



LJMU Research Online

Duarte Alonso, A and Alexander, N

Importance of acquiring knowledge through feedback in an emerging industry.

<http://researchonline.ljmu.ac.uk/id/eprint/4725/>

Article

Citation (please note it is advisable to refer to the publisher's version if you intend to cite from this work)

Duarte Alonso, A and Alexander, N (2017) Importance of acquiring knowledge through feedback in an emerging industry. *Asia Pacific Journal of Marketing and Logistics*, 29 (2). pp. 265-282. ISSN 1355-5855

LJMU has developed **LJMU Research Online** for users to access the research output of the University more effectively. Copyright © and Moral Rights for the papers on this site are retained by the individual authors and/or other copyright owners. Users may download and/or print one copy of any article(s) in LJMU Research Online to facilitate their private study or for non-commercial research. You may not engage in further distribution of the material or use it for any profit-making activities or any commercial gain.

The version presented here may differ from the published version or from the version of the record. Please see the repository URL above for details on accessing the published version and note that access may require a subscription.

For more information please contact researchonline@ljmu.ac.uk

<http://researchonline.ljmu.ac.uk/>

Importance of acquiring knowledge through feedback in an emerging industry

Abstract

Purpose – The purpose of this exploratory study is to investigate the importance of feedback in developing and operationalising knowledge from the perspective of craft brewing operators. The study contributes to various literature streams, including marketing and craft brewing entrepreneurship. An additional contribution is made through the adoption of the knowledge-based theory of the firm (KBTF), and the SECI process to facilitate understanding of the significance of knowledge in the craft brewing industry.

Design/methodology/approach – An online questionnaire was designed to gather data from mainly micro and small craft brewery operators. Of the 110 craft breweries identified across Australia, 57 (51.8%) participated. The predominantly qualitative data were analysed using content analysis and word association.

Findings – The importance of knowledge acquisition for craft brewery firms was revealed in various ways. For example, respondents most favoured new knowledge to learn about quality issues and perceptions of quality among buyers/consumers. Further, acquired knowledge through feedback was a determinant factor in participants' decision to produce particular styles of beers. Several alignments with the adopted theoretical frameworks were revealed, including the role of socialisation (SECI process) illustrated through the transformation of explicit into tacit knowledge.

Originality/value – The study examines the dimension of knowledge in the craft brewing industry, which, although considerably developing, continues to be under-researched. Furthermore, the study's findings underline various important implications for the craft brewing industry, suppliers, and for end consumers. The study also proposes a refinement of both the RBTF and the SECI process based on the findings.

Keywords: Feedback, knowledge, knowledge-based theory of the firm, SECI process, craft brewery operators.

Introduction

Contemporary research highlights the importance of knowledge, namely, as a factor influencing information search (Awasthy et al., 2012), purchasing intentions (Huy Tuu and Olsen, 2012), or as a mediator between repurchase loyalty, consumer satisfaction, and perceived risk (Huy Tuu and Olsen, 2009). The academic literature also emphasises the significance of knowledge acquired through feedback (Amigo et al., 2008; Pantelidis, 2010). Indeed, in the hospitality industry, Zhang et al. (2010) revealed a positive relationship between a restaurant's popularity, and customers' ratings concerning the service, quality of the food and volume of feedback. Similarly, research on restaurant patron comments (Pantelidis, 2010) identified important considerations given to food, service, price, ambience, or menu. Pantelidis (2010) therefore concluded that, depending on managers' responses, such feedback can significantly affect a restaurant's longevity. Other authors (Amigo et al., 2008) highlighted the impact of graphic and verbal feedback on restaurant staff, reducing busing time at a pizza restaurant. An element of knowledge generation is inferred in these last three studies, either for those consumers reading postings from others regarding a particular

hospitality business, or for management, in finding ways to improve or maintain consistency of food/service delivery.

A similar argument could be made regarding knowledge in the context of the craft brewing industry, which has experienced substantial growth in the last decade (Aquilani et al., 2015; Baginski and Bell, 2011; Brewers of Europe, 2015; Duarte Alonso et al., 2016; Ellis and Bosworth, 2015; Reid et al., 2014). First, the increasing numbers of craft breweries and craft beer labels has resulted in more alternatives and choices for consumers interested in experiencing such diversity. Second, knowledge is vital for hospitality operators, in keeping up-to-date with consumer trends, in learning about new local and international products, and in identifying ways to acquire these products. Third, for craft brewery operators, knowledge is equally vital; moreover, through feedback they learn about products/services that end consumers desire (e.g., at restaurants, bars).

The craft beer phenomenon also illustrates several associations with, and implications for, marketing and logistics, including the need for craft brewery operators to make investments. Indeed, some operators have implemented diversification strategies, incorporating a venue (bar, pub) to directly sell to the public (Gnauck et al., 2014; Wittmeyer et al., 2013). This strategy helps create a connection between consumers and the brewery, allows for first-hand observations and educational opportunities, and also increases breweries' margins.

Despite the development and potential of the craft brewing industry, academic research continues to be limited, including on microbrewing (Danson et al., 2015; Maye, 2012), beer tourism (Murray and Kline, 2015), and on beer tourists' motivations (Rogerson and Collins, 2015). Research on the acquisition and impact of feedback on generating knowledge in this industry has also been scant. Concerning this knowledge gap, Xie et al. (2014) recognise that research has shed little light on interactions "between consumer reviews and management responses" (p. 2). Similarly, despite the increasing prevalence of online-generated feedback, little is known about the effects of such feedback on firm performance (Kim et al., 2015).

The present exploratory study will contribute to the extant craft brewing and marketing literature, by examining the importance of knowledge acquisition through feedback in the emerging craft brewing industry. At the same time, the study seeks to narrow the knowledge gaps in the respective literature streams. The following overarching research question will be examined:

RQ1: How important is feedback for craft brewery operators? More specifically,

RQ2: What type of feedback are craft brewery operators interested in?

RQ3: How do they obtain such feedback?

RQ4: In what ways, if any, do operators react to feedback?

RQ5: How important is feedback in changing craft beer production process?

Answering the above questions could be helpful in different ways. For example, identifying ways in which operators synthesise and react to feedback will be informative for the craft brewing industry, for marketers, and for end consumers. Furthermore, learning about the extent to which operators change production processes based on feedback will have implications for product quality and/or variety, and, once again, for consumer experiences. In addition, and aligned with the themes under study, several knowledge-related theoretical

frameworks will be considered, including the knowledge-based theory of the firm (KBTF) (Grant, 1996; Grant and Baden-Fuller, 1995; Nickerson and Zenger, 2004), and the SECI process (Nonaka and Konno, 1998). The study will propose a refinement based on both these frameworks and the findings, thus, making a further contribution.

Literature Review

The term 'knowledge' has been defined in various ways; for example, Nonaka and van Krogh (2009) conceptualise knowledge as "the capacity to act based on explicit and tacit elements" (p. 638). Explicit knowledge is shared through data, in the form of manuals or specifications, and can be readily communicated between individuals systematically and formally (Nonaka and Konno, 1998), namely, through numbers and words. In contrast, tacit knowledge is difficult to formalise, share, or communicate; it is personal, deeply rooted in individuals' experience, actions, values, emotions, or the ideals they embrace, and includes subjective intuitions or insights (Nonaka and Konno, 1998). Overall, knowledge is intangible, dynamic, boundaryless, and has no value if it is not used "at a specific time in a specific place" (Nonaka and Konno, 1998, p. 41). Drawing from the work of Dretske (1981), Nonaka (1994) posits that knowledge can be organised and created "by the very flow of information [defined as 'flow of messages'], anchored on the commitment and beliefs of its holder" (p. 15).

The KBTF

Different authors have contributed to the development of the KBTF. Grant and Baden-Fuller (1995) explain that the theory may be perceived as an extension of other areas of research, such as innovation, new product development, or the resource-based view of the firm. Based on earlier studies (e.g., Hedlund, 1994; Jensen and Meckling, 1992; Kogut and Zander, 1992; Nonaka, 1994; Quinn, 1992), Grant and Baden-Fuller (1995) propose five assumptions regarding knowledge and firms, a justification for firms' existence, "and analysis of knowledge integration within firms" (p. 18):

- 1: In terms of strategic importance and contribution to adding value, knowledge is firms' main productive resource.
- 2: Skills, information, know-how, or technology are examples of knowledge. Furthermore, and as previously suggested, a key difference between explicit and tacit knowledge exists. Indeed, explicit knowledge is more articulated and communicated, while communicating tacit knowledge is more difficult (Grant and Baden-Fuller, 1995).
- 3: Individuals can gain knowledge, and they can store tacit knowledge.
- 4: Because time and cognitive boundaries can affect individuals, these should become specialised in acquiring knowledge. However, a trade-off must occur, in that there is a cost of breath of knowledge when increasing depth of knowledge (Grant and Baden-Fuller, 1995).
- 5: Production, which is based on creating value by transforming inputs into output, essentially requires the use of many different forms of specialised knowledge (Grant and Baden-Fuller, 1995).

The review of the literature by Nickerson and Zenger (2004) identifies that, by advancing or updating knowledge, "managers enhance the firm's capacity to produce efficiently" (p. 617). One key assumption of the KBTF is that managers' knowledge-based purpose is to generate valuable new knowledge; this knowledge, together with managers' capability, can contribute to problem-solving (Nickerson and Zenger, 2004). The theory of the firm also suggests that knowledge resides within individuals, and that the key role of organisations is to apply rather

than create knowledge (Grant, 1996). In order to create value within firms through knowledge, Grant (1996) proposes five key characteristics:

Transferability: This characteristic refers to the extent to which knowledge, both explicit and tacit, can be transferred; however, Meyskens et al. (2010) caution that tacit knowledge cannot be easily transferred to entities or individuals. In addition, knowledge transferability is important between firms, and perhaps even more so, within firms (Grant, 1996). For instance, knowledge transferability can help develop outputs and capabilities, enabling firms to attain their objectives (Meyskens et al., 2010).

Capacity for aggregation: Efficiency in transferring knowledge partly depends on “knowledge’s potential for aggregation” (Grant, 1996, p. 111). Similarly, whether at organisational or individual level, knowledge absorption is dependent on recipients’ ability to complement existing with new knowledge (Grant, 1996). Knowledge absorption can depend on formal and informal activities and processes, including socialisation by developing extensive and relevant informal networks (Sawyer et al., 2014).

Appropriability: Based on earlier research (Teece, 1987; Levin et al., 1987), Grant (1996) explains that appropriability is the ability of owners of a particular resource to acquire a benefit equal to that generated by the same resource. The degree of knowledge appropriability depends upon numerous elements, including its extent of application, generality or codification (Rossi, 2011). However, apart from copyrights or patents, as a resource, knowledge is inappropriable (Grant, 1996).

Specialisation in knowledge acquisition: In line with Grant and Baden-Fuller (1995), this characteristic underlines efficiency in producing knowledge. Indeed, specialisation results in different ways of knowledge acquisition being chosen, generating and reinforcing comparative advantages (van den Berg, 2013). Furthermore, creating new, or acquiring existing knowledge, and storing it demands specialisation among individuals, namely, of specific areas of knowledge (Grant, 1996).

Knowledge requirements of production: Grant (1996) posits that production depends on transforming inputs into outputs; thus, a key assumption of the KBTF is that knowledge is the main source of value, and “the critical input in production” (p. 112). Research on demand and supply integration (Esper et al., 2010) highlights the significance of value based on the operational interdependence among firm departments, whereby collaboration and cross-functional integration emerge. Together, these elements can result in effective generation, dissemination and application of knowledge, and ultimately, in creating customer value, delivering “superior integration of demand and supply management processes” (Esper et al., 2010, p. 11).

The SECI process

An important component of the SECI process is based on ‘ba’, a concept translated from Japanese into English language as ‘place’ (Nonaka and Konno, 1998). ‘Ba’ relates to knowledge and can be conceptualised “as a shared space for emerging relationships” (Nonaka and Konno, 1998, p. 40). Such space can be mental (ideals, ideas, shared experiences), virtual (teleconference, email communication), physical (office), or a combination of these (Nonaka and Konno, 1998). Through this shared space, and through individuals’ reflections of their

experience or that of others, 'ba' facilitates the advancement of collective or individual knowledge (Nonaka and Konno, 1998).

Interactions between explicit and tacit knowledge contribute to new knowledge creation (Nonaka and Konno, 1998). By combining tacit and explicit knowledge, the following conversion patterns or stages that are part of the SECI process emerge:

Socialisation facilitates the conversion of "new tacit knowledge through shared experiences" (Nonaka et al., 2000, p. 9), or social interactions (Khodakarami and Chan, 2014). Moreover, joint activities, including spending time together, allowing individuals to share and exchange tacit knowledge, and years of apprenticeship help facilitate understanding of other individuals' way of thinking (Nonaka and Konno, 1998). Freeing the self, by empathising- as opposed to sympathising- with others is essential for tacit knowledge to be shared (self-transcendence).

Externalisation can be demonstrated in terms of commitment and in becoming a member of a group (Nonaka and Konno, 1998). Through externalisation, tacit knowledge can be formulated into explicitly knowledge, and subsequently be shared within an organisation (Khodakarami and Chan, 2014). Furthermore, externalisation involves expressing and translating tacit knowledge into forms that can be understood by other individuals (Nonaka and Konno, 1998). Thus, aligned with the socialisation stage, self-transcendence is fundamental to group integration and to convert tacit into explicit knowledge (Nonaka and Konno, 1998).

Combination: This stage involves converting "explicit knowledge into more complex sets of explicit knowledge" (Nonaka et al., 2000, p. 9), or, as Khodakarami and Chan (2014) suggest, integrating various "sources of explicit knowledge to create new knowledge" (p. 29). The combination stage, which highlights the importance of justification, and allows organisations to take practical and specific steps, is based on three processes. In the first, the key step of securing "and integrating new explicit knowledge" (Nonaka and Konno, 1998, p. 45) involves gathering and combining knowledge, including externalised knowledge, and from outside or inside a company. In the second, new knowledge is disseminated among an organisation's members, for instance, through meetings or presentations. In the third, processing or editing explicit knowledge, namely, in the form of reports, market data, or plans enhances its usability (Nonaka and Konno, 1998).

Internalisation: This stage involves converting explicit knowledge into an organisation's tacit knowledge (Nonaka and Konno, 1998). Importantly, internalisation can promote "the actualization of new product innovation" (Ramírez and García Morales, 2011, p. 445), or improvements within an organisation. In fact, training, learning-by-doing, or exercises can help individuals have access to the knowledge area of a group or organisation. Two key dimensions are at the core of internalisation (Nonaka and Konno, 1998). First, explicit knowledge must be characterised by practice and action, for instance, actualising methods or concepts about innovation, strategy, or improvements. Second, knowledge can be embodied through experiments or simulations that help initiate 'learning-by-doing' processes (Nonaka and Konno, 1998).

Nonaka and Konno (1998) summarised these ideas in a clock-wise "spiral evolution of knowledge conversion and self-transcending process" (p. 43). First, socialisation (tacit

knowledge) can progress into externalisation (tacit-explicit knowledge), with the participation of more individuals to form a group. In the combination phase (explicit knowledge), several groups conform the organisation, while in the internalisation phase (explicit-tacit knowledge) both the individual and the group fall within the larger organisation (explicit-tacit knowledge). The entire process then begins at the level of socialisation. According to Nonaka et al. (2000), through the SECI process, firms create knowledge dynamically and continuously. Furthermore, tacit knowledge acquired by individuals is amplified and converged in the ‘spiral of knowledge’ represented by the four stages (Nonaka et al., 2000). Importantly, firms’ efficiency in converting knowledge “is what gives... [firms] rent” (p. 16).

Given the paucity of academic craft brewing research from a management, entrepreneurial, and marketing perspective, it is not surprising that the adoption of both the KBTB and the SECI process in this domain is to date inexistent. This study will seek to narrow this knowledge gap, adopting these theoretical frameworks to examine this growing industry from the perspective of craft brewery operators.

Methods

The present exploratory research investigates the significance of feedback in generating/developing knowledge, examining the case of the emerging craft brewing industry through the lens of the KBTB and the SECI process.

The background knowledge of one of the research team members was crucial in the initial process of making contact with craft brewery operators in Australia. Indeed, in March of 2015, the research team was invited to a meeting by a local craft brewers’ association, which took place near the authors’ institution. During the over two-hour event, the 20 attending craft brewery operators presented and discussed a number of contemporary issues, particularly related to the short and medium-term future of their industry. Sustainable growth, quality control, opportunities from involvement in gastronomy and tourism, and legislation barriers were some of themes discussed. Thus, the meeting allowed for gathering useful insights through note-taking, observations, and by asking questions to the participating operators. Together, this information was operationalised through the development of a questionnaire designed for the study. Given the budget and time-related barriers to visit different Australian states, or make telephone calls to states with markedly different time zones, a decision was made to use an online questionnaire to gather data from craft brewery operators. While this medium presents such limitations as achieving low response rates (e.g., Sauermann and Croach, 2013), the above challenges justified its choice.

One section of the questionnaire investigated demographic aspects of breweries and participants, including the state where the brewery was located, volume of production, number of employees, participants’ age and gender. The exploratory nature of the research, which attempted to collect first-time data from Australian craft brewery operators, also justified the content of some of the questions. For example, the second section, which was open-ended, asked participants to indicate in their own words the type of feedback they were interested to receive. Similarly, a third, open-ended section sought to learn about specific ways in which participants acquired feedback, and a fourth (open-ended) ways in which participants acted upon the feedback they receive. A final section asked participants to choose specific situations that applied to their craft brewery business; this section also provided space for typed comments.

Academic research on craft brewing was also considered during the questionnaire design process. For example, research focusing on the growth of this industry in various countries (Aquilani et al., 2015; Baginski and Bell, 2011; Duarte Alonso, 2011; Ellis and Bosworth, 2015; Reid et al., 2014) was reviewed.

While attending the March 2015 meeting, the research team presented the initial stages of the project, and invited the 20 operators to take part in the study. In addition, the contacts of all craft breweries that were members of the Craft Beer Industry Association (CBIA), 110 at the time of the study, were obtained from this association's website. In the following days, contact was established with the craft breweries individually. The e-mail message sent to the attention of the operators summarised the aims of the research project, and also asked recipients to follow a URL link provided in the body of the message to complete the online questionnaire. Three reminders were sent to the craft breweries between May and June of 2015. In all, 59 of the 110 craft breweries completed the questionnaire. Two respondents did not fully complete various sections of the questionnaire; these responses were no longer considered. Thus, 57 usable responses were obtained, a 51.8 percent response rate.

The data gathered through participants' comments were analysed using content analysis and word association. Content analysis is a method that requires from researchers to focus on specific characteristics of meaning, or those associated with the research question (Schreier, 2014). Word association involves presenting participants "with a target stimulus and asking them to provide the first thoughts or images that come to mind" (Roininen et al., 2006, p. 21). To support this analysis, NVivo, version 9, a data management software, was also used. The following sections will provide a collection of salient verbatim comments; these comments are labelled using the following abbreviation pattern: Participant 1: P1, Participant 2: P2, and so forth.

Demographic data of craft breweries and participants

Based on the figures (Table 1), predominantly, participants operated in three states (44, 77.2%). The majority (31, 54.4%) produced less than 100,000 litres of craft beer, and had been involved in the craft brewing industry for five years or less (31, 54.4%). A similar percentage of participants marketed their craft beer products both state and nation-wide, mainly in liquor stores, pubs, restaurants, and bars/clubs, while nine (15.8%) were exporting. This information illustrates the importance of relationships with various stakeholders, including national and international distributors, and with hospitality businesses. Most craft breweries (35, 61.3%) employed fewer than 5 employees, and therefore fell under the category of micro enterprises in Australia (ABS, 2001), while 14 were small (5-19 employees). Male participants clearly represented the majority as compared to the female group. Finally, a similar percentage of participants produced craft-beer brewing in urban and regional areas.

Table 1 Here

Results

Type of feedback participants seek

Based on content analysis and word association, a first part of the analysis (Table 2) indicates that quality-related information was a fundamental type of feedback participants were seeking from those acquiring their products (70.2%). An alignment between this finding and contemporary research emphasising the crucial value of product quality was noticed. For

example, in one of the few studies conducted among craft beer consumers to date, Aquilani et al. (2015) underscored the impact of perceived quality, as well as that of raw materials. In fact, these elements influenced consumers' perceptions, namely, of craft beer being of higher quality than commercial beers (Aquilani et al., 2015).

Similarly, research on wine consumers (Corduas et al., 2013) revealed the importance of intrinsic wine attributes, such as grape variety, aroma/bouquet, complexity and taste. Regarding extrinsic elements, Sáenz-Navajas et al. (2013) found that, for instance, wine bottling, awards received, or origin could affect consumers' perceived quality.

Quality-related feedback was distantly followed by general information (any type of feedback), feedback on the styles of craft beer produced, and perceptions/level of satisfaction with the different craft beers produced. A selection of comments further illustrates the significance of these forms of feedback:

P1: All feedback is warranted - the skill is in the interpretation of it. How we can assist venues to sell. What consumers are after in their beer [sic]. Certainly quality control is critical also.

P2: All feedback has value in how you continue to improve.

P3: Quality, styles of beer. What they like about our beer such as flavour, mouth-feel, clarity, aromas, etc.

P4: Quality issues. If there is something wrong with our beer I want to know about it.

P5: We want the good and bad news.

Ways of gathering feedback

When participants were queried about how they gathered feedback, the choice of face-to-face communication emerged, reinforcing the notion that this traditional information-gathering method still continues to be the preferred medium. Verbatim comments indicated various other perceived ways to gather feedback:

P6: Engaging in conversation with consumers, retailers and distributors to establish what is happening on the ground in their patch.

P7: We work in our retail bar. Our sales person gets feedback from venues we supply. We look at apps like 'Untappd' [<https://untappd.com/>] regularly to see if there is anything we should be concerned about.

P8: We have a cellar door onsite, so we can do this [feedback gathering] direct and via our wholesale market.

At the same time, and more aligned with the increasing role of technology in product/service delivery and marketing, more than half of the participants acknowledged that social media tools contributed to gaining knowledge from consumers. While traditional methods of communication and feedback-gathering seemed to prevail, this last finding was also important, not only given the increasing use of technology, but also because technology adoption is fundamentally ingrained in new, younger consumer groups. Moreover, this phenomenon could have significant implications for the future of the craft brewing industry, in capturing an audience, as well as in promoting and marketing craft beer products.

Indeed, Reid et al. (2014) highlight the significance of ‘millennials,’ a demographic group composed of individuals born between 1979 and 1981 (McGlone et al., 2011). As would be expected given their age, one key characteristic of this group is its strong relationship with social media: “millennials are digital consumers” (Reid et al., 2014, p. 119). Moreover, social media provide millennials with opportunities to learn about new beer types, seasonal beer releases, or where to purchase particular beers (Reid et al., 2014). Importantly, millennials can also be strongly influenced by word-of-mouth, namely, from friends, bartenders, or wait staff (Reid et al., 2014).

Despite the availability of different ways to gather feedback, there was also a perception that technology was not as efficient as traditional, direct feedback (P9): “*We talk to our customers, and they talk to us. Social media is full of opinions, mostly of no value.*”

Table 2 Here

Acting upon receiving feedback

Whereas responses to both type and ways to acquire feedback were mainly concentrated around one or two themes, three main forms of acting upon feedback emerged (Table 2). Responses were also much more evenly distributed, with approximately 40 percent of participants indicating that they acknowledged and responded to feedback they received. However, members of this group did not provide any specific forms of responses, suggesting that, rather than taking immediate action, they first wanted to reflect on the feedback they received. The following comments highlight this, rather passive, reaction to feedback:

P10: [We respond that] *Initial response acknowledging their feedback has been received and that we would look into the issue. A follow up response, if required, to clarify/inform of the decision or reaction to the issue raised.*

P11: *Depends what the feedback is and who it is from. I will take constructive feedback (good or bad) seriously and consider options for acting on it. I ignore useless feedback.*

Aligned with more reactive measures in response to feedback, based on the results (Table 2), the majority of participants indicated becoming involved in refinement of product quality, looking at existing issues, and recalling products. The following salient comments demonstrate such commitment:

P12: *Addressing any quality issue by tasting the beer by myself and also by an independent person...*

P13: *Negative issues: Engage with customer [sic] to define the problem, assess if it is in fact a problem; if it is a problem, identify cause and fix it. Positive feedback: Say 'Aw shucks. Thanks very much' and get on with next job [sic]. Customer requests for a particular style are put on the 'I will think about it list'.*

Within this context of responding to feedback, comments also documented that some participants were prepared to take radical measures to address feedback:

P14: *I have changed the name of a beer due to consumer feedback!*

P15: *Quality issues (fortunately few) force us to constantly look at our entire supply chain with the aim of ensuring freshness at the point of pouring. Feedback from venues helps us forecast demand, tweak recipes and develop new products.*

The importance of direct communication was again revealed, with P16, for instance, referring to the environment where end consumers experienced the craft beer product: *We try to get in touch with them [customers, distributors] if there has been a problem. Social media is not very effective for this though. In the brewery bar we find out what the problem is, and replace any problem or potential problem stock, and ask for them to return unopened problem stock for us to evaluate.*

The significance of responding to feedback has been documented by various authors. Among others, Xie et al.'s (2014) investigation of customer online reviews in the hospitality industry revealed a negative relationship between management response and hotel performance. In fact, specific responses by hotel managers were not reflected in performance improvements (Xie et al., 2014).

Situations potentially affecting craft beer production processes

A final section of the questionnaire asked participants to indicate what situations may be affecting craft beer production processes from a number of choices (Table 3). In line with the data shown in Table 2, the findings further reinforced the importance of addressing feedback from various sources. The majority (63.2%) of participants acknowledged producing certain beer styles in order to attract a particular market; similarly, 59.6 percent produced craft beer styles based on customer/consumer feedback. At the other end, imitating other craft brewers was only marginally considered.

Table 3 Here

Space for comments also allowed for gathering participants' views on these areas. While in general operators indicated proactively seeking to address feedback, the following comments also emphasise the balancing act of paying attention to commercial interests, and maintaining a certain degree of independence and creativity:

P17: *I produce beer that I would like to drink myself, and being part of a community, there are many like-minded people who want to do the same.*

P18: *I primarily produce beer styles that I like myself, but I do listen to customer feedback and have created new styles based on this feedback.*

However, there was also awareness for practicality and simplicity in production processes. Such was the case of P19, whose brewery produced less than one million litres: *"...we brew ales, as it is a quicker turnaround time and requires less energy, which is better for cash flow."* A common pattern emerged from these last three comments, in that these participants were owners of the craft brewery, and had been in the industry for 11 or more years. Based on these comments, it could be suggested that, through many years of receiving feedback, these individuals have translated explicit into tacit knowledge.

Discussion

Various alignments between the adopted theoretical frameworks and the findings were identified; these are discussed in the following sections and conceptualised in the proposed

refinement (Figure 1). Concerning the KBTF, a variety of comments highlighted the importance of translating explicit into tacit knowledge. First, P1 referred to interpreting feedback and ensuring efficiency and consistency in quality control, while P2 was committed to taking feedback to the next level. P6 relied on various key information sources, and, as P7 and P8, had ongoing opportunities to receive feedback and increase knowledge and understanding of production processes, quality issues or consumer responses.

In line with research by Grant and Baden-Fuller (1995), this knowledge can subsequently be stored as tacit knowledge, contributing to improving skills, for instance, looking for and solving any issues related to the craft beer product. In this process, operators create and add value to future production batches, not only by improving craft beers' quality, but also enhancing the brand through consumers' perceived quality.

Similarly, while many participants seemed to take a cautious, even passive, approach to reacting to feedback, as Table 2 illustrates, the majority were proactive in responding and/or addressing any issues. P13's visible willingness to engage with consumers to identify and resolve any potential problems once again suggests opportunities for converting explicit into tacit knowledge. P13 was also prepared to consider new styles of craft beer based on the feedback received, a step which would additionally demand a learning curve, including further exploration, trial-and-error, and subsequent improvements. Similarly, P5 and P15 were prepared to fast-track the process of translating explicit into tacit knowledge, making radical changes upon receiving feedback. The comments from P17, P18, and P19 also demonstrate the significance of accumulated experience in decision-making and business focus. These participants indicated having longer experience in the industry; as a result, they have become more specialised in acquiring and operationalising knowledge.

Thus, four of the five characteristics postulated by Grant (1996), namely, transferability, capacity for aggregation, specialisation in knowledge acquisition, and knowledge requirements of production clearly emerged from the findings. In the case of appropriability, Grant (1996) posits that knowledge is inappropriable. However, an argument could be made that, by operationalising the use of feedback and the associated accumulated tacit knowledge over the years, craft brewer operators can obtain a variety of benefits. Moreover, while these benefits may not be manifested in patents or copyrights, increased and accumulated tacit knowledge may lead to improved skills, quality and efficiency. Furthermore, operators may be able to create recipe refinements or new styles/flavours, with clear implications for their craft breweries' competitive advantage.

With regard to the SECI process (Nonaka and Konno, 1998), first, the socialisation stage was reflected in the findings, for instance, in participants' direct interaction with various potential sources of feedback, such as consumers, distributors, or retailers (e.g., P6, P8, P13, P14, P15). Importantly, in this stage, the adoption of both traditional, and more contemporary, technology-based communication methods was revealed.

Figure 1 Here

Second, externalisation was reflected in that, through the feedback received, participants can first accumulate or develop tacit knowledge, and strengthen their relationships with those individuals providing feedback. In this context, and in line with Nonaka and Konno (1998), a group of stakeholders that includes craft brewery operators and those individuals providing

feedback may be established. Subsequently, operators may convey and operationalise their accumulated tacit knowledge in ways that are understood by consumers, distributors, and retailers, particularly concerning quality improvements, or new product development.

Third, the stage of combination was also confirmed, and is illustrated in the first months or years in which craft brewery operators accumulate feedback. Over time, with the acquisition of more forms of explicit knowledge from a variety of stakeholder groups, this type of knowledge may increase in complexity, with impacts for integrating new or additional explicit knowledge (Nonaka and Konno, 1998). The more complex explicit knowledge is then shared within the craft brewery business, as well as edited or processed, allowing craft brewery firms to make full use of it.

Fourth, internalisation was also revealed. Indeed, the above stages of acquisition of new and more complex forms of explicit knowledge through feedback can be operationalised by craft brewery operators, taking specific actions, or learning-by-doing (Nonaka and Konno, 1998). For instance, operators may embrace innovation, develop production, sales, or marketing strategies, or overall, make improvements in craft beer production, thus, potentially enhancing the firms' efficiency and 'rent' (Nonaka et al., 2000), or tangible benefits. The different stages reinforce learning processes through the accumulation of explicit knowledge, and its gradual translation into tacit knowledge. As illustrated (Figure 1), the characteristics proposed by Grant (1996), and the stages suggested by Nonaka and Konno (1998) in the context of the study have important implications in terms of value creation, competitiveness and efficiencies. These implications flow back into craft brewery firms, with feedback once again being initiated and translated into knowledge.

Conclusions

As industry reports and, increasingly, the academic literature, indicate, the craft brewing industry has experienced major development in numerous countries. However, as various authors suggest (e.g., Danson et al., 2015; Maye, 2012), there are knowledge gaps in craft brewing entrepreneurship and management research. Similarly, the important aspect of interactions between consumer feedback and ways in which management respond has been studied to a limited extent (Xie et al., 2014). By investigating the importance of feedback in generating knowledge within the craft brewing industry, the present study contributed to the extant craft brewing, entrepreneurship, hospitality, and marketing literature. At the same time, the study addressed various identified knowledge gaps. Furthermore, the study's focus on knowledge acquisition justified the adoption of the KBTF and the SECI process, which represented an additional contribution.

The findings revealed the importance of knowledge acquisition, for instance, in that participants were interested in feedback related to quality issues and improvements. This feedback was predominantly gathered via traditional, direct, face-to-face contact, and, importantly, was strongly complemented by social media tools, including 'Untappd.' Regarding action upon receiving feedback, while nearly one third of participants appeared to take a rather passive approach, the majority engaged in responding, and in addressing any issues emerging from such feedback. In some cases, feedback led to prompt and swift action, including producing styles that consumers/customers demand, product recall, or even changing the name of the craft beer (P14, P16).

Clear alignments emerged between the findings and the adopted theoretical frameworks. For example, many of participants' comments highlighted the usefulness of the characteristics postulated by Grant (1996) concerning the acquisition and operationalisation of knowledge. Such was the case of transferability, capacity for aggregation, specialisation in knowledge acquisition, and knowledge requirements of production. Arguably, while apart from patents and copyrights (Grant, 1996) knowledge may be inappropriable, an argument is made that accumulated knowledge, including complex explicit and tacit knowledge could nevertheless generate important benefits to craft breweries. This valuable knowledge may be in the form of improved or developed recipes, resulting in new flavours and styles, constituting a key element in craft breweries' value creation and competitive advantage.

The findings were also aligned with SECI process. Indeed, through socialisation (direct, face-to-face feedback, or indirect, social media-based communication) participants were able to gather crucial knowledge from customers and other business stakeholders. The importance of externalisation was also reflected, in that direct/indirect forms of gathering feedback can strengthen bonds between the craft brewery and those stakeholder groups. Clear implications resulted for craft brewery firms, particularly in the form of continuous, constructive feedback, with breweries reciprocating, for instance, through new or improved products or services.

Implications

The aforementioned knowledge gaps, including the dearth of knowledge concerning responses by management to consumer feedback (Xie et al., 2014) identify practical implications from the study's findings. One such implication highlights the relevance of direct and indirect communication with various key stakeholder groups, including consumers, distributors and suppliers. These forms of obtaining constant feedback could enhance efficiency and competitiveness, alerting craft brewery operators of quality and other issues, and reinforcing the image of their brand in terms of product and service provision. In turn, these potential benefits could have a significant impact on the final product. In this context, distributors, hospitality businesses, and end consumers would benefit from new and improved quality products, quality consistency, and product traceability and safety. Another implication refers to the importance of feedback to change production focus (Table 3). With an ever larger number of breweries, and resulting strong competition, this finding emphasises the potential benefits that could be achieved from regular monitoring of consumer, distributor, or retail markets.

An important theoretical implication is illustrated by the value of the KBTF and the SECI to examine the study's main themes. The importance of these theoretical frameworks was particularly reflected in the alignment between the accumulation of knowledge, specialisation in knowledge acquisition, operationalisation, and transformation of explicit into tacit knowledge, and the study's findings highlighting the type of feedback operators desired, or ways to obtain- and react- to feedback. These alignments, and the proposed refinement (Figure 1) help increase understanding of studied themes in the context of the emerging craft brewing industry, particularly given operators' strong focus on developing recipes, new styles or flavours, and on the quality of craft beers (e.g., P3, P13, P18).

As discussed previously, the accumulation of knowledge through feedback, while apparently simple, entails a more elaborated, time-based, and complex body of explicit knowledge. Over time, this knowledge becomes an intrinsic part of craft brewery operators' operations manual, eventually resulting in tacit knowledge. Indeed, this knowledge, which is personal, deep-

rooted in a person's experience, actions, and values (Polanyi, 1962) is also characterised by subjective insights (Nonaka and Konno, 1998). The theoretical framework underlines that such knowledge may help drive innovation, for instance, by developing new products, thus, differentiating the firm from others and enhancing its competitive advantage.

Limitations and Future Research

Collecting only 57 usable responses from the identified CBIA members, albeit representing more than half of existing breweries at the time of the study, is a recognised limitation. In addition, the difficulty in identifying other craft breweries across Australia operating independently, or outside the CBIA, prevented their inclusion in the research. A third limitation is the lack of a comparative component, namely, in that data from craft breweries operating in other countries were not gathered. Despite these limitations, the study is a first exploration of knowledge generation and development through feedback into a growing industry that is still under-researched, including in Australia. Overall, the findings provide useful insights to various stakeholders, in particular, those operating in the craft brewing, hospitality, and event management industries, especially owners, managers, marketers, and end consumers.

The findings and limitations also highlight opportunities for researchers to further develop understanding and theory development on the importance of feedback to acquire and develop knowledge. For example, future studies could complement the currently limited literature on craft beer consumers' perceptions, examining the different variations of feedback, not only regarding the perceived quality of the craft beer, but also the overall craft brewing experience at a brewery, including service, atmosphere/surroundings, and other tangible and intangible elements. Future research could further investigate the supply side, for instance, the extent to which craft brewery operators are receptive to feedback, particularly from consumers, distributors, and suppliers. Studies could also extend beyond craft brewery operators and consumers to also include suppliers and distributors. The further adoption and consideration of the KBTF and the SECI process could significantly enhance future research on craft brewing, and contribute to further theory development. Given the current growth of the craft brewing industry, future investigations could be timely and inform practitioners, academics, and students about the significance of knowledge generation through feedback from various sources.

References

- ABS (2001), "Small business in Australia, 2001", available at <http://www.abs.gov.au/ausstats/abs@.nsf/mf/1321.0> (accessed 10 July, 2016).
- Amigo, S., Smith, A. and Ludwig, T. (2008), "Using task clarification, goal setting, and feedback to decrease table bussing times in a franchise pizza restaurant", *Journal of Organizational Behavior Management*, Vol. 28 No. 3, pp. 176-187.
- Aquilani, B., Laureti, T., Poponi, S. and Secondi, L. (2015), "Beer choice and consumption determinants when craft beers are tasted: An exploratory study of consumer preferences", *Food Quality and Preference*, Vol. 41, pp. 214-224.
- Awasthy, D., Banerjee, A. and Banerjee, B. (2012), "Understanding the role of prior product knowledge to information search: An application of process theory to the Indian market", *Asia Pacific Journal of Marketing and Logistics*, Vol. 24 No. 2, pp. 257-287.
- Baginski, J. and Bell, T.L. (2011), "Under-tapped?: an analysis of craft brewing in the southern United States", *Southeastern Geographer*, Vol. 51 No. 1, pp. 165-185.
- Brewers of Europe (2015), "Beer statistics 2015", available at:

http://www.brewersofeurope.org/uploads/mycms-files/documents/publications/2015/statistics_2015_web_002.pdf (accessed 9 July, 2016).

- Corduas, M., Cinquanta, L. and Ievoli, C. (2013), "The importance of wine attributes for purchase decisions: a study of Italian consumers' perception", *Food Quality and Preference*, Vol. 28 No. 2, pp. 407-418.
- Danson, M., Galloway, L., Cabras, I. and Beatty, T. (2015), "Microbrewing and entrepreneurship – The origins, development and integration of real ale breweries in the UK", *The International Journal of Entrepreneurship and Innovation*, Vol. 16 No. 2, pp. 135-144.
- Dretske, F. (1981), *Knowledge and the flow of information*, MIT Press, Cambridge, MA.
- Duarte Alonso, A., Bressan, A. and Sakellarios, N. (2016), "Exploring innovation perceptions and practices among micro and small craft breweries: A three-country study", *International Journal of Wine Business Research*, forthcoming.
- Ellis, V. and Bosworth, G. (2015), "Supporting rural entrepreneurship in the UK microbrewery sector", *British Food Journal*, Vol. 117 No. 11, pp. 2724-2738.
- Esper, T. L., Ellinger, A. E., Stank, T. P., Flint, D. J. and Moon, M. (2010), "Demand and supply integration: a conceptual framework of value creation through knowledge management", *Journal of the Academy of Marketing Science*, Vol. 38 No. 1, pp. 5-18.
- Gnauck, B., Hart, C. and Pagel, L. (2014), "Blackrocks: Craft brewing – from hobby to business: Applying strategic management to the small firm", *Journal of Business Case Studies*, Vol. 10 No. 2, pp. 103-120.
- Grant, R.M. (1996), "Toward a knowledge-based theory of the firm", *Strategic Management Journal*, Vol. 17 No. S2, pp. 109-122.
- Grant, R.M. and Baden-Fuller, C. (1995), "A knowledge-based theory of the inter-firm collaboration", *Academy of Management Best Paper Proceedings*, pp. 17-21.
- Hedlund, G. (1994), "A model of knowledge management and the N-form corporation", *Strategic Management Journal*, Vol. 15 No. S2, pp. 73-90.
- Huy Tuu, H. and Ottar Olsen, S. (2012), "Certainty, risk and knowledge in the satisfaction-purchase intention relationship in a new product experiment", *Asia Pacific Journal of Marketing and Logistics*, Vol. 24 No. 1, pp. 78-101.
- Huy Tuu, H. and Ottar Olsen, S. (2009), "Food risk and knowledge in the satisfaction-repurchase loyalty relationship", *Asia Pacific Journal of Marketing and Logistics*, Vol. 21 No. 4, pp. 521-536.
- Jensen, M.C. and Meckling, W.H. (1992), Specific and general knowledge and organizational structure, in L. Werin and H. Wijkander (Eds.), *Contract economics* (pp. 251-274), Basil Blackwell, Oxford, UK.
- Khodakarami, F. and Chan, Y. E. (2014). Exploring the role of customer relationship management (CRM) systems in customer knowledge creation. *Information and Management*, Vol. 51 No. 1, pp. 27-42.
- Kim, W.G., Lim, H. and Brymer, R.A. (2015), "The effectiveness of managing social media on hotel performance", *International Journal of Hospitality Management*, Vol. 44, pp. 165-171.
- Kogut, B. and Zander, U. (1992), "Knowledge of the firm, combinative capabilities, and the replication of technology", *Organization Science*, Vol. 3 No. 3, pp. 383-397.
- Levin, R.C., Klevorick, A.K. Nelson, R.R. and Winter, S.G. (1987), "Appropriating the returns from industrial research and development", *Brookings Papers on Economic Activity*, No. 3, pp. 783-820.
- Maye, D. (2012), "Real ale microbrewing and relations of trust: A commodity chain

- Perspective”, *Tijdschrift voor Economische en Sociale Geografie*, Vol. 103 No. 4, 473–486.
- McGlone, T., Spain, J.W., and McGlone, V. (2011), “Corporate social responsibility and the millennials”, *Journal of Education for Business*, Vol. 86 No. 4, pp. 195-200.
- Meyskens, M., Robb-Post, C., Stamp, J.A., Carsrud, A.L. and Reynolds, P.D. (2010), “Social ventures from a Resource-Based perspective: An exploratory study assessing global Ashoka fellows,” *Entrepreneurship Theory and Practice*, Vol. 34 No. 4, pp. 661-680.
- Murray A. and Kline C. (2015), “Rural tourism and the craft beer experience: factors influencing brand loyalty in rural North Carolina, USA”, *Journal of Sustainable Tourism*, Vol. 23 No. 8-9, pp. 1198-1216.
- Nickerson, J.A., and Zenger, T.R. (2004), “A knowledge-based theory of the firm—The problem-solving perspective”, *Organization Science*, Vol. 15 No. 6, pp. 617-632.
- Nonaka, I. (1994), “A dynamic theory of organizational knowledge creation”, *Organization Science*, Vol. 5 No. 1, pp. 14-37.
- Nonaka, I. and Konno, N. (1998), “The concept of ‘ba’: building a foundation for knowledge creation”, *California Management Review*, Vol. 40 No. 3, pp. 40-54.
- Nonaka, I. and Von Krogh, G. (2009), “Perspective-tacit knowledge and knowledge conversion: Controversy and advancement in organizational knowledge creation theory”, *Organization science*, Vol. 20 No. 3, pp. 635-652.
- Nonaka, I., Toyama, R. and Konno, N. (2000), “SECI, ba and leadership: a unified model of dynamic knowledge creation”, *Long Range Planning*, Vol. 33 No. 1, pp. 5-34.
- Nonaka, I., Toyama, R. and Nagata, A. (2000), “A firm as a knowledge-creating entity: a new perspective on the theory of the firm”, *Industrial and corporate change*, Vol. 9 No. 1, pp. 1-20.
- Pantelidis, I.S. (2010), “Electronic meal experience: A content analysis of online restaurant comments”, *Cornell Hospitality Quarterly*, Vol. 51 No. 4, pp. 483-491.
- Polanyi, M. (1966), *The tacit dimension*, Routledge and Kegan Paul, London, UK.
- Quinn, J.B. (1992), *Intelligent enterprise*, Free Press, New York.
- Ramírez, A.M. and García Morales, V.J. (2011), “Improving competitiveness trough creation of knowledge and reverse logistics”, *Engineering Economics*, Vol. 22 No. 4, pp. 443-450.
- Reid, N., McLaughlin, R.B. and Moore, M.S. (2014), “From yellow fizz to big biz: American craft beer comes of age”, *Focus on Geography*, Vol. 57 No. 3, pp. 114-125.
- Rogerson, C.M. and Collins, K.G.E. (2015), “Developing beer tourism in South Africa: international perspectives”, *African Journal of Hospitality, Tourism and Leisure*, Vol. 4 No. 1, pp. 1-15.
- Roininen, K., Arvola, A. and Lähteenmäki, L. (2006), “Exploring consumers’ perceptions of local food with two different qualitative techniques: Laddering and word association”, *Food Quality and Preference*, Vol. 17 No. 1, pp. 20-30.
- Rossi, F. (2010), “The governance of university-industry knowledge transfer”, *European Journal of Innovation Management*, Vol. 13 No. 2, pp. 155-171.
- Sáenz-Navajas, M.P., Campo, E., Sutan, A., Ballester, J., and Valentin, D. (2013), “Perception of wine quality according to extrinsic cues: The case of Burgundy wine consumers”, *Food Quality and Preference*, Vol. 27 No. 1, pp. 44-53.
- Sauermann, H. and Roach, M. (2013), “Increasing web survey response rates in innovation research: An experimental study of static and dynamic contact design features”, *Research Policy*, Vol. 42 No. 1, pp. 273-286.
- Sawyer, J., Evans, N. and Bosua, R. (2014), “Knowledge absorption through social networks for sustainability of SMEs in regional Australia”, *Journal of Economic and Social*

- Policy*, Vol. 16 No. 2, pp. 1-16.
- Schreier, M. (2014), Qualitative content analysis, in U. Flick (Ed.), *The SAGE Handbook of qualitative data analysis* (pp. 170-183), SAGE, London, UK.
- Teece, D.J. (1987), Profiting from technological innovation: Implications for integration collaboration, licensing and public policy, in D.J. Teece (ed.), *The competitive challenge* (pp. 185-219). Ballinger, Cambridge, MA.
- van den Berg, H.A. (2013), "Three shapes of organisational knowledge", *Journal of Knowledge Management*, Vol. 17 No. 2, pp. 159-174.
- Wittmeyer, C.B., Russell, M., and Miller, A. (2013), "Southern Tier Brewing: Family ownership of a high growth brewery", *Journal of Business Cases and Applications*, Vol. 9, pp. 1-10.
- Xie, K.L., Zhang, Z. and Zhang, Z. (2014), "The business value of online consumer reviews and management response to hotel performance", *International Journal of Hospitality Management*, Vol. 43, pp. 1-12.
- Zhang, Z., Ye, Q., Law, R. and Li, Y. (2010), "The impact of e-word-of-mouth on the online popularity of restaurants: A comparison of consumer reviews and editor reviews", *International Journal of Hospitality Management*, Vol. 29 No. 4, pp. 694-700.