

An exploratory investigation into strategic resilience in the US wine industry

Armand Gilinsky Jr, Judith Ford, Sandra K. Newton & Deanna Brown

To cite this article: Armand Gilinsky Jr, Judith Ford, Sandra K. Newton & Deanna Brown (2020) An exploratory investigation into strategic resilience in the US wine industry, Journal of Wine Research, 31:1, 35-48, DOI: [10.1080/09571264.2020.1723068](https://doi.org/10.1080/09571264.2020.1723068)

To link to this article: <https://doi.org/10.1080/09571264.2020.1723068>



Published online: 12 Feb 2020.



Submit your article to this journal [↗](#)



Article views: 6




View related articles [↗](#)



View Crossmark data [↗](#)



An exploratory investigation into strategic resilience in the US wine industry

Armand Gilinsky Jr^a, Judith Ford ^b, Sandra K. Newton^a and Deanna Brown^a

^aSonoma State University, Rohnert Park, CA, USA; ^bCenter for Environmental Inquiry, Sonoma State University, Rohnert Park, CA, USA

ABSTRACT

More frequent and destructive natural disasters have thrust the topic of strategic resilience to the forefront of managerial conversations around the globe. Stakeholders increasingly expect firms to have plans in place to mitigate these disasters and sustain, or quickly resume, their operations. The communities within which firms operate increasingly expect them to responsibly engage to sustain local economic and environmental assets. The climate and geography endemic to many wine grape-growing regions are also often vulnerable to wildfire, flooding and earthquakes. Via grounded field research, involving four case studies of wine businesses, we assessed perceived strategic resilience in the key wine regions of Napa and Sonoma Counties recently impacted natural disaster by applying content analysis to eight qualitative interviews from personnel at four bonded wineries. Our analysis found four conceptual constructs of organizational resilience: realizing a need, building stakeholder support, securing resources and capabilities and exemplifying best practices. These conceptual constructs could provide a roadmap for firms looking to increase their resilience in planning for natural disaster.

ARTICLE HISTORY

Received 4 May 2019
Accepted 20 November 2019

KEYWORDS

Disaster planning; resilience; content analysis; strategic preparedness; California wine industry; stakeholder engagement

Introduction

Businesses must not only operate in conformity with their legal and regulatory environments, but they also require a more tacit ‘license to operate’ from the local community in which they reside. Firms in the wine industry typically encounter both support and opposition in the communities where operations are based, and as wine firms attempt to build out the event-based and tourism sides of their businesses, they may be viewed as generators of economic development (i.e. wealth creation, jobs, and tax revenues). At the same time these firms remain vulnerable to community opposition (McCuan & Hertz, 2018). Earlier investigations examined whether or not a wine producer’s environmental practices influence wine consumers’ attitudes towards wine firms (Forbes, Cohen, Cullen, Wratten, & Fountain, 2009; Nowak, Newton, & Gilinsky, 2010) and whether or not philanthropy as a voluntary component of corporate social responsibility

CONTACT Armand Gilinsky  gilinsky@sonoma.edu  Sonoma State University, 1801 E Cotati Ave, Rohnert Park, CA 92928, USA

(CSR) positively impacts a wine producer's external stakeholders, at least in the short term (Forbes, Gilinsky, & Fuentes, 2018). Other researchers have investigated impact of climate change on sustainable viticulture (Shaw, 2017) as well as how managing organizational commitment to sustainability can improve the chances of sustainability innovations (Signori, Flint, & Golicic, 2017). While there has been research regarding disaster preparedness and response in the hospitality and tourism industry (Gruman, Chhiner, & Smith, 2011; Ritchie, 2008), none has examined strategic disaster preparedness specifically within the wine industry.

One might well consider an opposing viewpoint, namely, that resilience should be viewed as detrimental to the sustainability to a wine firm (or any other business) (Hamel & Valikangas, 2003). In that view, voluntary actions to contend with crises and disasters, while potentially leading to innovations, could be neutral with respect to or even have adverse impacts on a firm's financial and social performance (Akgün & Keskin, 2014). The trade-off between the costs and benefits of preparedness in the short-term that restrict resource allocations for the long term has sometimes been said to be a 'dark side' of anticipatory preparedness (Duncan, 1972; Ortiz-de-Mandojana & Bansal, 2016; Williams, Gruber, Sutcliffe, Shepherd, & Zhao, 2017).

Wine firms nonetheless need to be prepared to mitigate the impact of disasters and sustain, or at least quickly resume, operations to maintain the economic vitality of the communities in which they operate. By way of example, recent fire and earthquake disasters in California, New Zealand, and Northern Spain have resulted in damage greater than an estimated \$5 billion to the global wine industry and their surrounding communities. See Table 1 for an example of recent natural disasters from 2014 to 2017, and their attendant economic impact on several important wine regions.

Literature framework

Long-term investments in resources and capabilities present a potential method of creating value for internal stakeholders, including owners (Barney, 1991; Wernerfelt, 1984). Firms able to develop resilience, sometimes referred to as proactive social and environmental practices (SEP), use those as a buffer against shocks and return more quickly to their pre-crisis status (Ortiz-de-Mandojana & Bansal, 2016). Planning for resilience appears to be helping many firms to 'pay it forward.' Over the longer term, firms that invest in SEP may emerge even stronger: they can experience lower financial volatility, have higher rates of survival, and grow faster than rivals that are comparatively less responsive to social and environmental issues (Ortiz-de-Mandojana & Bansal, 2016). Managers of firms that engage in CSR resource allocation can 'create value at times for their shareholders through the creation of insurance-like protection' (Godfrey, Merrill, & Hansen, 2009, p. 442).

Table 1. Economic impact of natural disasters on wine regions, 2014–2017.

EVENT	REGION	DATE	ECONOMIC IMPACT
Earthquake	Napa Valley	8/2014	>US\$500 million
Earthquake	Kaikoura (South Isl.), New Zealand	11/2016	>NZ\$500 million
Fire	Napa Valley & Sonoma	10/2017	>US\$9 billion
Fire	Portugal & Northern Spain	10/2017	>€1 billion

Sources: Compiled by authors from: Bridges, 2017; Kasler, 2018; and Macau News Agency, 2018.

Planning has been defined as ‘a process through which individuals and teams can learn to cope with an unpredictable and rapidly-changing environment’ (Taylor, 1984, p. 57). Planning for resilience requires an organization to adapt quickly and recover from or cope with any known or unknown changes to that environment and continue its essential functions when faced with any type of disruptive event. Resilience can guide organizations through business disruptions with minimal operational, reputational and financial impacts (Moore & Bone, 2017). McCann, Selsky, and Lee (2009) recommend that organizations build individual, group, and organization-level interventions simultaneously because if planning to cope with unpredictability is non-existent or weak, then individual and team efforts are more likely to fail. Through this literature, we propose a conceptual construct termed, ‘Realizing a Need.’

A study of hospitals in the San Francisco Bay Area that had been crippled by a doctor’s strike, Meyer (1982) observes how organizational ideologies (e.g. values, attitudes, and beliefs) explain responses better than their contingency plans or even slack resources. Although some organizations in Meyer’s (1982) study claim financial or administrative resources helped them rebound and return to operations quickly, an ability to make strategic decisions linked to shared beliefs and fluid, entrepreneurial cultures are linked to superior resilience. Through this literature, and our own findings, we propose a conceptual construct termed, ‘Building Stakeholder Support’

According to Cameron, Dutton, and Quinn (2003), two building blocks contribute to an organization’s ability to be resilient: *resources* (social, emotional, material, etc.) and past *experience* with crises that can lead to the development of capabilities, such as proactive or adaptive routines. Leaders can provide resources through training, flexible work structures, or even respectful interactions. Leaders can develop experience with resilience by fostering practices whereby staff are able to exercise judgment, such as making or recovering from mistakes, experiencing success, or providing process feedback. Resources in the wine industry have been defined as financial resources, access to markets, wine production and marketing experience, land, and experimentation facilities, while capabilities have been defined as experimentation knowledge, operational knowledge, supply chain management knowledge, relationship building skills, wine production, and visionary thinking (Signori et al., 2017). Through this literature, we propose a conceptual construct termed, ‘Securing Resources and Experience.’

As McCann et al. (2009) suggest, leaders need help in making sense of their circumstances, creating and sustaining an openness to change, sharing knowledge, creating an action bias in the organization, and developing resources quickly. Organizational resource and experience-building activities are vital for coping with severe and sudden crises that threaten functioning and performance, such as weather-related or human-initiated disasters (McKnight & Linnenluecke, 2019; Williams et al., 2017). Prior disaster-oriented management research has focused on exemplary firm-centric reactions to natural disasters (Larson & Fowler, 2009; Lengnick-Hall, Beck, & Lengnick-Hall, 2011). Based on extant models of exemplary leadership during a disaster, we propose a conceptual construct termed, ‘Exemplifying Best Practices.’

We propose that these four constructs reveal organizational resilience – realizing a need, building stakeholder support, securing resources and experience, and exemplifying best practices. They are synthesized and illustrated in [Figure 1](#).

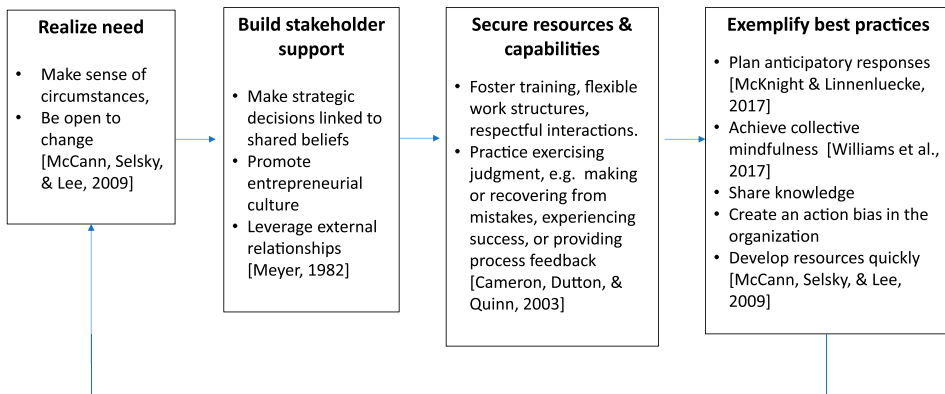


Figure 1. Resilience Adaptation Model. Source: prepared by authors for this investigation.

The next section presents the research methodology and rationale for using comparative case studies for this investigation. Findings from the comparative case are presented and discussed based on the progressive steps of the proposed model in [Figure 1](#). The final section provides conclusions, guidance for practitioners, the limitations of this investigation, and suggestions for future research.

Research methodology

Developing and comparing multiple case studies via content analysis for building theory is well established in the management literature (Eisenhardt & Graebner, 2007; Lawrence, 2010; Murray, 1996). Typically, this process involves identification of key words and phrases in the content to determine areas of convergence and gaps that remain to be filled. According to Patton (2002), content analysis using and comparing structured case studies refers ‘to any qualitative data reduction and sense-making effort that takes a volume of qualitative material and attempts to identify core consistencies and meanings,’ (Patton, 2002, p. 453). These core meanings are called patterns or themes. An advantage of content analysis stated by Weber (1990) is its direct focus on the products of human communication, i.e. the interview transcripts themselves.

The comparative case method applied in this investigation derives from Eisenhardt (1989), Yin (1994), and Sigglekow (2007), scholars that have promoted theory building via grounded field research using structured case studies. Prior investigations into the resources and capabilities in the global wine industry have employed this methodology (Pellicanó & De Luca, 2016; Signori et al., 2017). Inasmuch as most organizations operate in dynamic environments, in which entities evolve, nearly all are compelled to be prepared for or respond to symmetric and asymmetric threats, or at worst, disappear entirely. Unlike event-based, cross-sectional surveys, case studies can provide robust qualitative and longitudinal data for comparing organizational responses to dynamic (and often unanticipated) change.

A quantitative, survey-based study of perceived preparedness for disaster (Gilinsky et al. 2018) tested Fowler, Kling, and Larson’s (2007) findings that larger and older firms and higher-level managers within them would exhibit a higher proactivity

towards strategic preparedness than correspondingly smaller and younger firms and lower level managers within them. Using that premise and through purposeful sampling, four bonded wineries in Napa and Sonoma counties were identified and chosen which represented each of four quadrants: young/small, young/large, old/small and old/large, using the delineation of small, medium and large of the industry standard database, Wines and Vines.¹ Bonded wineries were chosen over virtual ones because the physical nature of bonded wineries was perceived to be more vulnerable to and responsible for addressing natural disasters. The interviews were conducted in August and September 2018, less than one year after the regional wildfires in October 2017. All four wineries had varying impacts from these wildfires. None of the wineries lost structures; one of the interviewees lost their home.

Within each of these firms, interviews were independently conducted with both a high-level manager and a lower level employee. This protocol was two-fold: to determine lower-level and upper-level perceptions of resilience, and to ascertain any discernible differences in how upper-level managers perceive resilience compared with a lower-level employee in the same organization. Structured interview questions were based on the survey instrument developed for the earlier investigation into disaster preparedness (Fowler et al., 2007) and can be found in the Appendix. Interview questions were provided to interviewees in advance via e-mail, along with confirmation of the date and time of the interview. While the interviews were structured around the questions, follow-up questions were asked and interviewers only had to provide occasional prompts. The respondents were forthright and willing to help yet requested that their and their winery's names remain anonymous. The interviews were conducted by two researchers; one conducted the interview and the second transcribed the conversations. Full content analysis using analytical software was not possible since the University Institutional Review Board-approved research project protocols did not permit electronic recordings of interviews to preserve anonymity of respondents.

Analysis and results

Demographic characteristics of the respondent wine firms, labeled Winery A, Winery B, Winery C, and Winery D are presented in [Table 2](#).

A summary of findings from the eight interviews can be found in [Table 3](#).

Via comparisons of the anecdotal case data from the transcripts of eight interviews, several patterns or themes of key words and phrases emerged. These themes informed the progressive steps of the proposed model in [Figure 1](#) above.

The very act of preparing for and being interviewed perhaps had an unintended result: some respondents reported greater preparedness *as a result of* this investigation, i.e. preparation for the interview had an observed tendency to trigger a need for planning:

I [subsequently] found out is that each winery is required by law to have an emergency response plan.

We have an emergency 'pre-fire plan box,' which allows for the gate to open if there is no power. The fire department knows about it to get inside, but I realize people could be trapped *inside* the gate with no way to get out. We need to make sure our employees know where the box is and how to use it.

Table 2. Sample characteristics.

	Winery A	Winery B	Winery C	Winery D
Demographics				
Location	Stags Leap			
AVA Napa Valley	Stags Leap			
AVA Napa Valley	Dry Creek			
AVA Sonoma County	Russian River			
AVA Sonoma County				
Age (years)	40	19	60	19
Size (cases produced)	25,000	500,000 (parent) 24,000 (winery)	850,000	8,500
Ownership	Family, private	Family, private, subsidiary of larger producer	Family, private	Family, private
Interviewees (High Level Mgmt)	Winemaker	Director of Communications (Parent)	VP Production & Procurement	COO
Interviewees (Lower Level Employee)	Lab technician	Winemaker (Winery)	Production staff	Tasting Room Staff

Source: prepared by authors for this investigation.

Thanks to this interview, I now know where our fire extinguishers are! We haven't done fire extinguisher training in a few years and we will be doing that training next week.

Resilience seemed less a function of size or age than the congruity of company culture, which appeared to breed trust and clear communication among stakeholders. Nearly every response to disaster was communication-based. Phone trees to communicate with stakeholders became critical. Information was pushed out to employees and key suppliers, but only one of the wineries had a central number for customers and suppliers to call to seek information updates.

One cool thing that happened is that [the president] would write daily updates to everyone in the organization, not just the California side but [HQ] as well. We relayed updates on

Table 3. Key findings from interviews.

	Winery A	Winery B	Winery C	Winery D
Resilience				
Organizational trust	High	High	Low	High
Organizational cohesion	Strong	Strong	Weak	Strong
During recent disaster	Forced evacuation but returned to front lines			
Loss of power (pours)	Forced evacuation but returned to front lines			
Loss of power (pours)	No forced evacuation or power loss			
Allowed employees to stay home	No forced evacuation or power loss			
Allowed employees to stay home				
Emergency plan	None	'Discovered ours during prep for interview'	'That's not my job, but we are working on a plan'	'No plan – get in our cars and drive away'
Return to normal operations	w/in one week	w/in one week	w/in one week	w/in one week
Market impact	Loss of tasting room revenues (high season)	Loss of tasting room revenues (high season)	Loss of tasting room revenues (high season)	Loss of tasting room revenues (high season)

employees and what was happening at the office and it was a simple way for everyone to know what was going on. I had friends that work for large organizations who were panicking because they only got radio silence. They had no idea what was going on. Even small communication helps even if the communication is the smallest bit.

Wine is wine, but human life is human life, and that the most important thing for us to do is to stay safe and not to worry about what is happening at the winery.

Our vineyard manager and [external vineyard team] were there and they got everyone out. Full bins [of fruit] were left in the fields. It was a no-brainer.

Supervisors told us that if we didn't feel safe we didn't have to come to work.

By contrast, one winery, which appeared to have less cohesion, had a stronger sense of hierarchy and a clear hesitation to express one's ideas.

I haven't seen an emergency plan or our executives haven't gone over it [with us]. We don't have an active plan. A plan that is at least 50% successful would be beneficial. It is on my 'to do' list but with our culture it's not a priority issue to address.

The stronger the degree of stakeholder support, the greater the drive to see with one's own eyes that a potentially disastrous situation was well under control. One Napa wine-maker, who had already lost their own home, said:

We cried with relief to see the winery was still standing ... I told the sheriff I was a wine maker and that I needed to check on the winery; he said it wasn't safe. I told him I lost my home already; the winery is all I have.

To maintain stakeholder support (inasmuch as many winery staff also resided in the communities where they worked) nearly all respondents reported that their employers continued to pay workers during times when their operations were shut down and made it clear that human safety was the only thing that mattered.

In terms of preparedness for natural disaster, neither the age nor the size of the winery mattered as much as did the proximity in space and time of recent disaster. In other words, those who had recently experienced impacts from natural disaster were far more likely to increase their preparedness for future disasters. Emergency planning in the aftermath of the disasters appeared to be iterative. One respondent from the Napa Valley, who experienced forced evacuation and close proximity to the 2017 wildfires reported moving company's data storage to the cloud, adding family members to emergency telephone trees, moving up the schedule to create an emergency plan, and strongly advocated for the purchase of an emergency electricity generator.

Are we ready [for another fire]? God no, but we will be better prepared ... one thing that was impressive was how the industry bonded together. Tragedy always bands people together.

Other respondents recounted how the complex communication channels endemic to a close community aided notification and response:

We have friends that lived in Fountaingrove [a residential and commercial area devastated by the October 2017 fires in the city of Santa Rosa in Sonoma County], just down the hill and they have a daughter that goes to Cal Poly [San Luis Obispo in California] with my son. Their daughter is the girlfriend of my one of my son's friends. So, my son called his friend to call his girlfriend and she then called to her parents to make sure that they were safe. They had no idea

that the fire was happening and then they were evacuated shortly after that. It is interesting that it took a call from their daughter to learn that a fire was going on and that they had to evacuate.

In contrast, one respondent in Sonoma County who was located further from the wildfires and only experienced partial losses of power reported:

Nope, no plans. I guess its lazy and wishful thinking. I feel safe here, very safe ... I don't know exact safety training that happens. Most long-term employees are trained but they haven't been done in a while ... I guess the plan would be to evacuate and drive away, just to leave.

Many Napa Valley and Sonoma County vintners overrode competitive policies to assist competitors who had been affected by natural disasters, e.g. Winery A sold fruit to other wineries:

... other growers and us in (our AVA) sold our fruit to a winery that lost their production facility. We sold the fruit at the average Napa grape price instead of the (AVA) price. That ... never happens.

Winery C bought, stored and processed fruit for other wineries, even mixing other fruit into their own county-labeled blends, while Winery B pledged to keep a small adjacent winery afloat until they were self-sufficient again:

... a fellow [growers association] board member lost her home, her vineyard, everything. She only makes about 300–400 cases. I told my owner that I am going to sell her one ton of fruit to help keep her business afloat ... for as long as she needs to get her back on her feet.

Only Winery D, which shut down for a few days during the fires because of power outages and general transportation impacts but was otherwise unaffected, seemed surprised when asked about helping wineries that had been affected by the fires:

I don't know wineries that were terribly affected. We could have opened production but we didn't hear that anyone needed it or was looking for it.

Yet, the organizational trust apparent in this same winery came through in the interview with a lower-level employee, who breached the security of the human resource database in order to reach colleagues and ensure they were safe. When asked if she had considered whether she might be reprimanded for breaking the rules, she responded,

I just wanted to know how people were. It was one of those things where I was lying in bed and I couldn't sleep and I just wanted to try to make sure people were okay ... I guess technically I shouldn't (have done that) but I felt that I need to go and do that.

This response illustrated a high degree of organizational trust. This is consistent with McCarthy, Starnes, and Truhon (2016, p. 6), who note, 'Organizations with high levels of cultural trust ... recruit and retain highly motivated employees, (who) ... make their own decisions; take risks; innovate ... and display organizational citizenship behavior (e.g. helping a co-worker in need).'

Conclusions and Implications

Despite the fact that the organizational preparedness instrument proposed by Fowler et al. (2007) has been adopted in the corporate social responsibility literature for over a decade,

no intervening study has attempted to unpack the different constructs included within this instrument and across diverse industries. We explored and proposed organizational resilience constructs within this instrument, which can further our understanding of strategic planning in the wine industry. Organizational resilience may also possess interactive effects on perceived strategic preparedness (Bhamra, Dani, & Burnard, 2011; Kantur & İşeri-Say, 2012). Location may play a role in resilience. For example, in our investigation, significant differences were observed in terms of perceived threats between two wineries located in the remote Stag's Leap District, which experienced forced evacuations due to their proximity to the Atlas Peak Fire in 2017 and two Sonoma wineries, which were not evacuated and lie relatively further away from the wildfires. We observed a clear difference in both strategic preparedness (and even the sense of urgency to have a plan) as well the sense of community strength and resilience based on proximity to and prior experience with natural disasters. That is, location may play a role in resilience. For example, in our investigation, significant differences were observed in terms of the two Sonoma wineries' perceptions of preparedness for threats compared with those in Napa. Future researchers could investigate the impact of location on resilience, as some geographical regions may be more or less disaster prone than Northern California.

While there has been prior research correlating cohesive organizational culture and the degree of organizational trust in the communities in which they operate (Hosmer, 1995; Rao & Greve, 2018), as well as demonstrated correlations between a cohesive organizational culture and employee performance (Huhtala, Feldt, Lämsä, Mauno, & Kinnunen, 2011), there is limited evidence regarding the correlations (if any) 'between cohesive organizational cultures and their propensity to foster exemplary resilience' (Akgün & Keskin, 2014, p. 6930), i.e. anticipatory disaster preparedness and post-disaster responses. The case data presented herein, however, shows strong anecdotal examples of organizational cohesion and interagency trust leading to measured risk taking by employees, regardless of job description, which led to greater resilience both during and following natural disaster. Further exploration of how organizational trust, communication, and cohesion impact an organization's ability to respond in times of disaster is clearly indicated.

Using a comparative case research methodology poses some limitations, which include the tendency of the businesses under investigation to be heterogeneous rather than homogeneous in terms of industry sector (Kenyon-Rouvinez, 2001). Prior studies have also taken note of the lack of generalizability of samples that have been restricted to respondents from family businesses (McCann, Leon-Guerrero, & Haley, 2001; Upton, Teal, & Felan, 2001). Due to the sensitive nature of some of the questions in our survey instrument and the relatively small size and unique characteristics of the wine industry, our sample size was limited. Thus, results may or may not be representative of all US wine businesses, wine regions, or attributes of related agricultural businesses.

Other future research studies on the topic of organizational resilience could test whether organizational size or age (years in business) explain greater variance in firm- and employee-level predictors and outcomes across different groups of wine businesses and employee groups in different regions of the US as well as in other countries. Furthermore, research studies in industries other than wine should test whether the validity of our construct factors holds in other industries, as well as the extent to which there are

differences between the results of our study and those of studies based on firms in other industries. Researchers could also investigate the impact of location on resilience, as some geographical regions may be more or less disaster prone than Northern California.

Econometricians could attempt to quantify the model in Figure 1 in order to develop an 'Index of Resilience and Sustainability' that enables a wine firm to benchmark itself against industry best practices. Additional work could quantify the relationships between an employee's sense of trust in their employer and their perceptions of empowerment, as well as between cohesive organization cultures and perceived preparedness and resilience, in order to identify key indices of these potentially moderating variables.

Although ours is an inconclusive cross-sectional investigation into those behaviors in the aftermath of a tragic event in Northern California, strategic choices to engage in long-term strategic preparedness activities within the wine firm to cope with adversity is of great importance to understanding firm behavior, and future researchers might consider longitudinal studies of strategic preparedness.

Managers of wine businesses must find the right balance between planning and remaining operational. No matter how well a plan has been thought out, unexpected events – 'black swans' – will happen (Taleb, 2007, pp. 203–4). One of the hallmarks of a successful business is adaptability, regardless of what its business plan might say to do. For some wine businesses, the environment is too turbulent for extensive planning to be beneficial. When a crisis occurs, managers may find that there is not enough information to allow them to follow a comprehensive plan. In this case, a manager's ability to adapt may be more important than following a careful plan for the future. Kahneman opines that, 'The contribution of a proactive, healthy organizational culture is not only vital to good strategy implementation, but also a healthy organizational culture is linked to organizational resilience, particularly in the face of setbacks' (Kahneman, 2011, p. 263).

In the words of Sigglekow (2007, p. 21)

An open mind is good; an empty mind is not. It is true that one wants to retain the capacity to be surprised, but it seems useful (and inevitable) that our observations be guided and influenced by some initial hunches and frames of reference.

We hope that our exploratory investigation, based on comparative case research involving a conceptual framework of resilience, can aid future researchers in conducting similar research, and shed at least some light on what motivates wine firms to become more resilient, as well as who might benefit from those actions.

Note

1. Large sized wineries are considered to be those producing more than 500,000 cases; medium sized from 50,000 to 499,999 cases and small sized wineries from 5,000 to 49,999 cases. <https://winesvinesanalytics.com/buyersguide/directoryportal/>

Acknowledgments

Funding was provided via a F. J. Korbels Professorship to hire an undergraduate student researcher to transcribe interviews with winery personnel. Postdoctoral funding was provided by a grant from the Stephen Norwick Memorial Fund.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

Postdoctoral funding was provided by a grant from the Stephen Norwick Memorial Fund.

ORCID

Judith Ford  <http://orcid.org/0000-0002-6233-6947>

References

- Akgün, A. E., & Keskin, H. (2014). Organizational resilience capacity and firm product innovativeness and performance. *International Journal of Production Research*, 52, 6918–6937.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120.
- Bhamra, R., Dani, S., & Burnard, K. (2011). Resilience: The concept, a literature review and future directions. *International Journal of Production Research*, 49(18), 5375–5393.
- Bridges, S. (2017). Economic impact of Kaikōura quake revealed. Beehive.govt.nz. April 29. Retrieved from <https://www.beehive.govt.nz/release/economic-impact-kaikC58Dura-quake-revealed>
- Cameron, K. S., Dutton, J. E., & Quinn, R. E. (Eds.). (2003). *Positive organizational Scholarship*. San Francisco, CA: Berrett-Koehler Publishers.
- Duncan, R. B. (1972). Characteristics of organizational environments and perceived environmental uncertainty. *Administrative Science Quarterly*, 17, 313–327.
- Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of Management Review*, 14(4), 532–550.
- Eisenhardt, K. M., & Graebner, M. E. (2007). Theory building from cases: Opportunities and challenges. *Academy of Management Journal*, 50(1), 25–32.
- Forbes, S. L., Cohen, D. A., Cullen, R., Wratten, S. D., & Fountain, J. (2009). Consumer attitudes regarding environmentally sustainable wine: An exploratory study of the New Zealand marketplace. *Journal of Cleaner Production*, 17, 1195–1199.
- Forbes, S. L., Gilinsky, A., & Fuentes, R. (2018). An exploration of philanthropy in the American, Spanish and New Zealand wine industries. *Wine Economics and Policy*, 7(1), 35–44.
- Fowler, K. L., Kling, N. D., & Larson, M. D. (2007). Organizational preparedness for coping with a major crisis or disaster. *Business and Society*, 46(1), 88–103.
- Gilinsky, A., Canavati de la Torre, S., Ford, J., Sen, A., Newton, S. K., & Brown, D. (2018). An exploratory study of strategic preparedness in the U.S. Wine industry. *Journal of Business Management and Change*, 26(1), 55–70. Winter.
- Godfrey, P. C., Merrill, C. B., & Hansen, J. M. (2009). The relationship between corporate social responsibility and shareholder value: An empirical test of the risk management hypothesis. *Strategic Management Journal*, 30, 425–445.
- Gruman, J. A., Chhinzher, N., & Smith, G. W. (2011). An exploratory study of the level of disaster preparedness in the Canadian hospitality industry. *International Journal of Hospitality & Tourism Administration*, 12(1), 43–59. doi:10.1080/15256480.2011.540980
- Hamel, G., & Valikangas, L. (2003). The quest for resilience. *Harvard Business Review*, 81(9), 52–63.
- Hosmer, L. T. (1995). Trust: The connecting link between organizational theory and philosophical ethics. *Academy of Management Review*, 20(2), 379–403.
- Huhtala, M., Feldt, T., Lämsä, A. M., Mauno, S., & Kinnunen, U. (2011). Does the ethical culture of organizations promote managers' occupational well-being? Investigating indirect links via ethical strain. *Journal of Business Ethics*, 101, 231–247.

- Kahneman, D. (2011). *Thinking, Fast and Slow*. New York: Farrar, Strauss and Giroux.
- Kantur, D., & İşeri-Say, A. (2012). Organizational resilience: A conceptual integrative framework. *Journal of Management & Organization*, 18(6), 762–773.
- Kasler, D. (2018). Wine country wildfire costs now top \$9 billion, costliest in California history. *Sacramento Bee*, December 6. Retrieved from <https://www.sacbee.com/news/state/california/fires/article188377854.html>
- Kenyon-Rouvinez, D. (2001). Patterns in serial business families: Theory-building through global case study research. *Family Business Review*, 14(3), 175–191.
- Larson, M. D., & Fowler, K. (2009). Anticipation is in the eye of the beholder: Top-level managers see things differently when it comes to crises preparedness. *J Business and Management*, 15(2), 129–141.
- Lawrence, A. T. (2010). Managing disputes with nonmarket stakeholders: Wage a fight, withdraw, wait, or work it out? *California Management Review*, 53(1), 90–113.
- Lengnick-Hall, C. A., Beck, T., & Lengnick-Hall, M. L. (2011). Developing a capacity for organizational resilience through strategic human resource management. *Human Resource Management Review*, 21(3), 243–255.
- Macau News Agency. (2018). Portugal: Forest fires of 2017 caused €1bn in damage; €244m covered by insurance. February 23. Retrieved from <http://www.macaubusiness.com/portugal-forest-fires-2017-caused-e1bn-damage-e244m-covered-insurance/>
- McCann, J. E., Leon-Guerrero, A. Y., & Haley, J. D. (2001). Strategic goals and practices of innovative family businesses. *Journal of Small Business Management*, 39(1), 50–59.
- McCann, J., Selsky, J., & Lee, J. (2009). Building agility: Resilience and performance in turbulent environments. *People & Strategy*, 32(3), 44–51.
- McCarthy, V., Starnes, B., & Truhon, A. S. (2016). *A primer on organizational trust: How trust influences organizational effectiveness and efficiency and how leaders can build employee-employer relationships based on authentic trust*. American Society for Quality, Human Development Leadership Division.
- McCuan, D., & Hertz, R. (2018). Summary report: Survey on community perceptions of wine businesses (updated). August 10, working paper. Sonoma State University Wine Business Institute. Retrieved from <http://web.sonoma.edu/uaffairs/govt-comm-relations/surveyonwinebusinesses>
- McKnight, B., & Linnenluecke, M. K. (2019). Patterns of firm responses to different types of natural disasters. *Business & Society*, 58(4), 813–840.
- Meyer, A. D. (1982). Adapting to environmental jolts. *Administrative Science Quarterly*, 27(4), 515–537.
- Moore, B., & Bone, E. A. (2017). Decision-making in crisis: Applying a healthcare triage methodology to business continuity management. *J Bus Continuity & Emergency Planning*, 11(1), 21–26.
- Murray, G. (1996). A synthesis of six exploratory, European case studies of successfully-exited, venture capital-financed, new technology-based firms. *Entrepreneurship Theory and Practice*, 20(4), 41–60.
- Nowak, L. I., Newton, S. K., & Gilinsky, A. (2010). Millennials' perceptions of environmentally responsible winery practices: An exploratory study. *Proceedings of 5th Academy of Wine Business Research*, Auckland, New Zealand, 8–10 February 2010.
- Ortiz-de-Mandojana, N., & Bansal, P. (2016). The long-term benefits of organizational resilience through sustainable business practices. *Strategic Management Journal*, 37, 1615–1631.
- Patton, M. Q. (2002). *Qualitative research and Evaluation Methods*, 3rd ed. Thousand Oaks, CA: Sage.
- Pellicanó, A., & De Luca, A. I. (2016). Dynamics, motivations and barriers in internationalisation processes of wineries in Calabria. *Journal of Wine Research*, 27(4), 257–283.
- Rao, H., & Greve, H. R. (2018). Disasters and community resilience: Spanish flu and the formation of retail cooperatives in Norway. *Academy of Management Journal*, 61(1), 5–25.
- Ritchie, B. (2008). Tourism disaster planning and management: From response and recovery to reduction and readiness. *Current Issues in Tourism*, 11(4), 315–348. doi:10.1080/13683500802140372
- Shaw, T. B. (2017). Climate change and the evolution of the Ontario cool climate wine regions in Canada. *Journal of Wine Research*, 28(1), 13–45.
- Siggelkow, N. (2007). Theory building from cases: Opportunities and challenges. *Academy of Management Journal*, 50(1), 20–24.

- Signori, P., Flint, D. J., & Golobic, S. L. (2017). Constrained innovation on sustainability in the global wine industry. *Journal of Wine Research*, 28(2), 71–90.
- Taleb, N. N. (2007). *The black Swan: The impact of the highly improbable*. New York: Random House.
- Taylor, B. (1984). Strategic planning: Which style do you need? *Long Range Planning*, 17(3), 51–62.
- Upton, N., Teal, E. J., & Felan, J. T. (2001). Strategic and business planning practices of fast growth family businesses. *Journal of Small Business Management*, 39(1), 60–72.
- Weber, R. P. (1990). *Basic content analysis* (2nd ed.). Newbury Park, CA: Sage Publications.
- Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*, 5, 171–180.
- Williams, T. A., Gruber, D. A., Sutcliffe, K. M., Shepherd, D. A., & Zhao, E. Y. (2017). Organizational responses to adversity: Fusing crisis management and resilience research streams. *Academy of Management Annals*, 11(2), 733–769.
- Yin, R. K. (1994). *Case study research: Design and Methods*. Thousand Oaks, CA: Sage Publications.

Appendix

Interview questions

Name: _____

Function: Distribution, marketing and sales, management, growing/production

Company: _____

Primary Business: Grower, Fully integrated winery, Virtual winery, Wine distributor, Winery equipment supplier, Wine services, _____

How many years organization is in business?

How many full-time people the business employs? _____ Part-time people?

How many 12x750ml wine produced annually? _____.

- a. How many years have you worked for the company? _____
- b. In that time has your organization experienced a crisis or disaster? If no, go to 'c'. If yes:
 1. Can you briefly describe what happened and how your organization responded?
 2. Were any operational or training changes made following the incident?
 3. Do you feel more or less secure at work since the most recent crisis or disaster.
 4. Were employees in danger of losing their jobs?
- c. How would your organization respond now if a crisis or disaster occurred?
 1. Would you continue to receive employee benefits (e.g. health insurance)?
 2. Would employees be in danger now of losing their jobs?
 3. Would you still be paid until you could reopen?
- d. Do feel the security at your workplace is adequate?
 1. How easy do you believe it would be for a potentially threatening non-employee to gain access to this workplace?
 2. Do you know where the nearest emergency exits and/or fire extinguisher are to your desk?
- e. How has your organization prepared for a serious crisis or disaster? For instance, do they pay volunteer employees to be trained in basic life support techniques? create and train employees on a preparedness plan? stage rehearsals to execute this plan? provide employee with practical tools, such as smoke mask, flashlight, etc.?
- f. Are you familiar and conformable with the plan? Are your colleagues?
- g. If a serious crisis or disaster were to occur at my organization, how would information be communicated to:
 1. employees, including those at scattered or remote locations?
 2. local fire and police departments?
 3. family members?

- h. How do you think your customers and suppliers would fair if you suffered a serious crisis or disaster?
 - 1. How would your organization continue its operations?
 - 2. Would you still have access to the data that I need to do your job?
 - 3. Would they know how and still be able to contact our organization for information?
 - 4. Would your customers would be covered if you were to suffer a disaster?
- i. Have you been in a position to either help an organization in the wine industry or receive help following a crisis or disaster? Could you tell us more about that experience?
- j. What is your sense of the resiliency of the wine industry as a whole? Of the North Bay?
- k. What kinds of tools would you welcome to help you build strategic preparedness and resiliency in your organization, industry and region?
- l. Who do you know in the industry with interesting stories to tell about crisis, disaster and preparedness? Would you be willing to introduce us to them?

Source: prepared by authors for this investigation based on a survey instrument by Fowler, K. L., Kling, N. D., & Larson, M. D., (2007). Organizational preparedness for coping with a major crisis or disaster. *Business and Soc*, 46(1), 88–103.