

# **Intergenerational knowledge sharing in family firms: Case-based evidence from the New Zealand wine industry**

## **Abstract**

This paper examines intergenerational knowledge sharing within family firms in traditional industries. We position our analysis against the background of the knowledge-based view of the firm and utilize knowledge creation theory and perspectives on knowledge sharing behavior to analyse how knowledge is shared in an organization. We employ a multiple case study approach and use the New Zealand wine industry as the context of our analysis. Our study extends family business and knowledge sharing literature by challenging traditional views of incumbent-successor relationships. We reason that family business literature is sympathetic to the senior generation nurturing the next generation while leaving a gap in our understanding of how the next generation contributes knowledge to the firm. We suggest that the knowledge bases of the senior and next generation are different in terms of how they are generated and the relative weight of tacit and explicit knowledge they contain. We also argue that knowledge sharing in family firms is bidirectional leading to innovative outcomes and change.

**Keywords:** Family business; intergenerational knowledge sharing; bidirectional knowledge sharing; knowledge-based view; wine industry; New Zealand

## **Introduction**

Sharing of knowledge is a central activity in most firms, but particularly so in family owned firms. Transferring tacit, complex knowledge, or “family wisdom”, across the family business is essential for the survival and development of the firm to the benefit of future generations (Trevinyo-Rodríguez & Bontis, 2010).<sup>1</sup> Several studies engage with issues related to the sharing

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<sup>1</sup> “Knowledge that is uttered, formulated in sentences, and captured in drawings and writing is ‘explicit’. Explicit knowledge has a universal character, supporting the capacity to act across contexts... Knowledge tied to the senses, tactile experiences, movement skills, intuition, unarticulated mental models, or implicit rules of thumb is ‘tacit’. Tacit knowledge is rooted in action, procedures, routines, commitment, ideals, values, and emotions.” (Nonaka & von Krogh, 2009, p. 636)

of the incumbent's knowledge. This knowledge sharing process is often framed as mentoring (Distelberg & Schwarz, 2015; Fiegenger, Brown, Prince, & File, 1994), or knowledge accumulation (Chirico, 2008), enabling intra family succession with new family members and/or generations entering into a leadership role in the family firm (Hatak & Roessl, 2015). Other studies focus on differences between knowledge sharing within the family and with employees – sharing with even key employees can tend to be significantly more restricted compared to the knowledge sharing taking place between family members (Cunningham, Seaman, & McGuire, 2016). Common among these studies is the tendency to treat knowledge sharing as one directional – from the senior generation to the next generation.

The predominant focus on how the generation in charge shares knowledge with the next generation presents a somewhat simplified view, missing an opportunity to study more nuanced aspects of the knowledge sharing processes. What is largely omitted in the existing literature is an investigation into issues related to knowledge sharing originating from the next generation entering into the leadership of the family firm. A recent review by Daspit, Holt, Chrisman, and Long (2016) does allude to the need for a better understanding of factors that affect knowledge exchange, however their argument is still presented in the context of incumbent-successor exchanges through the “nurturing” of the successor. The underpinning argument for this bias is the belief that the senior generation holds deep smartness (Leonard & Swap, 2004) in the form of practical knowledge acquired from running the family firm. This experience-based knowledge is typically in the form of tacit knowledge (Nonaka & Toyama, 2007), and a source of competitive advantages for the firm (Nonaka, 2007; Nonaka & Takeuchi, 1995). The problem with relying on deep smartness is that, particularly in traditional industries, there can be a tendency toward path dependency (Hirsch-Kreinsen, 2008b; Hirsch-Kreinsen & Schwinge, 2014), leading to difficulty in changing environments (Chirico & Salvato, 2008), or lack of innovativeness leading to wealth creation (Habbershon & Pistrui, 2002).

Against this background we ask two intertwining research questions: *What are the key differences, if any, between the knowledge bases of the senior and next generations in family firms? How do family businesses engage in knowledge sharing from the next generation to the incumbent?* Answering these questions contributes to current academic discussion related to incumbent-successor relationships by illuminating bidirectional knowledge sharing characteristics and related complexities in family firms. In particular, we argue that family business literature is too focused

on the senior generation, missing an opportunity to examine how the next generation can contribute knowledge to the family firm. This is somewhat unjustified, bearing in mind there is an increasing amount of anecdotal evidence that the next generation spends significant time outside the family business before taking up a more long term role in the family business. The transfer and application of the knowledge acquired by the next generation through work in organizations inside and outside their home country can potentially prove highly valuable for the family firm. Such knowledge can increase the ability of the family firm to adapt to changes in the business environment, increasing its chances of long term survival (Tushman & O'Reilly, 1996). Therefore knowledge sharing is not only the responsibility of the senior generation; instead, the onus is likely to be reciprocal. This is why it is important to understand the specific characteristics of the knowledge originating in the successor generation and how this knowledge can be shared and utilized within the family firm.

To answer the research questions posed above, we adopt the knowledge-based view (Grant, 1996; Phelps, Heidl, & Wadhwa, 2012), and guided by Nonaka and Takeuchi's (1995) conceptualization of knowledge creation in organizations to understand the knowledge bases in family firms. We employ a multiple case study approach and use the New Zealand wine industry as the context of our analysis to examine the unique characteristics of the knowledge bases held by the senior generation and next generation, and how these knowledge characteristics impact the process of knowledge sharing within the firm. For example, tensions between the two generations can result in hoarding and/or rejecting knowledge (Husted & Michailova, 2002). While these factors may have a detrimental effect in any organization, motivation in a family firm to mitigate knowledge sharing hostility is typically stronger. The reasons behind this motivation could be a propensity to develop and maintain a common vision (Hubler, 2009) or ensuring future ownership and long-term orientation (Lumpkin & Brigham, 2011). However, the issue of reliance on a shared understanding of the content of knowledge between those transmitting and those receiving the knowledge still remains (Husted & Michailova, 2002).

In essence, while prior research has identified incumbent-successor relationships including mentoring and grooming the next generation, our findings suggest that different generations active in the family firm have distinct knowledge bases. While the senior generation possesses knowledge that is largely tacit, the successor generation's knowledge base typically contains both explicit components (acquired through formal education) and tacit components (based on previous employment elsewhere and activities outside the family firm). It is this sharing of knowledge with

the senior generation that is less understood and largely overlooked in family business literature. Therefore our research concentrates on understanding the key characteristics of the next generation's knowledge base and how it contributes to how this knowledge is shared.

## Background

### *Family business*

Building on previous research we define family businesses as being owned and managed by family members (Sharma, Chrisman, & Chua, 1997). This could be a partnership between spouses or siblings, and across generations (Miller, Steier, & Le Breton-Miller, 2003). In this paper we focus on family businesses that are intergenerational, that is, with more than one generation from the same family currently owning and/or managing the business. A number of researchers consider family businesses to be long-term oriented (Brigham, Lumpkin, Payne, & Zachary, 2013) with motivation to pass their business to the next generation (Chua, Chrisman, & Sharma, 1999; Handler, 1989; Ward, 1987). For the most part, family businesses lean toward being motivated to succeed into the next generation, and this is where we see the potential for innovation events to occur which may otherwise never come to fruition. It is the diverse knowledge bases of the different generations that we consider to be a potential for stimulating innovation. We understand succession to be a bellwether topic and an ongoing concern for family firms (Short, Sharma, Lumpkin, & Pearson, 2016) and emphasize that the management of knowledge and knowledge sharing in intergenerational family businesses beckons closer examination.

### *Knowledge-based view*

We embrace the knowledge-based view as a theoretical backdrop in seeking to understand the content of knowledge shared between generations. The knowledge-based view appropriated what was considered the most important resource under the resource-based view – knowledge – and presented it centre stage as having “important implications for the creation and sustaining of competitive advantage and for the implementation of strategy through structures and management systems” (Grant, 2015, p. 1). A firm's competitive advantages are embedded in the specific knowledge of the firm (Spender & Grant, 1996) and the firm's ability to manage its knowledge assets (Boisot, 1998; Nonaka, Toyama, & Nagata, 2000). In particular, the firm's tacit knowledge is a source of sustainable competitive advantage (Kogut & Zander, 1992; Winter, 1987). Grant

(1996) referred to knowing how knowledge and knowing about facts and theories, which are transferred differently across individuals, space, and time. Firms are the most efficient governance form for facilitating knowledge transfer due to the formation of shared language and identity (Kogut & Zander, 1992). More recently, knowledge based theory scholars have allocated more attention toward how firms should organise themselves in order to generate new knowledge efficiently (Nickerson & Zenger, 2004).

Nonaka and Takeuchi's (1995) SECI (socialization, externalization, combination, integration) model suggests that knowledge is created as a result of interaction between tacit and explicit knowledge. The SECI model has been utilized across numerous disciplines and organization settings (Karim, Razi, & Mohamed, 2012; Lievre & Tang, 2015; Richtnér, Åhlström, & Goffin, 2014; Trigo, 2013), and has been used in developing arguments where knowledge is a central feature (Hatak & Roessl, 2015). For the purpose of this paper we adopt the SECI view that the interaction between tacit and explicit takes place along a continuum and the interaction is a key mechanism for transforming and applying knowledge for organizational ends (Nonaka & von Krogh, 2009). In particular, we use the distinction between tacit and explicit knowledge to characterise the knowledge bases of the two generations and to understand the particular issues associated with sharing and applying individual knowledge to organization ends in the family firm.

### *Knowledge sharing in family firms*

Knowledge management is not widely discussed in the family firm literature. Some existing research treats knowledge as an important dynamic capability (Chirico & Salvato, 2008), a strategic resource (Cabrera-Suárez, De Saá-Pérez, & García-Almeida, 2001), or a source of competitive advantage across generations (Cabrera-Suárez et al., 2001). Other studies focus on professionalization through management accounting knowledge (Giovannoni, Maraghini, & Riccaboni, 2011; Hiebl, 2013), or on strong relationships and connectedness resulting in learning (Trevinyo-Rodriguez & Tàpies, 2006), and the implications of the chosen family leadership approach on the development of a firms knowledge resources (Cunningham et al., 2016).

Research on knowledge sharing in particular has potentially significant relevance for family firm research considering that family firms tend to strive to maintain knowledge long-term within the family (Cabrera-Suárez et al., 2001; Miller, Steier, & Le Breton-Miller, 2016). Shared norms and values are generally expected to be conducive to knowledge sharing. However, Trevinyo and

Bontis (2010) found that within family firms the interaction leading to shared norms and values has a stronger effect on individuals i.e. in the form of emotions, which can have both a positive and negative effect on the knowledge sharing process. For example, family rivalry has been suggested to reduce the willingness of the senior generation to pass experience-based knowledge on to the next generation (Lansberg, 1999). On the other hand, the sense of identity in family firms and “familiness” (Habbershon, Williams, & MacMillan, 2003) can, when rivalry and conflicts are avoided or dealt with (Eddleston & Kellermanns, 2007), lead to a unique social system with frequent informal conversations enabling sharing of firm-specific knowledge (Miller, Steier, & Le Breton-Miller, 2006).

Many family firms belong to traditional industries including primary industries and manufacturing. In such industries knowledge tends to be deeply rooted in well-established practices and developed through trial and error learning processes (Hirsch-Kreinsen, 2008a). The knowledge base is often characterised as “accumulated internal knowledge” (Hirsch-Kreinsen, Jacobson, & Robertson, 2006, p. 11). Core knowledge in some family firms is intertwined with family traditions. Particularly in traditional industries, the senior generation would more than likely have started their career in the family business as an apprentice, or similar on-the-job training without significant formal training.

The valuable knowledge in family firms is often held by only a few individuals in the senior generation (Zahra, Neubaum, & Larrañeta, 2007). This knowledge is mostly stored in the form of tacit knowledge (Nonaka & Takeuchi, 1995; von Krogh, Ichijo, & Nonaka, 2000), which can only be passed further if the individual possessing the knowledge engages actively in the process of knowledge sharing. This can take place by articulating knowledge or guiding others in an apprenticeship or in a coaching situation (Nonaka, 2007). As tacit knowledge is highly resource-demanding to share, combined with the fact it is only in the heads of a few individuals, a bottleneck situation can occur in family firms resulting in knowledge not being shared or only shared on a need-to basis.

The accumulation of knowledge by a few individual family members usually increases the consolidation of power and control (Zahra et al., 2007). A strong asymmetry of power in an organization can result in increased reluctance by individual members of the organization to share or to accept shared knowledge (Husted & Michailova, 2002). The knowledge sharing literature – especially at the individual level – reveals that there is a complex set of motivational drivers behind

sharing (or not sharing) knowledge (Foss, Husted, & Michailova, 2010; Wang & Noe, 2010). These drivers include incentivizing, rewarding, and recognizing the source of knowledge (Cabrera & Cabrera, 2005; Husted & Michailova, 2002). They exist in family businesses too, just with the added complexity of familial alongside business relationships. As with non-family firms, family businesses can have a challenge with sharing knowledge where the knowledge transmitter can have their ideas and knowledge rejected by the receiver, or ideas and knowledge are hoarded and not shared at all (Husted & Michailova, 2002; Michailova & Husted, 2003). When family members either intentionally or unintentionally withhold knowledge from other members, decision-making activities are inhibited, leading to an increased risk of family firms ignoring innovation opportunities.

Research has documented that for family firms to survive and develop, the next generation should add new knowledge gained through education as well as work and experience from outside the family firm (Cabrera-Suárez et al., 2001; Kellermanns & Eddleston, 2004). For example, where the succeeding generation has international experience and a higher level of education than the incumbent – alongside their long-term orientation – this can lead to triggering an internationalization pathway (Stieg, Hiebl, Kraus, Schüssler, & Sattler, Forthcoming). If the next generation's knowledge base is different to the tacit, experience-related knowledge base of the senior generation, one would expect a need for changes in the knowledge sharing practices within the family firm. Since the power and decision authority is typically consolidated with a few senior family members, the next generation's knowledge will need to be shared with the senior generation in order to be actioned in the family firm. The challenge for the successor generation can be breaking an imposed path dependency (Lubinski, 2011), which, if not broken, may limit innovation activities (Hirsch-Kreinsen, Hahn, & Jacobson, 2008). Where the incumbent does not accept new thinking from the successor generation, this can create inertia within the organization and stymie the succession process. Therefore a careful examination of how knowledge is shared between generations is imperative.

## Methods

### *Industry context*

Our study is set in the context of the wine industry. The industry has a long history and is a traditional industry in New Zealand. Traditional industries are considered low to medium tech

according to the OECD classifications. Like many traditional industries, boundaries have been and are continuously pushed with the introduction of new and evolving science and technology. Over the past centuries winemaking globally has had a renaissance where science and technology has advanced the traditionally practice-based industry, and knowledge has considerably increased through formal education (Johnson & Robinson, 2007). Where there may not have been a formal education for winemaking 100 years ago, there are now programs for viticulture and oenology incorporating international practices. This has led to innovation within the industry. Winegrowers have also produced science, technology, and processes that are utilized by other industries, such as pasteurisation (Johnson & Robinson, 2007). Noteworthy is the broad commodity chain including the procurement of land through to the promotion of the product and management of the brand, and finally the distribution. In that sense the wine industry is a rich context for studying family businesses (Chirico, 2008; Gallucci, Santulli, & Calabro, 2015; Jaskiewicz, Combs, & Rau, 2015; Reay, Jaskiewicz, & Hinings, 2015).

Although a small industry on the world stage, the New Zealand winegrowers are comparable in size with other winegrowing countries around the world. Family businesses are prevalent in the New Zealand winegrowing industry with about “90% of its 700 wineries and virtually all of the 1000 plus independent grape growers being small, family-owned businesses” (New Zealand Winegrowers, 2011, p. 3). Moreover, the industry has proven to be innovative. Examples include growing methods such as harvesting and pruning techniques, organic and biodynamic practices, as well as technology and products, such as bottle labelling, closure technology, and pruning equipment (Stewart, 2010). New Zealand family wine businesses hold considerable knowledge associated with a history of winemaking and a culture where the next generation typically spends time outside the family business before returning with new experiences.

### *Case selection and data collection*

Selected businesses needed to meet certain criteria (Kuzel, 1992; Miles & Huberman, 1994; Patton, 1990), including what constitutes a family business; criteria based on the industry context; the demographics of the family business comprising ownership and management, and the number of generations involved. Although family business research has so far not developed an agreed-upon definition (Chua et al., 1999; Steiger, Duller, & Hiebl, 2015), the characteristics of a family



firm we considered important are reflected in Chua et al.'s (1999, p. 25) definition as “a business governed and/or managed with the intention to shape and pursue the vision of the business held by a dominant coalition controlled by members of the same family or a small number of families in a manner that is potentially sustainable across generations of the family or families”. To qualify to be part of our study, the business needed to be owned and managed by a family with potential for the firm to be passed to the next generation of the same family. This meant there needed to be at least two generations currently involved in the business and the family needed to hold majority shares.

The winegrowing businesses needed to be medium-sized based on their annual sales per litre in accordance with NZ Winegrowers categorisation,<sup>2</sup> with no restriction in terms of the region within New Zealand where the family business was located. The rationale for selecting medium-sized wineries was based on secondary research including websites, annual reports, and other documents where we established that about 70 per cent of Category 1 (small) wineries, 50 per cent of Category 2 (medium-sized), and 20 per cent of Category 3 (large) wineries were family owned and managed. Of the Category 2 wineries we found most had two generations involved in the business and typically had been established for at least 30 years.<sup>3</sup>

To establish the suitability of any one winegrowing family, a spreadsheet was utilized to tabulate against these criteria. To support confidence that the selected businesses were owned by a family, we referred to the Companies Office Register. Current websites and advertising also provided indications as to the appropriateness of each shortlisted firm. The three case sites we selected met all criteria and were “transparently observable” (Pettigrew, 1990, p. 275) in the sense that we were able to capture retrospective and real time growth, evolution, and transformation. Through the selection process and as research was carried out, extreme situations and polarity between the three case sites emerged (Pettigrew, 1990). Accessing three case sites allowed us to elude relying on a single case (Dyer Jr & Wilkins, 1991) while at the same time avoiding considering too many case sites (Eisenhardt, 1989). In other words, we opted for deeper grounding

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<sup>2</sup> Category 1 – annual sales not exceeding 200,000 litres [small wineries]. Category 2 – annual sales between 200,000 and 4,000,000 litres [medium-sized wineries]. Category 3 – annual sales exceeding 4,000,000 litres [large wineries] (New Zealand Winegrowers, 2015, p. 31).

<sup>3</sup> Category 1 (small) wineries were typically single generation. Of the Category 3 (large) wineries only two were intergenerational.

of varied empirical evidence while also sidestepping idiosyncrasies of a single case (De Massis & Kotlar, 2014).

Our study involved 27 semi-structured face-to-face interviews, with follow-up questions where necessary (Creswell, 2009). The interviews were carried out with all family members involved in the respective business, and a sample of employees which was helpful in terms of capturing the dynamics in the family. Each case represented two generations which allowed analysis of knowledge sharing from the senior generation to the next generation and vice versa. Table 1 presents the anonymized case sites and Table 2 displays demographics of the interview participants whom we gave pseudonyms. This anonymity was a criterion under the ethics approval for the study.

In addition, observations were made when and where possible and recorded as field notes, alongside studying carefully various documentation and archival evidence, such as history books, newspaper articles and websites.

**Table 1: Anonymized case sites and their key characteristics**

<b>Company</b>	<b>Years in business (approx.)</b>	<b>Ownership</b>	<b>Management</b>	<b>Number of family members in the business</b>	<b>Generations since establishment</b>
<b>Merlot Family Vintners</b>	100	Senior (2 <sup>nd</sup> generation) and next generation (3 <sup>rd</sup> generation)	Senior and next generation	Three	Three
<b>Sauvignon Family Estates</b>	40	Senior generation	Senior and next generation	Five	Two
<b>Riesling Family Winegrowers</b>	25	Senior generation	Senior and next generation	Five	Two

Merlot Family Vintners is much older and with extensive experience in establishing their vineyards in various regions. Both Sauvignon Family Estates and Riesling Family Winegrowers in their relative youth had indicated their involvement in pioneering new regions albeit the Rieslings had established their knowledge base off the back of corporate winegrowing where the Sauvignon family had entered the market by planting in an unestablished region based on pragmatism rather than science.

**Table 2: Demographic characteristics of interviewees**

<i>Participant pseudonym</i>	<i>Generation</i>	<i>Age range</i>	<i>Years in business (approx.)</i>	<i>Role</i>
<i>Melvin Merlot</i>	Second (sibling)	65+	60+	Chairperson
<i>Murray Merlot</i>	Second (sibling)	65+	50-60	Managing director
<i>Madge Merlot</i>	Second (sibling)	65+	30-40	Administration
<i>Morgan Merlot</i>	Third (son of Melvin Merlot)	40-65	10-15	General manager
<i>Trevor</i>	N/A (employee)	40-65	10-15	Senior winemaker
<i>Todd</i>	N/A (employee)	40-65	≤5	Production manager
<i>Solomon Sauvignon</i>	First (husband)	40-65	30-40	Co-founder
<i>Sylvia Sauvignon</i>	First (wife)	40-65	30-40	Co-founder
<i>Suzie Sauvignon</i>	Second (sibling)	30-40	10-15	Winemaker
<i>Simon Sauvignon</i>	Second (sibling)	30-40	10-15	Winemaker
<i>Stella Sauvignon</i>	Second (sibling)	20-30	5-10	Marketing
<i>Nathan</i>	N/A (employee)	30-40	≤5	Senior winemaker
<i>Nicole</i>	N/A (employee)	20-30	≤5	Accounts
<i>Nigel</i>	N/A (employee)	40-65	≤5	Cellar hand
<i>Norma</i>	N/A (employee)	40-65	30-40	Cellar hand
<i>Natalie</i>	N/A (employee)	20-30	≤5	Administration
<i>Roger Riesling</i>	First (husband)	40-65	30-40	Co-founder and Chairperson
<i>Ruth Riesling</i>	First (wife)	40-65	30-40	Co-founder
<i>Rania Riesling</i>	Second (sibling)	30-40	10-15	Marketing director
<i>Richie Riesling</i>	Second (sibling)	20-30	10-15	Winemaking director
<i>Renée Riesling</i>	Second (sibling)	20-30	≤5	Viticulturist director
<i>Gavin</i>	N/A (employee)	30-40	5-10	Chief winemaker
<i>Grant</i>	N/A (employee)	40-65	≤5	Operations manager
<i>Gerald</i>	N/A (employee)	30-40	10-15	Financial manager
<i>Gordon</i>	N/A (employee)	30-40	≤5	Restaurant manager
<i>Gina</i>	N/A (employee)	30-40	5-10	Function/events manager
<i>Gilbert</i>	N/A (employee)	20-30	5-10	Vineyard manager

### *Approach to data analysis*

Our study is interpretive (Nordqvist, Hall, & Melin, 2009). The interpretive approach features prominently in organizational studies (Lee & Cassell, 2013; Prasad & Prasad, 2002), especially through case study research (De Massis & Kotlar, 2014; Nordqvist et al., 2009). It

enables studying actors, processes and events (Eisenhardt, 1989; Stake, 1995) in a given context while providing detailed insights from which rich descriptions can be constructed (Gibbert, Ruigrok, & Wicki, 2008; Nordqvist et al., 2009; Orum, Feagin, & Sjoberg, 1991; Pettigrew, 1990).

Using a replicable protocol for interview questions helped assure rigor when interviewing both family members and employees in the selected family firms. Observations and archival evidence supported the interviews and contributed to the validity and reliability of data. Rich empirical insights emerged through within-case and cross-case analyses allowing an opportunity for interpreting how family businesses engage in knowledge sharing from the next generation to the incumbent, and the benefits gained through this engagement for the family firm. Our approach to data analysis drew upon the principal author's knowledge of the winegrowing industry context and their heritage in that industry. This experience and familiarity meant there was a thorough understanding of the context which provided an increased confidence when interpreting data (Zahra, Klein, & Astrachan, 2006).

For a contribution to be transferable or generalizable, the collection and analysis needed to be authentic (Roulston, 2010) and credible (Golafshani, 2003), which can be built through the transparency of research procedures and carrying out the research methodically, while adhering to the evidence (Yin, 2011, 2014). We utilized NVivo 9's tree-node hierarchy to manage and then further reduce and synthesize rich data to establish patterns and themes that lead to reliable interpretations (Wiles, Crow, & Pain, 2011).

## Analysis and findings

As pointed out earlier, we use the knowledge based perspective as the theoretical lens for our case interpretation. For studying the differences in knowledge base we in particular use the tacit/explicit distinction. To examine the knowledge sharing taking place from the next generation in the studied case companies, we focus on the interaction between tacit and explicit knowledge for transforming and applying knowledge for organizational ends (Nonaka & von Krogh, 2009). In particular within family businesses, knowledge will only be applied to organizational ends when the knowledge to some extent has been shared with the senior generation.

There are both similarities and differences between the case sites and given the idiosyncrasies of each family business, we were somewhat surprised by how much bidirectional knowledge sharing occurred. The primary similarities between the businesses were related to the

fact that the senior management included members of the family; each had a long-term orientation and sought continuity through the bloodline; and each had considerable influence over their businesses through ownership and management. We discuss the differences next.

### *Differences in knowledge bases across generations*

Supporting what is known from the literature about the older generation in traditional industries, the senior generation for each firm in our study described how they acquired their knowledge through “trial and error” and how they learnt through doing things themselves. For example, Solomon Sauvignon exuded this practical knowledge. Adopting a “learning by doing” style reminiscent in traditional industries, Solomon chose 20 varieties of rootstock, with most originating from Europe. After succeeding with the first vintage, he and his wife Sylvia grafted their own vines as the focus of the wine industry shifted from New Zealand’s North Island to the South Island.

We grafted everything and then I found the root stocks that didn’t show much phylloxera and didn’t show much leafal virus – with no scientific evidence, just by the eye... we propagated them and expanded all our vineyards.... (Solomon Sauvignon)

In the new region close to where he was growing, a pragmatic Solomon spotted an opportunity to provide the massively growing industry just south of his region with disease-free vines which created significant cash flow and employment. Notably Solomon did not rely on a scientific approach but rather a practical approach and used common sense:

Everybody lined up and wanted cuttings from us. ... We propagated them on clean deep cuttings and we preferred our own potting mix. So in the late Seventies, early Eighties we sold individual buds from Riesling, Silvaner, Gurtwitz, Chardonnay for 10 cents a bud. I remember we employed every woman [in the area] we could find. What we pruned out there – any cutting was picked up and taken into the shade and cut up into individual buds and sold to Montana or to Corbans or to Penfolds and so on. (Solomon Sauvignon)

Although the senior generation in the two younger firms (Sauvignon and Riesling) had some education, they often relied on gut feeling and bypassed science and technology. The learnings of the next generation were more forward-thinking, mainly due to technological and scientific advances in recent decades. To gain more experience, the next generation was encouraged by the senior generation to seek internships in other wineries, domestically and internationally. Table 3 displays the education and experience journey of each of the next generation family members across the three case sites.

**Table 3: Next generation education and experience**

<i>Respondent pseudonym</i>	Generation	Age range	Role in family business	Education	Experience
<i>Morgan Merlot</i>	Third	40-65	General manager	Degree in winemaking and viticulture (Australia) Commerce degree (marketing and management)	Brought up in winery Worked for family winery for 2 years after first degree, and 9 months after second degree Worked for pharmaceutical company (sales, marketing and management) Joined family business
<i>Suzie Sauvignon</i>	Second	30-40	Winemaker	Medical degree Master's degree and vocational training (UK) Post Graduate Diploma in Viticulture & Oenology	Brought up in winery Worked in medicine (UK, Australia, NZ) Worked in wineries in Australia, USA, and Europe Wine internship at a German University Joined family business
<i>Simon Sauvignon</i>	Second	30-40	Winemaker	Wine science degree (Australia) Owner/manager program Post Graduate Diploma in Commerce	Brought up in winery Worked in wineries in Australia, USA, and Europe Joined the family business
<i>Stella Sauvignon</i>	Second	20-30	Marketing	Commerce degree (marketing and management) Post Graduate Diploma in Wine Marketing (international wine and business)	Brought up in winery Working in family winery in holidays during study Market experience (Australia) In-store wine tastings for supermarkets and started own business doing this Worked in high-end cellars Joined family business
<i>Rania Riesling</i>	Second	30-40	Marketing director	No formal tertiary training	Helped establish the winery and restaurant Worked for a hotel chain in different departments, and restaurants Came back to family business to manage the restaurant and cellar door Worked for regional tourism as marketing coordinator/manager Joined family business as marketing manager/oversees restaurant
<i>Richie Riesling</i>	Second	20-30	Winemaking director	Diploma in Viticulture and Wine Production	Worked in family winery once established Worked in wineries in Europe and the USA Joined family business as a winemaker Started a craft brewery (beer and cider) using winemaking techniques while continuing as winemaker Owns, and has partnerships in bars
<i>Renée Riesling</i>	Second	20-30	Viticulturist director	Started a commerce degree Diploma in Viticulture	Worked in family winery once established Worked in wine sales for department store (UK) Nanny (UK) Worked in wineries in the USA and NZ Joined family business as a viticulturist Established organic winegrowing in the business

A difference between the three family businesses was the time the next generation entered the business. While the senior generations entered the business formally at a very early age, the next generation typically obtained formal education and sometimes established themselves in other, often unrelated, industries. Most of the next generation members we interviewed came back to the family business before they were 30 and were usually employed in a position of certain responsibility but not necessarily of general leadership. There were similar examples of grooming and mentoring. All members of the next generation interviewed recalled growing up among the vines and in the winery where they were given projects under the guidance of their parents. From a very early age the next generation were doing chores around the vineyard, being involved at harvest time, and later being entrusted on the bottling line and packing:

I didn't have jobs after school specifically. It never required my level of input. We had staff all through my life. When Dad was young he would have jobs after school because there was just no one else. But in the school holidays I would either work in the bottling line or do some tractor work from when I was twelve until we got some staff... [After school] I went to Australia and did a degree in winemaking. I never considered anything else... I came back here for two years and then thought, actually if I don't enjoy winemaking I've got no other career opportunities so I went to Auckland University and did a Commerce degree. And then came back here for about six or nine months but I was looking to work outside the business to get some further experience. It's no good coming into the business if you don't bring anything. So I went to work for a [pharmaceutical company] for about seven years in the sales and marketing area. (Morgan Merlot)

This typical example demonstrates the involvement the next generation had at an early age. While past generations may have continued in the family business without a significant break (e.g. formal education, travel, or vocational experience), this was contrary to the examples presented through the next generation in this study.

The scenario of first working in the family business, then leaving to work elsewhere was the norm for the next generation across the three case sites. Our first example was seemingly incongruous with the winegrowing profession. After being brought up in the vineyards and winery, Suzie Sauvignon studied in a medical field and treated winemaking only as a "Plan B". After studying for five years and completing a Masters while practicing medicine, Suzie decided to enrol in winemaking. This was followed by several years completing vintages in North America and Europe before returning to the family business. Suzie recalled how she was able to align her vocational background with winemaking:

In your studies you obviously study a whole lot of biology papers. Human biology, calculus, a couple of chemistry papers. [Then I did] a bit more bio-chemistry, stuff that's got more to do with saliva and taste and physiology. It was great. Like I can remember very well in my exams asking about sensory, like perception and tasting wine and stuff, and I could retain that quite well... In addition you knew kind of the nerve fibres and muscles and all the ins and outs of the equipment. (Suzie Sauvignon)

In the course of the interview she expressed how this knowledge could be applied:

It is quite important when you're tasting wines every day, how you taste things and what you taste and why you taste it. And, if a wine is high in alcohol it can be perceived as sweetness... the other day when I was in tasting people were saying about our Chardonnay, 'it's sweet'. And I knew, no, it's not sweet, it's low in acid, which might be perceived as being sweet but it's also high in alcohol which also can make it be perceived as sweet. But it's also got a lot of texture and body from all the work we do with lees. So your perception of things changes depending on the acid and the sugar balance and the phenolics, you know, all that kind of stuff. (Suzie Sauvignon)

Like Morgan Merlot, Suzie Sauvignon gained significant experience in an unrelated profession and was able to transfer her explicit knowledge to the family business. With her physiology knowledge she could formalize her interpretation of taste. For example, the knowledge she transferred was beyond what would normally be taught in winemaking or viticultural studies. She brought her intimate understanding of the human physiology into her winemaking but was also able to confidently write tasting notes based on not just taste, but on the science and how the senses experience wine.

Empirically we found that the knowledge base of the next generation had different features and key characteristics than the senior generation. While the senior generation's knowledge base was typically established through trial and error, and as a result of always working in the family business, the next generation displayed education and work experience from both related and unrelated organizations. From their individualized education and experience, the next generation were in a position to enter the family business with explicit knowledge that could be utilized in the activity of the organization and encourage a change in the actions and behaviors of the senior generation.

### *Next generation sharing knowledge with senior generation*

Notably similar across the cases was the recognition of each generation's diverse knowledge bases. However, sharing was displayed differently in each of the studied firms. Each family business had a rich learning environment where the next generation could learn from the



senior generation. The senior generation of Merlot Family Vintners reminisced about making a change: once they used spades for planting vines where now they use a tree planter. The main difference was that he waited until he took over from his father before implementing change while the current generation made changes when transitioning toward a succession:

When I took over from my father, I started bringing in new techniques. I started bringing in yeast cultures, cold fermentations, stainless steel. We started getting these quantum leaps in quality. (Murray Merlot)

Murray Merlot was speaking of a time in the mid-1900s where there was a proliferation of equipment introduced to the industry. Science was more advanced although it was still common for wine to have added sugar. This introduction of explicit knowledge would have been revolutionary at the time. However these processes, equipment, and science have significantly advanced since then. An example of new knowledge introduced by the next generation was when Murray's nephew entered the business. Murray acknowledged that their business was run quite loosely until Morgan introduced sophisticated systems that moved the business toward being more computer based. Importantly, Murray distinguished Morgan's education and experience in relation to his own and Melvin's background. The inference made was Morgan's ability to share his knowledge with the senior generation which led them to change their actions and behavior, for example, accepting Morgan's systems rather than only relying on their intuition:

[Morgan has] worked for seven or eight or ten years for a [pharmaceuticals company] and he's had the advantages of high level education. He's got two degrees, whereas I got my University Entrance exam and stopped, and Melvin didn't even do that. He did three years' secondary school... So Morgan comes in with a huge experience in the disciplines of big business and he's able to actually install them into our business, which we probably lacked a bit.... Our company was run hugely by Melvin and myself and stuff in our heads, and run by the seat of your pants, whereas Morgan is into the costings. (Murray Merlot)

Along with Morgan's well-established career when he entered the business in his thirties, he came in with a level of authority and maturity. Upon his arrival Morgan created himself a role that played to his skills by simply concentrating on financial and systems aspects of the business:

When I came into the business I spent the first bit of time not really taking anybody's job off them but working away to understand how I felt the business worked. Where I saw fairly flimsy systems, I created new systems.... I didn't take any job off my father or uncle. So I created this area of work – the financial area and systems area – which is going to make it that more robust.... My level of understanding of how the business actually ticks became better than my father's and uncle's, because I drilled down. (Morgan Merlot)

With a commercial background, Morgan not only introduced rigor to the business, but also created a way for risk to be minimised through a better understanding of the cost of production.

Importantly, when this combined tacit and explicit knowledge acquired outside the family business was shared through its application to organizational ends within the family firm, it also started a process of socialisation involving the senior generation. At the same time, given Melvin and Murray were the ultimate decision makers, any changes Morgan made to systems or processes would need to be understood by them. As such, the reports and data generated were increasingly used for decision making in the family business as the family developed a better understanding of how to interpret the data and make the best use of the reports. The reports and data were on the one hand integrated as a regular feature in meetings, and on the other hand shared in a way that allowed the senior generation to understand the process behind the reporting.

We used to have [systems] but not [as] sophisticated and it's all computerised and spreadsheeted and followed... whereas sometimes we set up [systems... however we would deviate from it], whereas he never wanders from it. (Murray Merlot)

Tacit knowledge was made explicit by the next generation, building a new level of professionalism. This allowed the company to understand risks through the systems implemented and detailed cost of production, quickly allowing opportunities to be screened with more confidence, or as Morgan put it, “understand where your risks reside and where opportunities are”. Examples of opportunities exploited included a few innovative partnerships like ownership of production facilities alongside other winemakers; distribution rights to supermarkets and other chain stores and partnering with non-family members as an entrepreneurial team purchasing other wineries. Morgan further pointed out that “systems run businesses and people run systems,” which highlighted the need for some control in the business on the basis of which good decisions can be made – not only by him but the senior generation.

Morgan also engaged a consulting firm to explicate the culture of the business. He identified that the family had a way of doing things, however, this was not always translated for the employees to understand. He recounted some of the family's history that expressed why they do things the way they do:

Generationally, the culture of this company has been set up by my grandfather and his personality - he was fairly steady as you go. At 14 he was prepared to go from Croatia – he actually grew up without parents, in effect, from 14 onwards... He turned out really well, with a very strong moral radar... And people acknowledge and respect that. So that's been quite a strong cultural thing for our company... The cultural things were set up by him and instilled in my father and uncle and consequently in me. And it doesn't just permeate the business, it's the family. All the family hold these principles. (Morgan Merlot)

From this foundation of how to run the family business there needed to be some translation for non-family members employed in the business where employees needed to learn about the culture of the owning family including behaviors, abilities, and approaches:

The family and the business sort of overlap. That flows into the business of non-family. This is how we do things. This is what we hold dear... We have embarked upon a process of formalizing a Mission Statement so that people can understand more easily what it is we've got as a more formal exercise, and why we do this. To me it's 'we don't have a mission statement, and so do we need one? Do we need a value statement?' The reason I would say 'not really' is because I know what those values are and culturally we have those in our company. The reason why I say 'yes' is because we now have employees in [other regions] who don't agree with us and don't interact with us and we have a growing base of people that need to understand these are our cultural cues, and these are our values, you need to operate like this, and you can't say you haven't been told, here it is in black and white. (Morgan Merlot)

In this scenario, the next generation takes the tacit knowledge that was traditionally passed through the family, and through the application of new systems makes this knowledge explicit to the wider organization. Importantly, this example was a combination of tacit knowledge within the family, and tacit knowledge introduced from Morgan's external experience. Not only would employees benefit from the externalization of knowledge but the senior generation would too benefit. As mentioned earlier the senior generation ran the business from "stuff in our heads and run by the seat of your pants" (Murray Merlot). Their acknowledgement and acceptance of formalizing the family story alongside other systemization helped the senior generation to validate the importance of knowledge brought along by the next generation. Melvin recognized the need to encourage Morgan in his role:

Since Morgan has come in seven or eight years ago, it's obvious that there's a new push in the company and it's just an age thing. You probably find that Murray and I... are looking at the bigger picture... When Morgan came the pressure was on straight away to up this and up that and then it's just a case of supporting. Yeah, make sure he's got the green light and give him moral support. (Melvin Merlot)

Morgan too recognized that he was given free reign to demonstrate to the senior generation the importance of having systems that would help them to "understand where your risks reside and where opportunities are":

I mean, you can obviously quite easily in these situations [see] that the 'old dog' doesn't want to give up and someone's itching to go or given any leash, so that hasn't been the situation with me. I think there's a period when you have to actually demonstrate you know what the hell you're talking about. And once that's demonstrated, it's like 'go for it'. (Morgan Merlot)

It is not surprising the older generation is reluctant to accept the new knowledge brought in by the next generation. The differences in knowledge bases add to the difficulty of validating the new knowledge brought in by the next generation. The quote above illustrates that the new knowledge is validated through its application to a smaller well defined problem in the family firm. Following the validation it can be more widely applied in the family firm without facing significant resistance from the senior generation.<sup>4</sup>

The senior generation of the Riesling family were known as being very experienced, with Roger Riesling being involved in some of the first plantings in the region where the family business is located. Roger adopted a corporate business model for the family business and the business was more strategically managed. However, Roger was not confined by systems and was very open to ideas and opportunities presented by the next generation. Renée, his youngest daughter, took advantage of this openness. After starting a Bachelor of Commerce and realising this was not for her, Renée asked her parents if she could work in the vineyards where she realised she could do this for a living. She went on to study viticulture and winemaking followed by vintages in Australia, North America, and in wine sales in the United Kingdom. Upon returning to New Zealand she worked for another family business in New Zealand. Apart from learning different styles she learnt other practices like organic growing. She explained:

It was good to see what other people were doing. It's not like you're spying or anything like that. And they've all got different styles. It's just like baking a cake. My Mum can bake better than me - it's just like that. We have got quite a few friends who are also winemakers in family companies and they've done the same, gone away and got experience and then brought it back... So I came back [to our family business] and went straight into a viticulture role. (Renée Riesling)

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<sup>4</sup> Morgan Merlot showed the interviewer a spreadsheet that identified variables and main steps (e.g. growing, producing, containment, and closure), that contribute to the production of a bottle of wine. This was demonstrated to, and accepted by, the senior generation. They in turn adopted the analysis as part of their reporting: *"All this gives variables and cost allocations and budgets and stuff like that. Then grapes – so 2009 Sauvignon Blanc from Marlborough, from Block – 01SAB01 63.46 tonnes of it at \$16.50 a tonne... And these are the products that we have and at the far end of it you end up with a sheet like this that just builds the costs up into that wine cost \$60.23. So I basically [built] this on an [Microsoft] Excel platform because when I got here and I saw that our costings... I was, like, all of our wine costs that? You know, one sheet for all of your wines. So how can we price our wine if we don't know how much it costs? So I just made that system up. It took me ages. And I'm refining it now. But it's accurate."* (Morgan Merlot)

With all her externally gained experience, Renée came back to a role where she continued to be mentored by her uncle who had previously trained under her father:

It was like Dad teaching me everything as well. I know I had all the scientific stuff [on paper] but it was a matter of being practical and being able to do it... Because we're a family company, we talk about generational steps. This was like, well, folks, if you want to see the next generation you need to start preparing for it. So I convinced Dad to give me four hectares to turn into organics. And then that went quite well and we made some really good wine out of it. [It was an advantage that] I'm able to make the wine as well... (Renée Riesling)

Both Roger and Renée were trained as viticulturists and had a shared understanding of the implications for organic growing given the stringent guidelines that define "organic". Roger was referred to by one employee as being "old school and not really that interested in organics" (Gavin - Riesling Chief winemaker), however this did not deter Roger from providing Renée with four hectares for a research and development project investigating organic winegrowing. Renée reflected on how she created the organic vineyard which produced award-winning wines:

It was just my project, just my job to look after it. And then because it did quite well, I think Bob Campbell rated it like 92 out of a 100 for its type... And then my father let me loose, so now I've got 14 hectares of it. (Renée Riesling)

To put this in perspective, Renée was entrusted with about 10% of the land that the family owned and leased. This example illustrates the socialization aspect of knowledge flow in a family firm, with the next generation and the senior generation having similar tacit knowledge with the addition of the uncle mentoring the niece having benefited from his brother's knowledge. It is also an example of the senior generation being cognisant of the next generation's explicit knowledge and giving a younger family member leeway to apply new knowledge. This led to innovative practices that created a new product for the winery and was shared with the senior generation, particularly her father, who was also a viticulturist.

A further, and perhaps more telling example of knowledge being shared from the next to the senior generation, was advancing the senior generation's technological knowledge. Although competent in typewriting and its advancement toward becoming electronic, she called upon the next generation to share their technological experience:

I've had to learn new skills... like with typing I was taught the old way and then when electric typewriters came along, I had to learn to use them... Computers came along. Oh, what do you do? So what I did, I asked my nephew to come down on a Sunday morning to show me what to do. And so I learned to do that and that whole computer thing was a learning thing for us all (referring to her brothers). And by this time this complex was built, so we moved into this. (Madge Merlot)

Madge added that once using a computer was mastered, the process started again when email became prevalent. After again calling on her nephew to teach her about email, she started to apply this knowledge with her brothers:

Murray only just sort of got his own computer just this year, and so I had to do all that for them. You know, printing out screeds of emails to keep them up-to-date with what was going on. ... I still do it for Melvin, but I just forward it to Murray. (Madge Merlot)

The introduction of technology also featured as a challenge to the senior generation of the Sauvignon family. While Solomon was good at organizing and prioritizing, he was limited in his technological skills:

We've been setting up computerized irrigation in the new vineyard. We set one up last year or the year before and had to get your head around how it works. Solomon is not very confident about his computer skills, so he had Stella on board with him for the first one he did. You need to have somebody who really has their head around it. (Sylvia Sauvignon)

Previously, Solomon needed to drive to their various vineyards across the region and manually turn the irrigation on and off. Stella and Suzie stepping in to share their knowledge was necessary for Solomon to navigate technology for efficiency in the vineyards, allowing Solomon to better spend his time managing the growing business.

These examples across the three family businesses reflect the importance of knowledge sharing originating from the next generation. A synoptic view of data related to knowledge sharing engagement by the next generation is presented in Table 4.

**Table 4: Next generation engaging in knowledge sharing**

<i>Participant pseudonym</i>	<i>Role in family business</i>	<i>Knowledge sharing engagement</i>	<i>Outcome from sharing knowledge</i>
<i>Morgan Merlot</i>	General manager	Extremely engaged	Established systems in the business. Partnered with external partners to purchase wineries later acquired for the family business
<i>Suzie Sauvignon</i>	Winemaker	Very engaged	Studied medicine and utilizes her knowledge in her winemaking
<i>Simon Sauvignon</i>	Winemaker	Very engaged	Is completely immersed in the business and initiated partnership networks.
<i>Stella Sauvignon</i>	Marketing	Moderately engaged	Concentrates on the marketing and promotion function of the business
<i>Rania Riesling</i>	Marketing director	Moderately engaged	Runs the hospitality side of the business including a restaurant
<i>Richie Riesling</i>	Winemaking director	Extremely engaged	Established a brewery with seed capital from the family business and by utilizing wine making equipment
<i>Renée Riesling</i>	Viticulturist director	Very engaged	Established an organic winegrowing enterprise within the family business

Table 5 provides a summary of the senior generations' acceptance of next generation knowledge.

**Table 5: Senior generation's acceptance of knowledge coming from next generation**

<i>Participant pseudonym</i>	<i>Role in family business</i>	<i>Level of knowledge acceptance</i>	<i>Acceptance of next generation knowledge</i>
<i>Melvin Merlot</i>	Chairperson	High	Although conservative, was open to systems being installed and understood that Morgan's commercial knowledge was invaluable to the family business
<i>Murray Merlot</i>	Managing director	High	Similar to his brother Melvin, he encouraged Morgan to utilize his commercial knowledge. He was keen to have his son enter the business in time as Morgan and his cousin get on well and have different attributes they brought to the business
<i>Madge Merlot</i>	Administration	High	In a unique position as she was not an owner but influenced her brothers. As the eyes and ears on the shop floor she sometimes mediated where she felt Morgan wasn't getting a fair hearing. She also utilized and applied technological knowledge gained from the next generation
<i>Solomon Sauvignon</i>	Co-founder	Moderate	As an engineer/winegrower he was very practical and pragmatic in his decision making. However sometimes this meant the next generation had their ideas rejected
<i>Sylvia Sauvignon</i>	Co-founder	High	Was the glue in the family. Sometimes acted as a mediator between the children and Solomon where ideas were rejected with no rationale
<i>Roger Riesling</i>	Co-founder and Chairperson	Very high	A visionary who encouraged his children to give things a go. He realized the next generation would need to create the vision for the family business going forward which included enabling them to find their feet through experimenting
<i>Ruth Riesling</i>	Co-founder	High	Was more skeptical than her husband but acted as a sounding board for ideas and proposed changes. She embodied practical wisdom which sometimes could be interpreted as rejecting ideas

## Discussion

So far we have provided insights into how family businesses engage in intergenerational bidirectional knowledge sharing. The findings revealed characteristics of the flow of knowledge with a better understanding gained about knowledge introduced by the next generation. They brought explicit knowledge into the firm gained through their education, working for similar firms, and sometimes in professions unrelated to winegrowing. These experiences were often brought with an intimate understanding of the international market and practices from other countries. We found that the next generation's knowledge base is centred around their formal education and work experiences. The senior generation, on the other hand, tends to establish their knowledge through trial and error experiences, and their accrued wisdom is often displayed through intuition and foresight. On the basis of these arguments we put forward the following:

*Proposition 1: In family firms the senior and the next generation have knowledge bases with different characteristics. The senior generation's knowledge base primarily includes tacit knowledge developed through trial and error and on the job experiences; the next generation's knowledge base primarily includes explicit knowledge acquired through formal education and articulated knowledge from firms where they have worked.*

In the family businesses we studied, the next generation was exposed to the business from an early age, often working in the business before leaving for tertiary study or travel. An early engagement with the next generation can build on the already tacit knowledge they have from observing the senior generation (Cabrera-Suárez et al., 2001), to promote intuitiveness, creative foresight, and pragmatic decision making. Socialization, that is the conversion process of new tacit knowledge through shared experiences (e.g. traditional apprenticeship), is prevalent in family firms where family members take a journey of lifelong learning before entering the family business (Boyd, Royer, Pei, & Zhang, 2015). However, the main concern in regard to socialization processes is that knowledge does not become explicit – that is, documented in a way that is easily leveraged within the organization (Desouza & Awazu, 2006; Nonaka & Takeuchi, 1995). This echoes Grant's (1996) concerns related to integrating tacit knowledge across the organization. In our study, the next generation of the Merlot family initiated the process in which tacit knowledge would become explicit through a mission statement and supporting documentation that could be disseminated through their business. This action recognized the socialization within the family firm, which to some extent is important to retain a competitive advantage. However the knowledge needed to become explicit to avoid derision within the business with those that were not close to the family, and who misinterpreted the values held by the family. As pointed out by Basly (2007, p. 172), “the weak externalization of knowledge coupled with the avoidance of sharing outside the family causes serious risks”. This is a form of knowledge externalization which was also obvious through the implementation of systems by Morgan Merlot. The mode of knowledge internalization where someone receives knowledge and subsequently applies that knowledge, was summarised by Nonaka and Konno (1998):

[Internalization] requires the individual to identify the knowledge relevant for one's self within the organizational knowledge. That again requires finding one's self in a larger entity. Learning-by-doing,



training, and exercises allow the individual to access the knowledge realm of the group and the entire organization. (p. 58)

This is particularly true through Renée Rieslings' reflection on how she applied explicit knowledge acquired from a formal education and industry experience within the family business. Apart from introducing an innovative process to the firm, this also cemented her place in the "larger entity". Her new knowledge generated innovative outcomes for the firm which were shared and utilized within the firm to the extent that her father increased her influence through providing significantly more land for her to produce wine organically. Furthermore, Renée was the recipient of mentoring not only from her father, but also from her uncle, conveying the importance of quality relationships between the generations for accepting new knowledge. Cabrera-Suárez (2005) suggested the role of the senior generation was to mentor the next generation and based on her case studies, she observed that with successful cases of family firm leadership, the role of the senior generation was an:

... important supporting role by allowing the assumption of responsibility and by creating an atmosphere of consulting and tolerance of mistakes.... Differences in leadership styles are considered constructive and fruitful. The conflict is limited to the working environment. (p. 91)

Mindful of these sentiments, we argue that family businesses need to be cognisant of the need to share knowledge in both directions between generations and in doing so understanding what distinct knowledge bases (with their respective value) each brings to the business. Our findings reveal that the next generation's knowledge can be important for recognising opportunities; however, a respectful acknowledgement of the senior generation's tacit knowledge can ground the introduction of explicit knowledge.

It seems reasonable to argue that family members hold tacit knowledge that is immediately accessible and somewhat unambiguous. With a favourable knowledge sharing atmosphere of high mutual trust and honesty that is observed in family firms (Royer, Simons, Boyd, & Rafferty, 2008), family members typically enjoy an environment where they can learn by doing. Because of the special family environment, family firms will often provide resources and opportunities needed for the next generation to document the robustness and usefulness of their knowledge for the family firm. Our interpretation of the empirical data leads to the following:

*Proposition 2a: In family firms, the next generation not only receives knowledge from the senior generation, but is also the source of new knowledge which, shared with the senior generation, can be applied to organizational ends.*

*Proposition 2b: By providing opportunities and resources for applying the acquired knowledge, family firms facilitate the sharing of knowledge from the next generation to the senior generation.*

An assumption asserted through the knowledge-based view that we challenge involves the roles of hierarchy and related decision making authority (Grant, 1996). Related to hierarchy, Grant (1996) refers to “achieving purposeful, coordinated action from organizations comprising many individuals” (p. 117). This illuminates concerns related to tacit knowledge in hierarchies that are potentially less problematic in the family business context. Grant (1996) states: “... once firms are viewed as institutions for integrating knowledge, a major part of which is tacit and can be exercised only by those who possess it, then hierarchical coordination fails” (p. 118). For example, with employees holding tacit knowledge that is not transferable up the hierarchy, hierarchical coordination is compromised. Typically in a family business the senior generation needs to transmit their knowledge to the next generation at an early stage in order to achieve an effective transfer of knowledge (Trevinyo-Rodriguez & Tàpies, 2006). In doing so, Trevinyo-Rodriguez and Tàpies added that the next generation could benefit from situations being created where they could “act, reflect, and name the findings” (p. 348). In that way, effective learning could occur where “commitment, expectations, values, and perceptions” needed to be “shared” across generations with learning processes being constructed in the way “that they show challenging and solvable situations highly related to real life and to future work” (Trevinyo-Rodriguez & Tàpies, 2006, p. 353). We depart from the traditional hierarchical view by acknowledging the valuable knowledge base that is held by the next generation through their formal education and experiences (Chirico & Salvato, 2008), as demonstrated through our findings.

The knowledge flow from the next generation to senior generation is not unproblematic. It is challenging for many family firms for several reasons. First, there are often differences in key characteristics of the knowledge base. Second, often the family firm will only have developed practices, if at all, for sharing intergenerational knowledge in one direction, namely from the senior

generation toward the next generation. Third, there are some important differences in validation criteria. The senior generation will typically rely on a deep experience-based knowledge to assess what works and what does not, whereas the next generation knowledge is either relying on more formal (scientific) criteria or on knowledge validation mechanisms they have learned about in other organizations. Finally, traditional industries often lean toward path dependency and can cause significant inertia in regard to the direction of innovation activities (Hirsch-Kreinsen et al., 2008).

### Conclusion and implications

This paper extended the traditional view of knowledge sharing in family firms as being one directional from senior to next generation (e.g. Distelberg & Schwarz, 2015), where the senior generation hold deep smartness (Leonard & Swap, 2004). Building on, but different from many existing studies, we argue and put forward evidence for bidirectional knowledge sharing between the senior and next generation. We highlighted that the next generation, given their formal education and/or work experience, bring a valuable knowledge base to the family business. This knowledge base is different from the one held by the senior generation by drawing more extensively on explicit knowledge acquired through tertiary education combined with tacit knowledge acquired from vocational activities outside the family firm. This potentially valuable knowledge originating from the next generation is often applied to organizational ends in the family firm.

Notwithstanding, there are a number of implications when the next generation's knowledge is implemented. Although the introduction of new knowledge is important, the extent to which the senior generation accepts new knowledge from the next generation can differ substantially between family businesses. Often the ability to validate the new knowledge is critical for the subsequent wider application of the knowledge. This bidirectional knowledge sharing appears to be a *modus operandi* for family businesses aspiring to generate innovative outcomes and change.

At this point it is worth noting that alongside the benefits of knowledge sharing between generations, there can be detrimental consequences if the knowledge is not managed well. We propose that families need an overt awareness of both obverse knowledge sharing (senior to next generation) and reverse knowledge sharing (next to senior generation) and the need to manage diverse knowledge represented by both generations. Contributing to the solution for managing diverse knowledge, families could engage with governing knowledge sharing (Foss, 2007; Foss et

al., 2010). This implies the need to choose “organizational structures and mechanisms that can influence the processes of using, sharing, integrating, and creating knowledge in preferred directions and towards preferred levels” (Foss et al., 2010, p. 456). Knowledge governance needs to be recognized early, particularly when the next generation enters the business. An early engagement with the next generation can build on the already tacit knowledge they have from observing the senior generation (Cabrera-Suárez et al., 2001), to promote intuitiveness, creative foresight, and pragmatic decision making.

Advantages that family firms have over corporate firms to facilitate knowledge sharing include connectedness and cohesion (Björnberg & Nicholson, 2007), trust and close ties (Sundaramurthy, 2008), and the ability to build tacit knowledge between generations (Jaskiewicz, Uhlenbruck, Balkin, & Reay, 2013). By having strategies in place to minimize hoarding or rejection of knowledge (Michailova & Husted, 2003), redundancy in the knowledge production and problem-solving processes can be avoided. Moreover, by being cognisant of sharing knowledge in a positive way, families can benefit from a learning environment that encourages bidirectional knowledge sharing.

While we have utilized the knowledge-based view to interpret our data, we see future opportunities to engage with social psychology literature including social modelling techniques that could complement the understanding and examination of knowledge sharing in family businesses (Bandura & Walters, 1963; Wood & Bandura, 1989). These techniques could encourage families to be more cognisant of the need to realise the potential in bidirectional knowledge sharing and how to manage diverse knowledge between generations. This would be particularly relevant with the early habituation of the next generation into the operations of the business. Family firms can be rich learning environments and the development of a mentoring or grooming curriculum for learning that encourages bidirectional knowledge sharing engagement – at various life stages – could enrich the sharing of knowledge and provide a platform for the next generations.

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