world (Decanter 2009). The reputation of the *region* is arguably the primary quality indicator notwithstanding the excellence of many individual vineyards and winery skills. We present a case study showing how winery-based actors in the Central Otago pinot noir region collaborate to circulate their knowledge, contributing to the reputation of the wine region as a whole and an enhanced reputation for individual wines. First, the distinction in the literature between know-how (tacit knowledge) and explicit knowledge is discussed and its relevance to business development. Next, the collaborative potential of business networks/regional clusters is introduced. The case study methodology then follows. Finally, our findings and conclusions are examined.

## How knowledge works

The idea that knowledge underlies the economic development of physical assets has a long history, associated with the dynamics of competitive innovation (Schumpeter 1934). An important contribution to the understanding of the workings of knowledge was the theoretical distinction made between a person's know-how (sometimes called *tacit* knowledge) and *explicit* knowledge (see for example Nonaka and Takeuchi 1995, based in part on work by Polanyi 1967). Explicit knowledge is easily expressed in speech or text, and hence transferable, for example, knowledge stored in CRM databases. However, tacit knowledge is difficult to explain or codify, and so harder to pass on to others. We have to be shown *how* to do such things, or experiment in a cycle of trial and error, with correction and adjustment. Tacit knowledge then is individual competency or *know-how*. Rather than gaining a transfer of knowledge by 'how-to' books or accessing data bases, tacit knowledge is transferred in more collaborative ways, by instruction, observation and doing, and through communities of practice. Also to note is that through obsolescence and competitive innovations elsewhere, knowledge can "wear out". Of relevance to any 'new world' wine region, competing in a world market, is the need to gain and leverage 'old world' knowledge and combine it with a deep understanding of the local *terroir*. We will return to this tacit/explicit distinction and its relevance to Central Otago *terroir* later.

## Collaborative and competing knowledge networks

A wine region has the general characteristics of a business cluster - a geographically bounded network of actor firms who both compete and cooperate (Porter 1990). The variety of desirable but unevenly distributed resources (including know-how) that exist across a closely proximate network of competitors helps explain why individual business actors might develop collaborative relationships with each other. According to Bengtsson & Kock (2000, p.421), it is this *heterogeneity* of resources that fosters collaborative relationships among competitors, because the actor firms seek to gain access to what they don't have, and may succeed if there is perceived mutual benefit. Another important network conceptualization involving knowledge transfer is *social capital*, which refers to the relationship ties operating in a social context that facilitate the willingness of individuals to share their knowledge at a social exchange level (Tsai & Ghoshal 1998). Strong (close) social ties and the interdependencies that they create also facilitate knowledge transfers and learning in a network setting (Granovetter 1973). Also of note, Håkansson & Johanson (1992) and Håkansson & Snehota [1995] in a seminal work, known as the *ARA model*, describe business networks from three inter-connected perspectives. That is, interaction about *resources* that are tied to each other, exchanged through *activities* that are linked one to another, and supported by various actors who are connected through *relationship* bonds that affect their propensity to act in a certain way. Later, we will examine the underlying processes at work in these three dimensions (following Håkansson et al 2009, p.224).

## The case of Central Otago pinot noir

The Central Otago Wine Region in the South Island has its own special history. At 45° south this is the world's southernmost winemaking region and also at New Zealand's highest altitude. There are over 100 wineries, with differences in the soils, topography and even climate within the vineyards themselves. This wine region began producing pinot noir and riesling in the 1980s, with characteristic hot, dry summers and snowy winters. Most vineyards are owner-operated. Many of the established wineries have full-time or part-time vintners but some use local wine production companies. Wine producers tend to know each other as many of them have grown up together. From the beginning, the early producers recognized that they did not have individual market clout and could more successfully develop regional awareness by working together on some activities, even though they were competitors.

The purpose of this research was to investigate how winery-based actors in the Central Otago region collaborate to gain and pass on their knowledge. A case study research approach was adopted, which involved the collection and analysis of in-depth information in the Central Otago wine region. As the main aim of this research was to understand how competing wineries collaborate, the logical approach was to study the region as a whole. A *focal net* framework was adopted (Halinen and Törnroos 2005) to assist in choosing reliable key informants within the region, chosen because they were able to respond authoritatively to the central questions of the study. In the end, 12 wineries with 25 respondents representing the elite and knowledgeable wine people were chosen as our focal net. The research began with a preliminary analysis of marketing collateral from the selected wineries to determine how they communicate to their intended market. In-depth interviews were held with winery staff, comprising 25 vintners, viticulturalists, and owners/managers. Later, the ARA model with technical support from NVivo provided a structure for the analysis of network dynamics, specifically the interactions that account for the development of actor bonds (relationships), the activities in which they participate, and the exchange of resources (including know-how).

## Findings

We found that wineries exchange knowledge with their counterparts, trial it at their own site, and make needed adaptations as they see fit. Networks of collaborative relationships within the region facilitate the circulation of such knowledge. This knowledge (explicit, oral and text based) becomes know-how (tacit, skills and competencies) only when it is put into practice (Nonaka 1991). The degree of knowledge exchange is by no means routine, uniform or consistent, as will be described next, using the categories of network analysis provided by Håkansson & Johanson (1992) and Håkansson & Snehota [1995].

### *Actor bonds*

Initial collaboration between wineries included the pooling of winemaking facilities and information exchange, as there were few expert winemakers in the region. This approach worked well for the early pioneers, with the catalyst being Rolf Mills, the founder of Rippon winery, and his vision in the 1980s to develop a collaborative approach for the future success of the region. At the start, all wineries marketed their wines under the Central Otago regional brand with their individual winery labels usually in a subordinate position.

Collaboration between winery staff was facilitated by the *proximity* of wineries in the region. This follows what might be expected from the literature on regional firm clusters (Porter 1990). Formal and informal activities (both business and social) sustained the interaction and collaboration, and the development of relationships within the region. Not just the wineries, but many trade and distribution firms are regionally interdependent, relying on personal relationships to ensure their continued success and growth. An interesting development is that the vintners interface frequently with a contract vintner. The contractors' work with grapes from all of the sub-regions and have much knowledge about the wines of the region. The contractors' relationships with other vintners ensure knowledge retention specific to the region. The interaction between the vintners and contractors also provides constant knowledge renewal within the region as they exchange new ideas.

Porter (1990) indicates that often business relationships in a region become inseparable with social relationships. Porter (1990) also suggested that proximity leads to frequent contacts, therefore social relationships develop more quickly. Many positive statements concerning socialisation emerged during the interviews:

*We socialise with a number of the wine people–yeah. But we’re not out there, we’re not out there sort of sitting in their back pocket all the time, but, I mean, we’ll ring them and say come and have a meal and they ring us and say come and have a meal. [Owner 10]*

The influence of new “young” vintners arose in the interviews. In probing this issue further, attracting young, enthusiastic vintners to the region was seen as a source of pride by the existing vintners. It provided continual evidence to them that Central Otago was a region to be taken seriously. There was a sort of nurturing effect occurring, in that the established vintners wanted to ensure the success of the new vintners:

*So, we are just in this wave of, you know, young ones who left New Zealand and came back with more knowledge and the ambition to do a good job”. The knowledge base here is extremely good. [Vintner 11]*

The new vintners come into the region with previous contacts and develop contacts and networks with their neighbours. Also, the young vintners themselves group together socially and rely on each other. There is concern that this may lead to a departure from the cohesiveness on the part of some of the wineries. Many see it being a detriment to future growth:

*I mean I have a strong belief that you should contribute to the [wine] community in which you belong, which is – and I’m not sure that everybody believes that now. At the beginning everybody did [viticulturalist-owner7]*

#### *Activity links*

There are associations supporting marketing and viticulture. *Central Otago Winegrowers Association* (COWA) was established in 1982 and *Central Otago Pinot Noir Ltd.* (COPNL) was set up in 2002 under the umbrella of COWA, exclusively to provide marketing assistance with exporting. It is at the discretion of the owner to join or not join. For example, COPNL brings wine writers to the region and the vintners facilitate tastings and attend dinners associated with the events. Also, although the activities of COWA are mainly aimed at the needs of viticulturalists, many vintners attend their events. COPNL sponsors 16-20 events each year, held in Central Otago and internationally, in which member vintners participate. All of these events are well attended by members, such as the annual *Pinot Noir Celebration*. The more members participate in joint activities, the more new relationships develop, or the closer existing relationships become. Seeing many others doing the same thing supports a positive attitude about collaboration. Success instils pride in the members as individuals and perpetuates cohesiveness within the region. If someone was previously employed at a winery and has moved to a new one, they still maintain contact with the first winery and meet at informal gatherings.

Viticulturalists were likewise keen to maintain open communication. They were aware that the quality of their grapes impacted the region as much as individual winemaking skills. Sharing viticultural resources across the region is critical to keep costs low. They also want to learn from each other about new techniques that could benefit vineyard management. Sustainability and organic certification are current areas of interest.

#### *Resource ties*

Resource sharing occurs in a variety of ways, from information exchanges, borrowed equipment and personnel, or shared marketing costs and activities.

*I suppose the thing about Central is like, let's say I have a problem that I could ring up another winemaker and ask them hey, I've got this problem...can you give me any advice on it. [Vintner 4]*

This collaborative information exchange raises the quality level of outputs across the region. They can take quite small snippets of information from each other and apply it to their particular environments. Or work collaboratively to solve a problem. Of special interest to us was that seemingly insignificant information was taken seriously:

*On the one hand, we are such a young region, the daily learning curve, even if you think it's not important like if someone says 'Ah, it's much drier out there than I thought' maybe I think about irrigation because I thought 'it's fine', so you think about it and you say 'well, let's have a look, well, that's true it is very dry'. [Vintner 12]*

The fact that they are growing pinot noir grapes on a marginal climatic edge for top end world markets, means that they are still learning, and need to use each other as a resource:

*I struggled with the ferments this year. Okay, what can I do to not get blocked there in the first place? You know, there's no small talk, but you always pick up something that alerts you and something else.... I might hear something and say, "Hey, I need to look at this" and I think that's the good part. And, we're all learning. [Vintner 6]*

Viticulturalists worry about the costs associated with vineyard production. They source products in bulk for discounted prices by purchasing together. They also face battles finding casual workers for the vineyards, particularly at harvest, and they frequently telephone each other to try to access new workers. Viticulturalists are seen more as farmers involved with day-to-day decisions rather than strategic decision makers. We found this odd as terroir starts in the vineyard and is dependent on exemplary vineyard management. Some viticulturalists have academic degrees, some at the master's level, so their relative status is gradually changing.

Certainly, the dominant view in Central Otago is that sharing information to solve problems builds common knowledge and that is to the region's benefit. But some owners expressed the view that the need to share information has lessened over time. Many of them stated that they were beginning to know every small space in their vineyards and the quality and taste of grapes grown there. With this specialized knowledge and experience, has come confidence:

*I'm getting recognition for the way I'm working and the way that we're making our wine, and the wines themselves, so, I'm getting more and more confidence about what we're doing, which is good. [Owner 1]*

The atmosphere of the region has changed since the early pioneer winemaking days. The fact that they say they collaborate but do it less seemed to be a contradiction. Our interpretation is that they can still call on virtually anyone in the region if they need help but they need help more on more specific topics, such as organics or sub-regional production, which means the group of people with whom they collaborate has become more specific, or more localised.

The majority of current vintners travel to premier pinot noir wineries in California, Oregon, and Burgundy and help them harvest and make wines. Several mentioned that it was "mandatory that their assistant winemakers participate in vintages elsewhere". Many of the vintners stated that Central Otago probably would not be as advanced today without outside knowledge introduced from other Pinot Noir producing areas:

*With some friends of mine in Burgundy, we started up a cultural exchange between Central Otago and Burgundy. So, we sent three people over there, they sent three people over here, for each harvest, and that's been going for a year and a half now, it's been doing really well. [Vintner 1]*

### Knowledge spirals

The concept of knowledge circulating in a network or region is not new (see for example, Bathelt et al 2004; Nonaka 1991; Nonaka & Takeuchi 1995). This conventionally requires high levels of trust to protect the interests of the knowledge giver. However, the need for know-how is also a motive, as has been discussed (Bengtsson & Kock 2000). A surprising discovery in this study was that wineries were willing to share their knowledge across the region because each winery *uses* that knowledge differently. In other words, new knowledge has to be adapted to individual environments to be of *value in use*, and can only happen when it becomes part of the *know-how* particular to that winery. Different vineyard terroir and different approaches to wine-making protect the knowledge-giver from loss of competitive advantage because information exchanges are less risky when they require practical adaptation at the next winery. Such knowledge transfer cycles occur in both wine making skills and vineyard management:

*But the exchange of information is quite amazing, really. People with Pinot are willing to give that information because they realize what works from their side may not work for someone else. [Owner 3]*

Terroir is an emerging concern as it *differentiates* Central Otago wines from wines of other domestic and global Pinot Noir producing areas. The Pinot Noir consumer as a global archetype is very discerning and develops preferences for wines from specific regions with different nuances. This being so, and given high production costs and the boutique size of most vineyards, Central Otago wines are distinctive because of their terroir. Distinctive terroir and sympathetic winery handling become a strategy for gaining consumer recognition.

### Conclusions

It has been argued that in business to business relationships, the risk is that knowledge shared cooperatively might be used competitively. But in the Central Otago wine region, know-how applied in the vineyard and in the winery has been freely shared. This apparent lack of caution at first seemed paradoxical and contrary to our expectations. However, the level of trust usually needed to facilitate knowledge transfers did not need to be high when the risk of competitive application of that knowledge was seen as low. Our explanation is that as know-how (tacit knowledge) in the region cannot be directly transferred and replicated easily, whatever know-how is shared is likely to turn out differently in its application elsewhere. We conclude that the *value-in-use* of knowledge is changed as knowledge is transferred. This we see as a terroir enhancing *knowledge convergence* – relating to soil, climate, grapes and skillful management in the winery. This convergence of know-how is necessary for developing a consistent wine reputation for a young region, but the diversity of this knowledge, when it is applied, ensures individual winery brand *differentiation*, which is needed competitively.

In our view, a co-constructed, communicated belief in terroir may also contribute to the reputation of the wine region as much as does the practical efforts of knowledgeable people discussed in this paper. This would be a worthy topic for a future study.

### References

- Bathelt, H., Malmberg, A. & Maskell, P. (2004). Clusters and knowledge: Local buzz, global pipelines and the process of knowledge creation. *Progress in Human Geography*, 28, 31-56.
- Bengtsson, Maria & Kock, Sören (2000), Coopetition in business networks—to cooperate and compete simultaneously. *Industrial Marketing Management*, 29, 411–426.
- Decanter (2009). World Wine awards 2009. <http://www.decanter.com/recommendations/subrecommendation.php?rid=583&sid=1743> [Sourced January 11, 2010]
- Granovetter, M. (1973). The strength of weak ties. *American Journal of Sociology*, 78:1360-80.
- Håkansson, H., Ford, D., Gadde, L-E., Snehota, I. & Waluszewski, A. (2009). *Business in Networks*. Chichester, West Sussex: Wiley.
- Håkansson, H. & Johanson, J. (1992). A model of industrial networks. In Axelsson, B., Easton, G. (Ed.) *Industrial Networks: A New View of Reality*. London: Routledge.

- Håkansson, H. & Snehota, I. (Eds.) (1995). *Developing Relationships in Business Networks*. London: Routledge.
- Lawson, C. & Lorenz, E. (1999). Collective learning, tacit knowledge and regional innovative capacity. *Regional Studies*, 33, 305- 337.
- Nonaka, I. (1991). The Knowledge creating company. *Harvard Business Review*, November-December, 96-104.
- Nonaka, I. & Takeuchi, H. (1995). *The Knowledge Creating Company: How Japanese Companies Create the Dynamics of Innovation*. New York: Oxford University Press.
- Polanyi, M. (1967). *The Tacit Dimension*. New York: Doubleday.
- Porter, Michael E. (1990). *The Competitive Advantages of Nations*. London: Macmillan.
- Schumpeter, J. A. (1934). *The Theory of Economic Development*. Cambridge, MA: Harvard University Press.
- Tsai, W. & Ghoshal, S. (1998). Social capital and value creation: The role of intra-firm networks. *Academy of Management Journal*, 41 (4): 464-476.
- Vargo, S. L. & Lusch R. F. (2008). Service-dominant logic: Continuing the evolution. *Journal of the Academy of Marketing Science*, 36, 1–10.
- Zhang, L., Zheng, X, Li, J., Nie, G., Huo, G. & Shi, Y. (2008). A way to improve knowledge sharing: From the perspective of knowledge potential. *Journal of Service Science and Management*, 1:226-232.