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Collaboration among micro and small firms in a traditional industry

Abstract

Academic research emphasises numerous benefits that businesses could gain from collaborating. However, studies also report many existing knowledge gaps. In considering various elements of the theory of collaboration, the present exploratory study contributes to the extant collaboration, micro and small business, and wine research literature, investigating the extent to which winery operators of these largely exporting firms collaborate and share resources. Differences were evaluated between these measurements and demographic characteristics of participants and wineries. Overall, the findings revealed modest levels of collaboration and sharing resources. Participants highlighted restaurants and other wineries as most preferred collaborating partners, while taking part in events, experiences and promotional activities were predominant ways of sharing resources. Statistically significant differences were observed, particularly based on wineries' size; also, associations between the findings and elements pertaining to the theory of collaboration were identified. Overall, the findings have important implications, also for wineries with an exporting focus.

Keywords: Micro and small firms, collaboration, theory of collaboration, wine industry, Italy.

Introduction

Collaboration, significance and knowledge gaps

Earlier research (Gray 1985) emphasises the increasing need to encourage problem solving collaboratively among private sector and public organisations. Collaboration is perceived as a powerful strategy facilitating the achievement of a vision that may not be possible when entities work independently (Gadja 2004).

A number of studies highlight the strategic value and potential benefits of collaborative efforts and partnerships. Ainscow, Muijs, and West (2006), for instance, examine the strategic significance of collaboration in helping schools to solve immediate challenges. Aligned with Gadja's (2004) and Gray's (1985) notion, Imperial (2005) investigates collaboration in watershed management programs as a strategic tool to improve "governance of networks where problem-solving capacity is widely dispersed and few organizations accomplish their missions by acting alone" (p. 281).

In the wine industry, collaboration is associated with strong internal research and development activities, more focus on innovation, and more in-house expertise (Doloreux, Shearmur, and Guillaume 2015). Data gathered among Portugal's winery managers (Correia, Passos Ascensão, and Charters 2004) reveal that collaboration and partnerships with entities within the wine industry was vital in attracting visitors to the region. However, despite perceptions of positive outcomes, such partnerships were very limited (Correia et al. 2004). Research conducted in Germany (Koch, Martin, and Nash, 2012) identified that, while effective regional collaborations may help to develop brand identity, and enhance winery businesses' visibility nationally and internationally, "Collaboration is markedly absent amongst the German wine stakeholders" (p. 68).

Knowledge gaps exist in relation to collaboration between firms and industry, as well as other external stakeholders. Among other studies, Reinl and Kelliher (2010) explain that, despite the significance of networks and learning processes for micro-firm development, this area is neglected in academic studies. In addition, there is a lack of evidence regarding "successful cooperative strategies in this [micro firm] environment" (Reinl and Kelliher 2010, p. 141). In general, despite many calls to study micro-firms, one key group in this research,

historically academic research specifically focusing on these businesses has been rare (Kelliher and Reinl 2009).

Concerning the wine business literature, and associated with collaboration, Lewis, Byron, and Grimmer (2015) posit that few studies have examined network practices of SME wineries operating outside major Australian wine states and regions. Doloreux et al. (2015) explain that wine industry research has not explored the role that collaboration plays in innovation in the industry. An argument is also made of the little empirical research concerning collaboration between micro and small wineries and other ‘collaborating partners.’

Literature Review

Collaboration: Conceptualisation and theory

Definitions are vital for theory development (Wood and Gray 1991). Furthermore, theory is about existing links among different phenomena, and about ‘stories’ explaining why events, thoughts, structures, or acts occur (Sutton and Staw 1995). Theory underlines “the nature of causal relationships, identifying what comes first as well as the timing of such events” (Sutton and Staw 1995, p. 378).

According to Gadja (2004), collaboration theory comprises acceptable general abstractions and principles generated through the observation of numerous entities and individuals working together developing strategic alliances. Earlier pioneering work attempting to develop the theory (Wood and Gray 1991) refers to Gray’s (1986) definition, which highlights various key elements: “Collaboration occurs when a group of autonomous stakeholders of a problem domain engage in an interactive process, using shared rules, norms, and structures, to act or decide on issues related to that domain” (p. 11). By expanding and ‘defending’ all the emerging elements, discussed in the context of wine business related research in the following paragraphs, Wood and Gray (1991) make a contribution to the theory.

Stakeholders of a problem domain: This type of stakeholders is composed of organisations and groups with an interest in a problem domain, or an issue of common concern. At the start of collaborative efforts, stakeholders’ interests may be common or even differ; as collaboration continues, these interests may become redefined or may change (Wood and Gray 1991). A typical case of collaboration among wineries, or between wineries and other stakeholders is the development of wine tourism, whereby such business and entities as restaurants, hotels, other food producers, or the leadership of tourism information offices may share common interests in boosting local tourism (Koch, Martin, and Nash 2013). The opposite case, when wine tourism stakeholders’ interests differ, may result in conflict (Sequeira and de Carvalho 2012).

Autonomy: Even when stakeholders may agree to follow certain shared rules within a collaborative group, they still maintain independent powers to make decisions (Wood and Gray 1991). Research on Chablis (France) wine producers (Brouard and Ditter 2008) noticed that, while individualism was engrained in the wine industry, producers considered cooperation as a key necessity for development and survival. Importantly, collaboration resulted in positive benefits through consumers’ increased interest and involvement in consumption.

Interactive process: The notion that change-oriented relationships of a certain duration take place through the involvement of the participating stakeholders (Wood and Gray 1991). In the wine industry, interactive processes may occur during winery association, cooperative, or

even individual winery meetings, at events or fairs where wineries attend in a group to display their products, or in partnerships with other businesses and organisations in the case of wine trail development or conducting export missions. A recent study (Marlowe, Brown, and Zheng 2016) suggests the significance of interactive processes, for instance, by wineries forming strategic alliances with local businesses, as a determinant factor between success and failure.

Shared rules, norms, and structures are responsibilities for participating stakeholders. Moreover, stakeholders must adhere to norms and rules that govern interactive processes when they participate in collaboration, also when a negotiated order concerning those responsibilities is already shared (Wood and Gray 1991). In the wine industry, such order is illustrated through collaborative alliances among wineries, with agreements requiring the completion of a list of steps. Additionally, pioneering, resourceful, and reputable wineries may provide guidance and leadership concerning structure and ways of operating. In these cases, written/unwritten rules and norms may exist to facilitate order, transparency, and accountability.

Action or decision: Fundamentally, collaboration may exist as long as the participating stakeholders are involved in processes intended to end in decision or action (Wood and Gray 1991). Therefore, given that collaboration focuses on particular objectives, participants should intend to make decisions or act. However, action or decision do not imply that intended goals must be accomplished for collaboration to exist; indeed, “collaboration may fail in its objective” (Wood and Gray 1991, p. 148). Earlier research discusses the downfall of a craft beer trail with various collaborative relationships. Plummer, Telfer, and Hashimoto (2006) report that, despite the apparent effectiveness in collaborative efforts towards specific objectives, after three years, lack of commitment, incompatibility of intentions, and dissatisfaction among some operators led to weakening collaboration, and to the trail’s demise. Thus, while initially intentions to collaborate among the trail’s stakeholders existed, collaboration became fragmented over time, and, partly related to Wood and Gray’s (1991) proposition, despite initial good intentions, collaboration did not accomplish its original objectives.

Domain orientation: In collaborating, participants should orientate actions, decisions, and processes toward issues associated with “the problem domain that brought them together” (Wood and Gray 1991, p. 148). The underlying principle should therefore be the focus on aspects intrinsically related to the group’s main objectives, as they “concern the domain’s future” (p. 148). In the wine industry, if a group or alliance was established to initiate collaborative projects such as export related activities, the energy, effort, and other forms of investment should be geared toward fully addressing such activities, or ‘problem domain.’

Wood and Gray (1991) recognise the absence of ‘outcomes’ in their proposed definition “toward which the collaboration is directed” (p. 149), though they posit that such definition (Gray 1985) can suit a variety of collaborative ways. In addition, general definitions of collaboration “should leave the consequences of collaborating unspecified and open to empirical investigation” (Wood and Gray 1991, p. 149). This study considers outcomes as an essentially element, and discusses it as follows:

Outcomes allow collaborating stakeholders to measure the level of group or personal benefit in participating in collaborative relationships. Sometimes, the outcomes can be negative, as Plummer et al.’s (2006) case study underlines, where some stakeholders’ perceived lack of

benefits from joining the trail resulted in their changing behaviour towards collaborative relationships. In contrast, Dalmoro's (2013) study of the Brazilian and Uruguayan wine industries noticed positive outcomes from the formation of networks within these industries for internationalisation efforts, including exports and more exposure.

Lewis, Byrom, and Grimmer's (2015) investigation among small wineries in an Australian premium wine region revealed the existence of collaboration through horizontal networks, with commercial, strategic and social reasons being most predominant for wineries to join the network. Importantly, the motivations to stay in the network evolved over time, as winery operators gained presence and experience in the region (Lewis et al., 2015). Overall, these networks contributed to sharing knowledge, building norms and goodwill; within the wine region, networks also played a significant role in wine tourism promotion.

In comparing Australian and French wineries, one key finding made by Jordan, Zidda, and Lockshin (2007) was the apparent greater proactiveness toward collaboration, and 'collaborative spirit' among Australian operators as compared to their French counterparts. Working in this positive environment, coupled with the perception of a more flexible legislation, allowed Australian wineries to become marketing/market oriented, be more efficient, proactive in strategic orientation, and more innovative and entrepreneurial (Jordan et al. 2007). In addition, research among elite wine producers in Napa Valley (Taplin 2010) found that, among key industry actors, sharing tacit knowledge, or knowledge based on values, perspectives, intuition or beliefs that individuals develop from their experiences (Saint-Onge 1996) complemented technical skills, and facilitated collective organisational learning. Similarly, Duarte Alonso's (2011) study among wineries producing muscadine wines concluded that, apart from reciprocal business promotion and exchanging ideas, collaboration also helped instil a sense of belonging and friendship.

Different theoretical foundations have been considered or referred to among authors studying collaboration, cooperation, or networking in the wine industry, including network theory (Dalmoro 2012), and knowledge-based theory (Taplin 2010). In turn, micro and small business research adopting the theory of collaboration, or elements from the theory proposed by Wood and Gray (1991) are very limited, or absent in the case of wine business research.

The study's objectives

The present exploratory research makes various contributions to the wine and micro and small enterprise literature. A key objective is to address knowledge gaps concerning collaboration among micro and small enterprises involved in the wine industry. Thus, the study contributes to the wine business and micro and small business literature, investigating collaboration from the perspective of Italian winery owners.

The following research questions are proposed and studied:

RQ1: With whom do micro and small winery operators usually collaborate?

RQ2: Are there any differences between collaboration and demographic aspects of participants/wineries? Similarly,

RQ3: To what extent do they usually share resources with those they collaborate?

RQ4: Are there any differences between sharing resources and demographic characteristics?

By addressing these questions, the study seeks to add new practical and theoretical knowledge. Fundamentally, the participating wineries belong to the group of micro-small firms that in most parts of the world, including in the European Union (Eurostat, 2015) account for over 90% of existing businesses. Thus, from a practical perspective, learning

about the extent to which this group of firms collaborate with other partners/entities, as well as the extent to which firms share various resources could better inform the wine industry, and potentially other industries, of opportunities- as well as impediments- in building collaborative relationships. From an academic perspective, these findings could be considered, confirmed/disconfirmed, or further extended to investigate other regions, and other industries, thus, representing a further contribution of the study. Similarly, from a theoretical perspective, the study incorporates elements discussed in earlier literature seeking to develop the theory of collaboration (Wood and Gray 1991). The adoption of these elements to gain understanding of the study's findings could also inform the theoretical development of future wine business research.

Methods

The present study contributes to the literature of wine business research, micro and small business entrepreneurship, and collaboration, examining collaborative relationships and the extent of sharing resources from the perspective micro and small winery operators. In addition, the study investigates potential inter-group differences between participants and wineries' demographic characteristics, and the dimensions under study. The significance of Italy as the world's second largest wine producer (Wine Institute 2015) was one fundamental reason for choosing this country's wineries. This choice was complemented by the research team's background knowledge of Italy's wine industry, and experience conducting previous research among Italian wineries.

Given the large number of wineries across Italy, and the limited time, financial, and human resources to travel to wineries scattered across numerous wine regions to gather data through interviews, and in line with earlier wine business research (Johnson and Bruwer 2007; McCutcheon, Bruwer and Li 2009), a decision was made to collect winery operators' data through an online questionnaire. Previous research indicates some advantages of online questionnaires (Evans and Mathur 2005; McPeake, Bateson, and O'Neill 2014). However, limitations of this data collection medium are also recognised, including low response percentages (Hardigan, Succar, and Fleisher 2012; Shih and Fan 2008).

For the purpose of this research, the questionnaire consisted of three sections, with Section 1 gathering operators and wineries' demographic information. Section 2 (Table 2) presented participants with nine Likert-type scaled items, whereby 1= No collaboration at all, and 5= Very much collaboration. This section asked participants to rate their extent of collaboration with other collaborating partners. Section 3 (Table 4) asked participants to measure eight Likert-type items (1= Not at all, and 5= Very much), and indicate the extent to which they shared resources with collaborating partners (Table 3). At the end of sections 2 and 3, space was available for participants to add or type comments, thus, providing the study with a qualitative component. The space at the end of Section 2, for instance, asked participants to add 'other' collaborating partnerships or comments regarding these partnerships. Similarly, at the end of Section 3 the space provided allowed for adding 'other' shared resources not included in the questionnaire, as well as comments pertaining to those shared resources.

Several wine business studies discussing collaboration, cooperation and networking were consulted during the questionnaire design process (e.g., Dalmoro 2013; Johnson and Bruwer 2007; Jordan et al. 2007; Taplin 2010; Wargenau and Che, 2006). For example, Wargenau and Che's (2006) study conducted in southwest Michigan found that wineries of various sizes exchanged information and collaborated with lodging operations, while the larger wineries collaborated with restaurants. Duarte Alonso's (2011) research noticed participants' collaborative relationships with other wineries, as well as sharing ideas, and

placing high relevance on friendship and camaraderie with other wineries as important ways of collaborating. Research among Niagara Wine Route's wineries (Telfer 2001) also found alliances between wineries, as well as participation in locally/regionally developed events.

The websites of different Italian regional wine associations (e.g., <http://www.renaissance-italia.it/cantine/>; <http://www.produktorivini.it/>), and those of independent wineries were consulted to identify their email addresses (2,150) that would help elicit a sufficient number of responses. The wine associations and wineries were located in all 20 Italian regions. The identified businesses were contacted by email in May of 2015; the message informed recipients of the study's objectives, and formally invited winery operators to take part in the research project. The body of the message also contained a URL link of the online questionnaire for participants to proceed and complete the survey. Immediately after sending the email messages, 152 (7.1%) messages were returned undelivered. These messages were then deleted from the collated list. In the following weeks, three reminder notices were sent to the 1,998 wineries.

In total, 214 responses were obtained. From these, it was noticed that three wineries were medium-size, or employing between 50 and 249 people (European Commission 2015); these wineries were not included. Thus, 211 usable responses were collected, a 10.6% response rate. Undoubtedly, this percentage, while higher than that of earlier wine business research (Johnson and Bruwer 2007), is still modest. Therefore, the results may not be generalisable to Italy's wine industry, or the wine industry of other countries/regions, and should be treated with caution.

Data analysis

When applicable, independent samples t-test and one-way ANOVA (Scheffé post hoc) were employed to determine statistically significant inter-group differences. The independent samples t-test is a procedure facilitating the assessment of "two sample means from independent samples" (Heiman, 2011, p. 262). For example, the data collected in this study allowed for testing potential differences between male and female participants, or between exporting and non-exporting wineries. This choice is also aligned with contemporary wine research (McCutcheon et al., 2009) comparing female and male in terms of perceived wine attributes, including the significance of the region of origin. A post hoc procedure helps determine statistically significant differences in pairs of means, and is the most conservative of post hoc procedures (Sapp, 2006). Indeed, as opposed to other tests that "tend to increase the probability... [of] statistical significance when two means are close together" (Sapp, 2006, p. 152), the Scheffé post hoc may indicate statistical significance when two means are far apart. Using Scheffé post hoc is also consistent with recent wine entrepreneurship research (Newton, Gilinsky, and Jordan, 2015). In addition, comments from participants were translated by members of the research team into English, and presented verbatim as applicable; these comments are identified with letters and numbers (e.g., P1: Participant 1).

Demographic characteristics: Participants and wineries

Table 1 illustrates that both owners and owners/winemakers represented the majority of participants (135, 64%). A similar number and percentage of wineries (125, 59.2%) produced 100,000 bottles of wine a year or less, and 164 (77.8%) fell under the micro firm category, or those employing fewer than 10 employees (European Commission 2015), while 22.2% were small businesses (10-49 employees). Almost three-fourths of the wineries were established for at least two decades, and almost two-thirds of participants were male. Further, 145 participants (68.7%) have worked at the winery for over a decade, suggesting significant experience and knowledge, particularly concerning the themes under study (i.e. knowledge of

other collaborating partners, of resources shared). Finally, the vast majority of wineries were involved in exports and were open to the public.

Table 1 Here

Results

RQ1: With whom operators collaborate

Overall, the means (Table 2) clearly confirmed a modest level of collaboration. In fact, only on three occasions were the means closer to the ‘much collaboration’ point (4.00), while all other items fell within the neutral point (mean=3.00) or below. Participants indicated collaborating mainly with event managers/organisers (70.6%). One revealing illustration of numerous collaborations with various partners related to events and tourism was presented by P1, a female winery owner/winemaker, with over three decades of experience in the wine industry: “*We partner with the Consortium for the Protection of Barolo Barbaresco Langhe e Roero, Vignerons of the Piedmont, Union of Alba Wine Producers, Women Wine Producers, Association of Piedmont Wines, Association of Barolo Wine Routes, Communal Winery di La Morra, Regional Barolo Wine Shop, Regional Wine Shop Grinzane Cavour, Association of Firms Made in Piedmont.*” Experience is significant in this context, especially in gaining new insights and accumulating knowledge through learning from partnerships, as well as in building trust, and potentially achieving outcomes from these partnerships over time.

Interestingly, restaurants (66.8%) emerged as the second strongest collaborating partner group. While positive in local wine promotion, and potentially higher revenues for wineries as compared to sales to distributors, given that all participating wineries in the present study were micro and small, this result is in contrast with findings in previous research conducted among Michigan wineries. As previously indicated, Wargenau and Che (2006) underlined the lack of collaborative relationships between smaller wineries and local restaurants, with only larger wineries being involved in such relationships.

Table 2 Here

Rather expectedly, other wineries (59.7%) were also mentioned as an important collaborating group. In contrast, and reflecting the overall modest means (Table 2), various participants used the space for comments to voice their frustration at what they considered lack of collaboration within the wine industry:

P2: Collaboration means little... There is a lack of relationships in order to put in place shared initiatives, and lack of real detail of the proposed initiatives.

P3: There is almost no collaboration with other wineries; it is simply unthinkable! Only a little bit [collaboration] with a regional wine association.

Similarly, marginal or no collaborations seemed to exist between wineries and universities, and between wineries and other food-producing firms. Regarding universities, two participants’ comments demonstrated dissatisfaction with outcomes from previous experiences:

P4: Universities are too dependent on receiving state funds. Two previous projects [with universities] folded. In addition, research is done at the university, and no researcher invests time to visit our businesses.

P5: Unfortunately, in our region universities are not inclined to collaborate with wineries. We host so many university students for them go gain industry experience;

*despite our contribution, we have never seen any university academic visit our winery...
I think this is very indicative!*

The above comments suggesting lack of collaboration between the wine industry and other institutions are strongly associated with contemporary research highlighting limited cooperative agreements between these two groups (Gil and Carrillo, 2016), and it is in stark contrast with earlier research identifying reciprocal benefits (McCarver, Jessup, and Davis, 2010).

RQ2: Inter-group differences in collaboration

Conducting a reliability analysis of the nine items (Table 2) using SPSS, version 23, a Cronbach's Alpha of .803 was identified. This Alpha is regarded as satisfactory for comparing groups (Bland and Altman, 1997), thus, supporting the further analysis of the data. The various comparisons between the items and demographic groups yielded several statistically significant differences. First, the level of wine production was an important and influencing factor. Indeed, the higher the production, the more participants appeared to collaborate with event managers ($p < 0.02$), with the group producing over 100,000 bottles yearly clearly indicated a higher level of collaboration (mean=4.01) than the other two groups (means= 3.56, 3.44). Higher production levels (above 100,000 bottles per year), and with more pressures to promote and sell wines may encourage or persuade this group of operators to open up to collaboration, especially with event managers in order to display and sell their wines.

Second, years working at the winery also seemed to be an influencing factor ($p < 0.01$; $p < 0.05$). In this case, the less time participants had worked at the winery, the higher their collaboration with event managers appeared to be. Moreover, participants who had worked at the winery for 10 years or less indicated higher involvement (mean=4.06) as compared to other groups with more winery/industry experience, or between 11 and 20 years (mean=3.48), and 21 years and above (mean=3.62). One plausible explanation for this finding is that individuals with more winery and wine industry experience, may have found avenues to market the wines successfully, and therefore, may be less inclined to start collaborative relationships. At the same time, being less experienced with the winery business, and potentially with the wine industry, may persuade new entrants to be more receptive to collaboration as one way to thrive.

Running independent samples t-test also identified various statistically significant differences based on the size of the winery, gender, and whether the winery is or not involved in exports (Table 3). For example, by dividing wineries into micro and small size, it became evident that they differed in several ways, including in collaborating with various partners. Given their larger size (small wineries), it is suggested that these firms may have more resources at their disposal, as well as more need to engage in collaboration to gain exposure and sales. Female participants also differed significantly from males in three items, most notably regarding their stronger involvement in collaborating with event managers. In a similar vein, participants from exporting firms clearly collaborated more with event managers. Arguably, depending on the level of exports, these operators understand the need to diversify into other revenue-generating activities beyond export markets.

Table 3 Here

RQ3: Extent of sharing

The extent to which participants appeared to share a variety of resources (Table 4) further highlighted the overall marginal level of collaboration. Participation in festivals/fairs as a

group was the most prevalent form of sharing resources. This item includes paying attendance fees, sharing, and operating booths/tents jointly. Three other items that scored above the 'neutral' point (mean=3.00), namely sharing experiences, promotional activities and knowledge could be both part of occasional meetings with other neighbouring winery operators, as well as when jointly participating at events and fairs, where operators may communicate their expertise and passion with event visitors. Experience, for instance, has been suggested to be a significant resource, and a key trait among firm managers (Bailey and Helfat 2001; Castanias and Helfat 2001; Harris and Helfat 1997; King and Tucci 2002). Moreover, sharing experiences was an important element highlighted in Duarte Alonso's (2011) research among United States wineries.

Surprisingly, given the relative small size of the wineries, sharing equipment and machinery, and jointly or reciprocally collaborating in vineyard related activities were the least shared resources. Various verbatim comments further supported ways in which some participants shared resources:

P6: I collaborate in co-marketing activities with another firm in the fashion industry.

P7: Our firm is a member of a winery association, which is involved in increasing regional exposure rather than in the promotion of the adhering wineries. Another local entity helps with the sale of wine products from the local wineries.

P8: Due to the limited dimensions, our winery does not have a cellar; instead, we share space and equipment with another producer. Also, with other four wineries we have developed a group to promote and sell in some markets (exports), and for centralising/consolidating logistics.

P9: Our collaboration efforts are strong; alone with local institutions managing tourism, fairs and events we have continuous collaboration. We want to have more continuous collaboration with other wineries in order to become partners and not competitors, to try to build something together and make the region better known.

Importantly, P9 further reflected on issues that concerned the smaller local wineries, identifying limitations that could be overcome by means of stronger collaboration: "... it [collaboration] is not always possible and it is a question of inflexibility in their positions... Being the largest winery in the province, and having good understanding of the industry, and an existing infrastructure (i.e. bottling plant), we could support the smallest wineries in vinification processes, and in bottling their wines. This would allow them to avoid making costly and inadequate investments that might never recover..." As P10 suggested, convincing other operators to build partnerships and ultimately benefit from collaborative efforts was a significant challenge: "Unfortunately, in this region... there is a culture of mistrust that does not help when trying to do things together."

Table 4 Here

RQ4: Inter-group differences in sharing

Conducting an internal analysis of the eight items shown in Table 4 resulted in a Cronbach's Alpha of .835. Comparing the items (RQ3, Table 4) to various demographic characteristics of participants and wineries yielded few statistically significant differences. Based on the size of the business, small winery operators indicated sharing through participation in groups at

events/fairs to a higher degree (mean=3.66) than did operators from micro wineries (mean=3.26) ($p<0.02$). The larger size of wineries, which has implications for levels of production and also regarding available resources to attend events, coupled with the stronger need to promote, sell and attract new groups of consumers or clients, may be reasons for such difference. Regarding the same item, female participants (mean=3.70) considered sharing the resource of participation at events with other partnering wineries significantly more than did their male counterparts (3.18) ($p<0.001$).

Discussion

Despite the apparent marginal level of collaboration participants indicated, various alignments between the findings and Gadja's (2004) conceptualisation emerged, and more specifically, with the elements presented by Wood and Gray (1991). One general abstraction is represented by various comments (P1, P6-P9) illustrating different ways in which participants were engaged in collaborative relationships. In particular, wineries' alliances with event managers, marketing and tourism businesses and entities (wine, other associations) was a salient point identified in the findings. Given that over 90% of participating firms were involved in exports, these findings are symptomatic of operators' intentions to continue diversifying, building critical mass, including through the identified collaborative efforts, and consolidating or extending export strategies.

The following paragraphs discuss the associations between Wood and Gray's (1991) elements, the context of the study, and the findings; these associations are illustrated in a proposed refinement of collaboration theory (Figure 1).

Stakeholders of a problem domain: As with other industries, including manufacturing clusters, orchardists and other food producers located in a geographic area, wineries and other potential collaborating partners, such as those illustrated in Table 2, were clear stakeholders of 'a problem domain'. In the case of the wine industry, and as suggested in previous research (Wargenau and Che 2006) this problem domain was illustrated by the need of both wineries and local businesses to develop their business and the region's profile, and, ultimately, its economy. Collaboration was then utilised as an important tool to address issues related to the problem domain. The fact that participants appeared to be working predominantly with event managers, restaurateurs and other wineries (Table 2), identifies a change in wineries' strategies, seeking to diversify, potentially complementing their focus on wine exports with other activities, including wine/event tourism.

Autonomy: This element did not emerge clearly. Some operators' establishment of alliances with external as well as internal stakeholders, and their apparent predisposition to share various resources (Table 4), suggest commitment to follow shared rules with collaborating entities and individuals. Thus, while previous research (Brouard and Ditter 2008) emphasises the individualistic nature of winery operators, and while indeed many may be strongly autonomous, independent, or individualistic, such characteristics may not prevent them from engaging in collaboration.

Figure 1 Here

Interactive process: The findings identifying collaborative alliances with events suggest that such collaborations may be of a limited duration, especially since events may run for a day, weekend, or a week. However, preparations and meetings may take place beforehand and interactive processes may be required, with clear implications for building strengths in the

collaborative relationships. In addition, working with restaurants, other wineries, sharing resources when participating at events in groups, or during promotional activities demand continuous interactive processes, where adjustments and changes in behaviour or strategy may be required from both sides.

Shared rules, norms, and structures: Engaging collaboratively with various alliances, groups and individual businesses of certain duration will require adhering to written and unwritten rules, for instance, in terms of commitment, or decision-making, or a prescribed order to execute strategies. Thus, one assumption from the findings is that, given the extent and specific ways in which many wineries appeared to be collaborating, moving forward with existing partnerships will require from participants to continue holding accountability and responsibility.

Action or decision: The overall results suggest that, in some cases, collaboration efforts between participants and other individuals or entities may have failed. This outcome is in line with Wood and Gray (1991). These authors explain that, given that collaboration aims at achieving an objective, participants are expected to make decisions or act. However, this definition of collaboration does not mean that objectives must be attained for collaboration to take place. In fact, collaboration may fail in its aims (Wood and Gray, 1991). Moreover, the fact that various resources were so marginally shared (Table 4) reveal other forms of previous or current failure, including in the existing business culture regarding collaboration (P2, P3, P10). In contrast, the highest means (Table 2) confirm that, given the nature of the collaborative relationships and resources shared, in other cases collaborating processes are geared toward the execution or implementation of actions and decisions. The focus on actions and decisions, including participation at fairs, working with events and restaurateurs, also tie into the element of *domain orientation*. Moreover, wineries collaborate with those businesses and entities, and vice versa, to address the ‘problem domain’ or common concern, which in this study is arguably the need to achieve economic prosperity for the wineries, other stakeholders, and the region.

Outcomes: While Wood and Gray (1991) did not include this element in their discussion of the theory of collaboration, various inferences could be made in the present study regarding outcomes. At the same time, presenting outcomes in collaborative relationships provides a fundamental and crucial complementing component to the research, highlighting its potential, as well as justifying its inclusion in future discussions of the theory of collaboration.

On one hand, while rather marginal, the higher means (Tables 2, 4) suggest the potential of outcomes to positively affect the collaborating groups, for instance, attending event to promote and sell wines, or experiences that may improve quality controls. Some verbatim comments underlining promising outcomes from collaboration (P8, P9) further support this point. On the other hand, while the study did not explore reasons for low involvement in collaboration, some comments (P4, P5), coincidentally referring to negative outcomes between industry-university collaboration, clearly revealed the other side of outcomes. These experiences, both positive and negative, contribute to a deeper understanding of collaborative alliances, and merit the further investigation of outcomes in future research.

Conclusions

Earlier research (e.g., Gadja, 2004) highlights the significant benefits that can be achieved through collaboration, including in the wine industry (Doloreux et al. 2015; Sequeira and de Carvalho 2012), although others (Correa et al. 2004; Koch et al., 2012) underline limited

collaboration in this industry. Authors also acknowledge many knowledge gaps with regard to collaborative relationships, for instance, in the area of networking within micro (Reinl and Kelliher 2009), and winery firms (Doloreux et al. 2015; Lewis et al. 2015).

In addressing some of these limitations, this study contributed to three bodies of literature, namely, collaboration, micro and small firms, and wine business research. Indeed, in considering various elements of the theory of collaboration (Wood and Gray 1991), the study examined perceptions of Italian winery operators of collaboration, including with whom they collaborate, and the extent they share resources. In addition, the study identified inter-group differences between these two areas and demographic characteristics of participants and wineries.

Overall, and aligned with previous research (Correa et al. 2004; Gil and Carrillo 2016; Koch et al. 2012), a modest level of collaboration, and a modest level of sharing resources were revealed. Event management, restaurants, and other wineries appeared to be the most important collaborating entities, while group participation at events, experiences and promotional activities were most common ways of sharing resources. Importantly, verbatim comments complemented these findings, emphasising ways of collaborating and sharing resources, and identifying benefits for participating stakeholders. Other comments also revealed the challenges in developing a culture of collaboration.

The usefulness of the elements presented by Wood and Gray (1991) that are part of Gray's (1985) definition of collaboration became apparent, and contributed to a greater understanding of various aspects related to collaboration in the context of winery firms. The proposed refinement (Figure 1) complemented such understanding through a visual abstraction of the alignments between the theory and the findings. Fundamentally, stakeholders of a problem domain, autonomy, interactive process, shared rules, norms, and structures, and action/decision are intrinsic elements that stimulate and invite reflection of firms' collaborative partnerships. However, while not part of Wood and Gray's (1991) theoretical discussion, 'outcomes' was a key element in the process of understanding different degrees of collaboration.

Implications

Based on the findings (Tables 2, 4), one major practical implication is the need to instil or develop a stronger sense of collaboration, an issue that is not only documented in this study, but also in previous research (Correa et al. 2004; Koch et al. 2012). One example concerns industry-university partnerships, an area where very marginal collaboration seemed to exist (Table 2); this significant deficiency was further illustrated in various comments. Evidence from McCarver et al. (2010) suggests that these relationships could be beneficial for both stakeholder groups. Given the large number of micro and small firms in the winery and other industries, reaching out to this group could be very fruitful for students to assimilate 'real-world' experiences and those from the classroom, while for firms, a helping hand could be available in various ways, including practical work or industry experience (e.g., P5).

Further, a constant flow of projects and other forms of partnerships and alliances could be developed to bring these two groups closer. Universities could help in further developing the potential of micro/small firms, and enjoy the success by exposing students to real business environments. Another important implication is the further strengthening of those partnerships where participants appeared to be currently involved the most. In fact, the increasing number of culinary events, and existing restaurant and winery businesses could be key future partners in developing synergies to promote the region, with additional implications in terms of exports, domestic sales, and inflow of quality visitors to the regions.

From a theoretical perspective, one implication is the usefulness to adopt the elements pertaining to the theory of collaboration (Wood and Gray 1991) in facilitating understanding of micro and firm-related collaboration. However, adopting ‘outcomes’ as an additional element could prove even more enlightening, and therefore constitutes this study’s main theoretical implication. First, this addition is particularly important in the context of micro and small firms, a group that traditionally has lagged behind larger firms in availability of resources (Hewitt-Dundas 2006; Jansson and Sandberg 2008; Shiau, Hsu, and Wang 2009). Second, resistance or distrust could impede engagement in collaboration; this notion is supported by the disappointment of previous experiences some participants expressed. Moreover, without a clearly defined outcome from collaborating, firm operators may be even less inclined to engage in these relationships. The identification of outcomes from collaborating, in combination with other elements of the theory, could inform the micro/small business community, the industry, as well as academics.

Limitations and Future Research

This study presents various limitations. First, while a contribution to theory is illustrated in the proposed refinement (Figure), this conceptual framework is not all-inclusive. In fact, the framework lacks a more robust emphasis on such areas as financial/economic motivations to collaborate, or relational trust and the role of formal contracts as part of collaborative relationships.

A second limitation is the low number of participants as compared to the several thousand existing wineries in Italy. The lack of a longitudinal approach to identify potential changes and make comparisons, for instance, regionally and internationally, is a third limitation of this research. Fourth, the study was conducted during late spring-early summer, with no replication at other times of the year. Because of some of these limitations, the overall findings may not be generalizable to all Italian wineries or elsewhere. Some of these limitations, however, could be addressed in future research, including by seeking a larger sample of participants, and/or responses from wineries in various regions or in another country, as well as by using a longitudinal approach.

Gathering new information could be of practical value for the wine industry, government and European Union development agencies in their efforts to instil a culture of collaboration, cooperation, and networking among micro and small firms. This information could also be invaluable for academics, in gaining a deeper knowledge and awareness of challenges this group of businesses faces. Future research could also adopt the elements of the theory of collaboration, including ‘outcomes’, and address the limitations of the proposed framework (Figure 1), for instance, providing a greater emphasis on the financial/economic motivations to collaborate among winery operators. In doing so, the usefulness of this theoretical framework to study micro and small firms in the wine or other industries could be confirmed, disconfirmed or further enhanced.

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