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### Article

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# **Uncertainty and adaptation in the context of Brexit: An entrepreneurial action and dynamic capabilities approach**

## **Abstract**

**Purpose** – The purpose of this exploratory study is to propose a framework to understand firms' adaptation to uncertainty and change, specifically, in regards to the perceived impacts of the Brexit phenomenon. In doing so, the study considers entrepreneurial action theory (EAT) and the dynamic capabilities approach (DCA).

**Design/methodology/approach** – Face-to-face interviews were conducted with owners and managers of 34 family-run firms operating in Italy's Prosecco Superiore and Spain's Cava industries.

**Findings** – The element of uncertainty due to the imminent Brexit decision clearly emerged, and was demonstrated through various effects on firms, including the falling British Pound. The findings revealed that combining the EAT and the DCA provides a stronger explanation in understanding adaptation to uncertainty. For example, sensing (DCA) was suggested to be a precursor of opportunity attention and evaluation (EAT), or recognising opportunities, and was subsequently manifested by operators' action, or seizing (DCA), including through more involvement in exports and wine tourism.

**Originality/value** – The study is one of the few efforts to date to examine the potential impacts of an uncontrollable contemporary phenomenon, and ways to adapt from the perspective of entrepreneurs involved in a traditional and socioeconomically significant industry. The different adaptive strategies that emerged from the findings can provide practical insights. The proposed framework emphasises the theoretical and practical value of understanding adaptation through the lens of the adopted theoretical foundations.

**Keywords:** Uncertainty, adaptation, entrepreneurial action, dynamic capabilities, winery operators, international business.

## **Introduction**

### *Uncertainty and Brexit*

The referendum held in the United Kingdom (UK) in June of 2016, which resulted in voters' decision to leave the European Union (EU), has created various unprecedented scenarios (e.g., Fuller, 2017), including for entrepreneurs and their affiliated industries, particularly increased business and economic uncertainty (Dhingra et al., 2017). Notably, following the

referendum's result, the British Pound experienced an unprecedented depreciation (Plakandaras et al., 2017), with potentially important consequences for businesses and consumers (Bounds, 2017).

Research focusing on UK small and medium enterprises (SMEs) (Brown et al., 2017) reveals that uncertainty ensuing from Brexit is to affect the more export-oriented, innovative and larger firms, and cause lower capital investment and growth. Furthermore, Bouoiyour and Selmi (2016) highlight the increasing uncertainty for all UK industries, and the ensuing adverse effects given the potential scenario of changing passport rules that might result in a lack of business opportunities. Uncertainty has been referred to as “the decision-maker’s judgments of the propensity for each of the conditioning events to occur” (Hastie, 2001, p. 657), and “the conditional volatility of a disturbance that is unforecastable from the perspective of economic agents” (Jurado et al., 2015, p. 1177).

With regard to foreign trade with the UK, Brexit-related uncertainty has various implications for firms and industries in both the EU and outside. Consequently, negotiations of new trade arrangements between the EU and the UK (Phillipson and Symes, 2018), or between these entities and non-EU countries that might also be affected by Brexit (Revell, 2017) will need to be undertaken. After Brexit, two forms of adaptation might be considered by European leaders, notably, static, leaving approaches to integration unchanged, or dynamic, based on radical changes (Majone, 2017). However, these might be incompatible with basic principles of existing member states (Majone, 2017).

In addition, firms and industries engaged in international business will need to develop strategies and alternatives to adapt to the uncertain environments, including those created by Brexit. For example, uncertainty from Brexit is also likely to affect the UK car manufacturing industry, particularly foreign direct investment (Bailey and DePropris, 2017). Chakravarthy (1982) posits that “a state of adaptation for a business organization is one in which it can survive the conditions of its environment” (p. 35-36).

### *Knowledge gaps, research objectives, research questions and structure*

While there is some preliminary work on perceptions of foreign companies' management on Brexit (Grömling and Matthes, 2017), the academic literature focusing on the impact of this phenomenon on businesses and their industry, as well as on ways to adapt is still sparse. This knowledge gap is also evident in the wine industry, where the perceived consequences of Brexit from the perspective of wine producing firms exporting to the UK have been researched to a very limited extent. As a consequence, knowledge on how winery businesses

build resilience and adapt to the Brexit phenomenon is scant. At the same time, enhancing this line of research, both empirically and theoretically, has key implications for the wine industry, and for UK consumers. Indeed, the UK is among the world's leading wine importing markets (Anderson and Wittwer, 2017a), and it ranks fifth in global wine consumption, with 5.22 percent of the total market (Wine Institute, 2017).

New insights concerning the potential impacts of Brexit on the wine industry, and ways in which wineries could minimise these impacts could extend current knowledge, and provide valuable information to winery operators, their industry and associations, government, and the academic community.

This exploratory study will examine these concerns among entrepreneurs operating in two wine products that are also in which demand among UK consumers, notably, Italy's Prosecco Superiore and Spain's Cava. Such popularity is reflected in the figures for the year 2015 (Table 1); a key commonality in both is that the UK is their third largest export market. As with other areas of wine entrepreneurship, academic research focusing on Brexit, its impacts on these two industries, and ways to adapt and become resilient has been almost inexistent.

Table 1

Against this background, two following two research questions (RQs) are addressed:

RQ1: To what extent is Brexit perceived to affect the two industries under investigation?

RQ2: How could firms adapt to such effects, thereby building resilience?

This study is structured as follows: First, the literature review provides a theoretical background of entrepreneurial action and the dynamic capabilities approach. Second, the methodology section discusses various elements, including such methodologies as case study research, inductive analysis, purposeful sampling, as well as the data collection and analysis processes. Third, the findings section addresses the study's key questions, while the discussion section identifies the associations between the two adopted theoretical frameworks and the study's findings. Finally, the concluding section briefly summarises the study's main points, and further identifies the key practical and theoretical implications, as well as acknowledging its limitations. The study ends by suggesting avenues for future research.

## **Literature Review**

This study's emphasis on how firms cope with uncertainty in a changing business environment, justifies the consideration of two theoretical propositions that will help address the study's main concerns. These propositions include entrepreneurial action theory (e.g., McMullen and Shepherd, 2006; Mitchell and Shepherd, 2010) and the dynamic capabilities approach (Eisenhardt and Martin, 2000; Helfat and Peteraf, 2009; Teece et al., 1997; Teece, 2007, 2012). Together, these propositions represent the foundation of a third important contribution in the form of two proposed theoretical frameworks. The first (Figure 1) depicts the significance of the two adopted theories, as well as their relationships in the context of adaptation and building resilience in light of turbulence. This framework is further enhanced through Figure 2, which associates the theories and the study's findings.

Importantly, contemporary wine business research lacks a theoretical lens through which the perceived effects of Brexit and subsequent adaptation measures can be examined. Moreover, current theoretical frameworks do not wholly encompass issues surrounding uncertainty, and firm adaptability. By providing such a lens, the study can close an existing theoretical gap and provide more in-depth understanding of the issues under investigation.

### *Entrepreneurial action*

Over the years, scholars have attempted to develop a theory of entrepreneurship; however, there is no consensus regarding what constitutes such a theory, and, thus far, none has emerged (Steyaert, 2007). McKelvie et al. (2011) explain that entrepreneurship is a process involving a certain degree of uncertainty. Consequently, a determining factor in the success or failure of a venture is the entrepreneurs' ability to understand and act in the face of uncertainty (McKelvie et al., 2011).

Some researchers have turned their attention to alternative ways to understand entrepreneurship and contribute to theory development. One demonstration of these efforts is the notion of entrepreneurial action (EA), which is based on the principle that entrepreneurship demands action, and that being an entrepreneur means acting "on the possibility that one has identified an opportunity worth pursuing" (McMullen and Shepherd, 2006, p. 132). In advocating the work of Hebert and Link (1988), McMullen and Shepherd (2006) explain that EA relates to behaviour responding "to a judgmental decision under uncertainty about a possible opportunity for profit" (p. 135). This definition is grounded on the premise "that entrepreneurship requires one not just to decide but to decide to act" (p. 135).

Judgement must therefore be exercised when making decisions between various courses of action taking place in the face of uncertainty (McMullen and Shepherd, 2006). Another definition (Spedale and Watson, 2014; Watson, 2013a) conceptualises EA as making creative, innovative or adventurous deals and exchanges between the home enterprise (entrepreneurial actor) and other parties engaged in a trading relationship. Thus, at the core of EA is the principle of adventurous, imaginative, or creative ways of deal making, which is ingrained in humans' propensity to exchange (Watson, 2013a). EA can be understood "as a category of situated creativity" (Watson, 2013b, p. 407). In some situations, exchanges are undertaken through business deals that have an innovative or novel dimension to them (Watson, 2013a).

EA can be illustrated through the creative or imaginative actions of builders, shop keepers, or pub owners, in devising deals with customers, their staff or with other parties, sometimes to develop, expand or even keep a business afloat (Watson, 2013b). In addition, EA can be manifested by bringing new products to markets, creating new organisations, or by investing (Klein, 2008). Acting in an entrepreneurial way is to deal with economic and social circumstances and to innovate; importantly, these circumstances can constrain or enable "the shaping of entrepreneurial actions and their outcomes" (Watson, 2013b, p. 407).

According to Mitchell and Shepherd (2010), by proposing the stages of opportunity attention and evaluation, McMullen and Shepherd (2006) sought to develop a theory of entrepreneurial action. Indeed, McMullen and Shepherd (2006) designed a conceptual model that relates perceived motivation and uncertainty to EA. In this model, the attention stage, which involves questions associated with recognising and acting upon opportunities in general (Mitchell and Shepherd, 2010), combines prior knowledge, personal strategy (motivation), and third-person opportunity (McMullen and Shepherd, 2006). Concerning these factors and resources, Butler et al. (2003) underline that firms seeking to do business with others internationally require additional information such as specific local networks. This aspect is linked to entrepreneurs' need and desire to accumulate information (Autio et al., 2013), as well as knowledge and expertise, and, consequently, be better equipped to deal with uncertain environments. The motivational component is therefore crucial; in fact, "motivation needs to outweigh perceived uncertainty in order for entrepreneurs to act" (Meijer et al., 2007, p. 5837). Moreover, EA is more likely to be motivated by factors other than financial gains (Grégoire et al., 2011).

The evaluation stage entails questions linked to the recognition and action upon opportunities by specific individuals, or 'first-person' opportunities (Mitchell and Shepherd, 2010). Moreover, after entrepreneurs perceive an opportunity, they must identify those steps

required to maximise it; the action of exploiting opportunities completes the process, and represents EA (Butler et al., 2003). Furthermore, McMullen and Shepherd's (2006) model illustrates an overlap between both stages, in that third-person opportunity links with two key elements of the evaluation stage: knowledge (feasibility assessment) and motivation (desirability assessment). These last two components pave the way for EA to occur.

Some authors have empirically tested the concept of EA (e.g., Mathias et al., 2015; Spedale and Watson, 2013). Research by Meijer et al. (2007), for instance, analysed the influence of perceived uncertainty and motivation in entrepreneurs' decision to act in the biomass gasification industry. Their findings revealed that political, resource, and technological factors were most predominant among entrepreneurs, resulting in their perceived uncertainty, and influencing their decision-making.

In addition to EA as an approach to dealing with uncertainty, firms could undertake other forms of competences to adapt to changes in their environment, including the dynamic capabilities approach, discussed in the next section.

#### *The dynamic capabilities approach (DCA)*

The focus of this study on identifying ways in which firms adapt to uncertainty also supports the consideration of the DCA, which provides a strong complement to the EAT. Indeed, the DCA seeks to assess those sources that can help firms to capture and create wealth, as well as help their management in achieving competitive advantage in environments that are becoming increasingly demanding and rapidly changing (Teece et al., 1997). The DCA extends and complements the resource-based view (RBV) of the firm framework (Schilke, 2014). The RBV emphasises the strategic significance for firms to possess resources, including labour, land, or capital (Penrose, 1959) that are valuable, rare, imperfectly imitable, and non-substitutable (Barney, 1991), or VRIN attributes (Eisenhardt and Martin, 2000). Together, these resources, alongside managerial involvement (Penrose, 1959), can be fundamental sources of a firm's competitive and sustained competitive advantage (Barney, 1991).

The term 'dynamic' highlights firms' capacity to renew competences in order to harmonise with changing business environments (Teece et al., 1997). Similarly, 'capabilities' underscores the crucial role of firms' strategic management in integrating, reconfiguring or adapting external and internal resources to address the requirements of the changing business environment (Teece et al., 1997). One type of capabilities, entrepreneurial capabilities, denote

firms' "ability to identify a new opportunity and develop the resource based needed to pursue the opportunity" (Arthurs and Busenitz, 2006, p. 199).

In turn, reconfiguration and adjustment of firms' resource base, together with existing opportunities, is characteristic of dynamic capabilities (DCs) (Arthurs and Busenitz, 2006). Overall, DCs represent a set of identifiable and specific processes, and include alliancing, product development, or strategic decision making (Eisenhardt and Martin, 2000). DCs enable firms to modify ways in which they perform (Helfat and Winter, 2011), and contribute to creating value, notably, "by [firms] manipulating resources into new value-creating strategies" (Eisenhardt and Martin, 2000, p. 1106).

Zahra et al. (2006) note that the DC literature is affected by overlapping definitions or inconsistencies. They posit that DCs reflect abilities that help firms to reconfigure their routines and resources in a way that is both envisioned and considered appropriate by their main decision-makers. Zahra et al. (2006) also presented a theoretical model illustrating capability formation and the effect on firm performance, suggesting that entrepreneurial activities influence 'dedicated and leverage resources/skills' and 'learning processes.' These elements help create substantive capabilities and organisational knowledge, which in turn determine the type of DCs needed "to adapt to emerging conditions" (Zahra et al., 2006, p. 926), ultimately affecting firms' performance.

However, the subsequent work by Teece makes a significant theoretical contribution to the DCA, proposing various frameworks. Fundamentally, Teece explains that DCs fall into- and are sustained by- three different categories of adjustments, activities, or orchestration processes:

- *Sensing* is a creation, learning, interpretive and scanning activity (Teece, 2007), which "contains a strong element of diagnosis, which is important to strategy" (Teece, 2014a, 341), and requires critical cognitive capabilities (Helfat and Peteraf, 2015). Moreover, sensing is partly in accord with McMullen and Shepherd's (2006) stages of opportunity attention and evaluation, in that it emphasises the identification and assessment of opportunities (Teece, 2012, 2014a) or threats (Helfat and Peteraf, 2015).
- *Seizing* refers to the "mobilization of resources to address an opportunity and to capture value from doing so" (Teece, 2012, p. 1396). Once the opportunity is sensed, firms need to address it through new services, processes or products (Teece, 2007). Thus seizing can involve astute, substantial and irreversible investments in both



tangible and intangible assets, and designed superior business models (Helfat and Peteraf, 2015).

- *Transforming* entails continuously renewing and adjusting firm activities (Teece, 2012, 2014a), as well as enhancing, reconfiguring, and combining organisational assets (capabilities, resources) in order to sustain growth or profitability (Helfat and Peteraf, 2015).

Teece's DCA has been adopted in contemporary research, including in empirical studies focusing on international business (e.g., Eriksson, Nummela and Saarenketo, 2014; Villar, Alegre, and Pla-Barber, 2014). Among other discourses in this area, Kindström et al.'s (2013) study on microfoundations of service innovation found alignment between the DCA and their findings. First, the authors suggest four key sensing activities emerging from their research that apply to service environments: service system, internal, customer-linked service sensing, and technology exploration. Second, seizing was found to correlate with service interactions, managing the service delivery process, structuring the service development process, and adopting new revenue mechanisms. Finally, transforming/reconfiguring was revealed through the orchestration of the service system, balancing product/service-innovation related assets, and the creation of a service-orientated mental model (Kindström et al., 2013).

Bringing together and complementing the discussion of the two adopted theories, a conceptual framework (Figure 1) is presented. On one hand, and as acknowledged by different authors (e.g., Barney, 1991; Eisenhardt and Martin, 2000; Wu, 2010; Wu and Wang, 2007) firms' attributes (valuable, rare, imperfectly imitable, non-substitutable) contribute to equipping firms with essential tools to enhance their competitiveness, including when facing uncertainty and turbulence due to an external event. On the other hand, EAT reinforces the significance of the VRIN attributes and the DCA elements. Moreover, entrepreneurs' ability to cope or bear with uncertainty, particularly by building such ability upon their motivation and knowledge (McMullen and Shepherd, 2006) is conducive to identifying business opportunities. Moreover, as suggested (Figure 1), such degree of competitiveness and identifying or acting upon opportunities, has important implications, preparing and enabling firms to successfully address uncertainty and turbulence.

The suggested links between the two theories and the study's objectives underline their potential contribution to help increase the understanding of wineries' ability to adapt and build resilience in light of an external event. Therefore, the study proposes a theoretical

framework (Figure 2), which associates both theories and the study's findings. Thus, the following third RQ is proposed:

RQ3: To what degree does the proposed theoretical framework (Figure 2) allows for a deeper understanding of adaptation in light of a significant external event (Brexit)?

Figure 1 Here

## **Methodology**

The main objective of this study is to propose a framework based on the EA and DCA ideologies to understand uncertainty and adaptation in view of Brexit from the perspective of operators (owners, managers) involved in two industries with important commercial links with the UK, notably, the Prosecco Superiore (Italy) and Cava (Spain). The perspectives of these participants constitute the unit of analysis of the research. Babbie (2016) refers to a unit of analysis as what or who is under study, which in the social science field is essentially represented by individuals.

By increasing understanding of how entrepreneurs adapt under conditions of uncertainty as a current or potential result of Brexit, the study makes various contributions. For instance, the study contributes to entrepreneurship literature focusing on uncertainty and adaptation from a contemporary macroeconomic issue (Brexit). Despite the significance of the wine industry for the UK, in terms of imports, and for European wine exporting nations, this dimension is still under-researched, most notably empirically. A further contribution is made by considering the case of two regions from two different countries that are heavily dependent on international business transactions (exports). At the same time, the study provides an international, two-country element, which is also missing in the wine entrepreneurship literature concerning the examination of uncertainty and adaptation as a consequence of Brexit.

The characteristics of the study, which explores contemporary issues in an industry which to date has received very limited attention justifies the adoption of a case study and an inductive analysis. A case study as a research strategy that examines “a contemporary phenomenon in its real-life context” (Yin, 1981, p. 59), seeks to understand “the dynamics present in single settings” (Eisenhardt, 1986, p. 534). The evidence of case study research may originate from observations, fieldwork, archival records or interviews (Eisenhardt, 1986;

Yin, 1981). Cases studies “are valuable at all stages of the theory-building process” (Eckstein, 2000, p. 119).

In inductive analysis, researchers work back and forth between their database and themes until an all-embracing set of themes is established (Creswell, 2013). This process can entail a collaborative and interactive effort between the researcher and participants; as a result, participants have an opportunity to shape abstractions or themes emerging from the study (Creswell, 2013). Complementing these notions, Thomas (2006) provides three key purposes for developing an inductive analysis approach:

- To condense varied and large raw text data into more summarised formats,
- To ascertain clear associations between the study’s objectives and summary findings emerging from the data,
- To develop theory or a model “about the underlying structure of experiences or processes that are evident in the text data” (p. 238).

A further method adopted in this study is purposeful sampling. This method involves the strategic selection of ‘information-rich cases’ or those that, based on their substance and nature, will help shed light on the inquiry question under examination (Patton, 2015). Thus, when employing purposive sampling, one must first determine the selection criteria in choosing, for instance, the participants to be studied (Merriam, 2009). In this research, various selection criteria were considered in choosing its participants. For example, two regions producing Prosecco Superiore and Cava, two products that are popular in the UK (Table 1), were chosen. Furthermore, owners and managers of these firms were selected based on their knowledge and expertise in managing the firms and/or in exporting their products. These characteristics demonstrate their potential as ‘information-rich’ cases (Patton, 2015). Owners and managers of the firms are individuals best placed in both the operation and strategic oversight of the business, having both experience and knowledge critical to this study. Their selection as ‘information-rich cases’ positions them uniquely to provide information which could reflect entrepreneurial action and dynamic capabilities.

The use of case studies enables strong in-depth understanding into the different recurrent issues that consistently affect and are experienced by family firms in this study. The ability to select critical cases, provides a unique means to examine and identify the different approaches to dealing with uncertainty from individuals who are best placed and

knowledgeable. Yet it is also important to note that while methodologically robust, case studies can be limited in its ability to generalise findings to the wider context and as such, this context, should be considered. Nonetheless, there have also been suggestions that results may not be not statistically generalisable but are analytically generalisable (Welsh and Lyons, 2001), highlighting the value and significance of its usage. In this same vein, this study intends to contribute to understanding approaches to dealing with uncertainty through the use of the EA and DCA as a theoretical framework. Case studies are particularly viable and afford generalisability when the investigator's goal is to expand upon theoretical propositions (analytical generalization) rather than focus upon populations or universes (Easton, 2010; Yin, 1989).

For the purposes of this study two main questions were posed to participants:

- To what extent will Brexit affect your firm?
- How could your firm adapt to the effects of Brexit?

A review of reports on the suggested effects of Brexit and its implications for the wine industry (Anderson and Wittwer, 2017b; Crabb, 2016), as well as research focusing on firm adaptation to uncertainty (Laine and Galkina, 2017; Martin-Tapia et al., 2008; Uzkurt et al., 2012) provided the foundation in designing these questions. The interviews included additional questions that sought to learn demographic characteristics of participants and their firms, including participants' role, years of experience, whether the firm exported, and its size (Table 2).

Searches on the Institute of Cava and Conegliano Valdobbiadene DOCG (Controlled and Guaranteed Designation of Origin, Prosecco Superiore) websites in April of 2017 of 2017 helped identify the electronic contacts of 42 and 55 wineries, respectively. The research protocol entailed a message addressed to the owner or manager, which informed recipients of the objectives of the study, and formally asked them to participate in the study through a face-to-face interview. As above, these individuals were selected based on their extensive knowledge and background. Following the same protocol ensure consistency in approaching respondents and that key individuals were contacted appropriately. The message sent resulted in the positive reply of 17 wineries from each region, an overall 35.1 percent response rate (34/97). In July of 2017, one of the researchers travelled to Sant Sadurni d'Anoia (Spain), and subsequently to Valdobbiadene (Italy), and interviewed a total of 36 owners and managers

representing the 34 firms (Table 2); indeed, two interviews were undertaken with two winery managers. The average time of the interviews was 60 minutes, and the visits included tours to the facilities, which allowed for observations, and for collecting printed company information. Using various data sources, or data triangulation (Patton, 2015) helped corroborate the data (Tellis, 1997), as well as dealing with trustworthiness and research/respondent bias (Bowen, 2009).

Different views, guidelines and suggested numbers of interviews have been proposed to explain data saturation, the stage at which no new themes or information emerge from the data (Guest et al., 2006), though “there is no agreed method of establishing this” (Francis et al., 2010, p. 1229). For instance, Guest et al. (2006), noticed saturation within the initial 12 interviews; Francis et al.’s (2010) reached saturation at interview 17, while Marshall et al. (2013) suggest that 15 to 30 interviews should be contained in single case studies. Concerning the present study, in each round of interviews (Italy, Spain) data saturation was revealed by the last interview (17).

Similarly, triangulation from multiple sources ensured that the findings were robust and valid. The themes identified by the study were drawn from at least 3 different sources to ensure that emergent issues were valid and robust. Hair *et al.* (2007) view this approach as data triangulation which focuses on the validity through comparisons of cross-sectional data from different sources. Given the number and range of interviews alongside the data collection sources utilised through case study research, data triangulation is robustly applied to the findings of the study.

While the data were transcribed by one of the researchers, who is fluent in Italian and Spanish, the entire team was involved in the analysis process, which entailed qualitative content analysis, a research method for subjectively interpreting text data (Hsieh and Shannon, 2005). This interpretation, which is conducted through a systematic classification process, where researchers identify and code themes or patterns (Hsieh and Shannon, 2005), allowed for stronger reliability and validity of the research findings through researcher triangulation. This approach allows the comparison of results between researchers to identify similarity of findings and with it reduce the potential for bias (Hair et al., 2007). In essence, as themes are subjective in nature, cross examination coding and patterns across different researchers allows for examination of consistency. Researcher triangulation ensures this consistency is translated into robust and valid conclusions. Furthermore, content analysis is “an empirically grounded method, exploratory in process and predictive or inferential in intent” (Krippendorff, 2013, p. 1). To support this process, the analysed data were exported

into NVivo version 11, a computer assisted data analysis software (CAQDAS) (e.g., Wickham and Woods, 2005).

#### *Demographic characteristics of participants and wineries*

As illustrated (Table 2), the majority of participants (58.3%) are owners and/or co-owners of the firms, and members of the family owning the business (21, 61.8%), whereas 31 (91.2%) were involved in exports in general. However, all 34 participating businesses are family firms. In terms of working experience in the Prosecco Superiore/Cava industry, most participants (25, 69.4%) have worked in their industry for at least 10 years. Almost all participating firms (32, 94.1%) fall under the category of micro (less than 10 employees), and small enterprises (between 10 and 49 employees) as defined by the European Commission (2003), with only two firms (5.9%) being medium (SP16) and large size (SP14), respectively. While an argument could be made that the much larger size of these two firms might provide an element of heterogeneity of the sampled firms, their extensive production and exporting experiences were perceived invaluable in enriching the content of the data gathered. Therefore, a decision was made to include these firms in the research. Finally, males represented the bulk of participants (85.3%).

Table 2 Here

## **Results**

### *An uncertain environment - Brexit*

An overall negative perception emerged regarding the potential effects of Brexit (Table 3). Indeed, the largest group of Italian (9, 50%), and Spanish participants (12, 66.6%) voiced concerns for their own firms, either referring to specific or future perceived outcomes. The aftermath of Brexit will yield fluctuations in the exchange rate and ultimately have direct impacts on Italian and Spanish firms' bottom line:

*IP6: We were affected because we had decided against increasing our prices to the UK market.*

*SP14: The immediate effect of Brexit was the devaluation of the Pound. Given that our sales are made in Pounds... we received a lower amount in Euros... wine prices have also increased in the UK market; the immediate effect was a decrease in sales.*

These expectations resonate with current research highlighting the effect from other currencies appreciating British Pound. Cameron (2017), for example, identified a direct relationship between the strong appreciation of the Australian dollar in recent years and below-average exports of Australian wines to the UK. Parallel to this report, Anderson and Wittwer's (2017b) projected scenarios for the UK's wine consumer market identify 'nontrivial' effects from Brexit on incomes and the British pound.

Table 3 Here

Other perceptions emphasised that the impacts would be felt strongly at an industry level, particularly among those wineries that traditionally had focused on UK markets producing smaller margins. Such was the case of Prosecco DOC (Controlled Designation of Origin), which was viewed as a sector benefitting from economies of scale and therefore less costs and lower sale prices. For instance, IP8 indicated that direct impact will be felt more in terms of wineries producing Prosecco DOC and less for wineries that are targeting the higher end consumer market (IP8). Similarly, there was a notion that Cava companies targeting the UK consumer and traditionally producing large quantities would be most affected (SP10). Other respondents had negative views concerning future possibilities to export to the UK, or were taking cautious steps in the UK market:

*IP16: We are not investing in UK promotional campaigns in the UK at the moment until we clarity on the effect of Brexit.*

*SP6: This market was already difficult for us, and now it might become even more difficult.*

IP16's comment strengthens Bloom's (2014) research, in that, due to situations of greater uncertainty, firms' willingness to invest, and hire, and consumers' willingness to spend is reduced. Bloom's (2014) argument is supported by Jurado et al. (2015), in that an increase in uncertainty can depress the above elements, particularly when, as a result of uncertainty, there is risk adversity, financial constraints, or fixed costs.

#### *The firm's ability to adapt*

Bloom (2014) posits that, facing an uncertain future, some firms are more willing to innovate, and that uncertainty can trigger more research and development. These proactive scenarios seem to apply in the case of wineries, especially as they operate in a very competitive, and increasingly globalised business environment (Flint and Golicic, 2009; Hussain et al., 2007;

Lewis et al., 2015). Therefore, Bloom's (2014) points are useful in the context of wineries' adaptation alternatives, including in regards to winery operators' motivation and commitment to act entrepreneurially in the face of uncertainty.

To adapt to Brexit, various threads and themes were identified through content analysis (Table 4). In response to the uncertainty and negative effects Brexit had caused, the majority of participants (26, 76.5%) strongly supported the alternative of increasing involvement in international markets. Moreover, the mind-set of many winery entrepreneurs was changing, and, in a global world, exporting is fundamental and increases wineries' probability of survival (SP2). Furthermore, for several participants (e.g., IP6, IP9, SP10, SP14) growing internationally through repositioning and strategizing beyond the UK market will aid the firms in the future. Acknowledging the importance of the UK market for their firm, there was a view that firms needed to reposition themselves and grow internationally, especially beyond the EU.

The current popularity of Prosecco and Cava internationally represented a key factor in strengthening international exposure and entering new markets (Table 4). Interestingly, to some extent, such growth in popularity was attributed to the more affordable type of Prosecco, the DOC (IP16): *"There has been a Prosecco worldwide 'boom', which did not exist 10 years ago... consumers are learning about the Prosecco DOC phenomenon."* At the same time, however, such popularity represented a barrier to differentiate the DOC from the DOCG, or Prosecco Superiore, a product which, according to participants, undergoes a much more rigorous and laborious process. A similar argument could be made of the Cava industry, with SP16 recognising that *"traditionally the UK has imported low-priced Cava; however perception among consumers is changing. Cava is now perceived in a different light, more positively..."* Hence, as illustrated (Table 4), participants considered that, to create a clear point of differentiation between low end Prosecco and Cava, much stronger efforts were needed to educate and inform consumers and importers.

Table 4 Here

## **Discussion**

### *Coalescing the EAT and DCA frameworks*

In order to deal with uncertainty, adaptive measures have been proposed, where the focus is not limited just to practical approaches, but rather places priority on synergies in theoretical frameworks. Indeed, the main adaptive measures participants referred to have strong links



with the two proposed theories; they are illustrated in Table 5, and conceptualised in Figure 2. Importantly, to evolve or navigate through the different stages shown, firms need to exhibit some/all the VRIN attributes (Eisenhardt and Martin, 2000). In this study, and as some of the comments below illustrate, the VRIN attributes are apparent. For instance, the attributes were manifested in firms' business philosophy, including their organic growth based on long-term strategies, value-added proposition, first-mover advantage (e.g., finding a trustworthy importer), focus on niche markets, artisan, limited production, and very extensive expertise and accumulated knowledge (Table 2).

### *Sensing*

Based on the findings, an argument is made that sensing (DCA) is a key preliminary step in the adaptability process, prior to undertaking action to maximise opportunities. Essentially, sensing entails learning, interpreting, and scanning activities, as well as a significant portion of diagnosis preceding the development of strategies (Teece, 2007, 2014a). The diagnosis component (Teece, 2014a), considered to be a trigger of subsequent adaptive measures and strategies among participants, manifested itself through participants' negative perceptions of the impact of uncertainty due to Brexit, and ways to adapt.

In the case of Italian participants, sensing by interpreting was revealed through their awareness of current trends indicating this product's growth in popularity, even in traditionally price-sensitive markets such as the UK (IP9): *"By observing and by talking to our UK contacts, Prosecco, while not gaining a status as Champagne, has nonetheless achieved a status as a quality product, consumed by different demographic groups."* A similar outcome was illustrated among Spanish participants, who interpreted the positive trends and wider acceptance of higher-end Cava products (SP3a): *"There is already growing awareness of authenticity and origin... I do not believe that consumers will go back to the times of [consuming] unknown wines."*

Table 5 Here

Operators' knowledge and expertise were strongly related to their continuous learning, which allowed them to identify and develop strategies. For some, learning was an intrinsic part of a comprehensive plan that prolonged through generations, and was fundamental for the firm's business strategy:

IP15: *Positioned as a high quality product, is like a vineyard: you need to look to the future, in the next 20-30 years. For example, we are now reaping the benefits of 25 years ago... A firm which is focused on long-term quality is always looking for ways to invest back into the business; this has always been my obsession.*

SP15: *For the last 30-40 or so years, like some other 25 local Cava producers, I used to travel to countries that grow grapes and elaborate wines... we built very strong relationships.*

IP15's comments partly reflect earlier research on small independent businesses (Georgellis et al., 2000), where successful innovation was found to be dependent on entrepreneurs' ability to plan ahead, to innovate, and preparedness to take risks. In turn, Sapir et al. (2016) explain that the creation of knowledge entails a social process based on discourse and negotiation between social actors. According to Autio et al. (2013), individuals' exposure to outside information not only influences their recognition and evaluation of opportunities, but also guides EA. This notion illustrates a strong association between sensing and attention and evaluation, the two stages of the EAT (McMullen and Shepherd, 2006).

Scanning (Teece 2007), and to some extent acquisition and accumulation of knowledge, emerged through participants' knowledge and appreciation of other markets that could constitute alternative business propositions. Expanding on current and tested capabilities can be built on when sensing other new markets:

IP9: *"In Italy, we are already identified as a brand; now we aim to be an internationally recognisable brand. For example, we would like to have a presence in Japan, which is an antecedent for high-end products.*

SP12: *In Japan, they are beholden to quality, and our Cava is apt with their gastronomy.*

#### *Attention stage*

Following the 'sensing' orchestration process (Teece, 2014a), the attention stage (McMullen and Shepherd, 2006) emphasises the recognition of opportunities in general, as well as acting upon these. Accordingly, based on the findings, this stage is reflected in participants' industry. Two commonalities between both groups of respondents were identified: the recognition of present opportunities in international markets, and the need to educate importers and end consumers (Table 5). In terms of the educational element, both groups exhibited similar

concerns around establishing a clear brand image and differentiation strategies around low volume, niche, and more artisan products.

For this reason, given the ubiquitous geographic separation and distance between wineries and end consumers and importers, participants agreed that much stronger efforts were needed in order to build a clear image that would render their firms recognisable (IP15): *“When we have journalists, we offer them products that are 10 – 20 years old, and they remain astonished... these activities will contribute to enhance the image of high-end Prosecco.”* Moreover, the region of Champagne in France was cited as an example of the multiple advantages of a strong brand image (SP1): *“The Champagne industry has achieved a status that the whole world recognises... ideally, when people hear Cava, they should think ‘quality’”*

#### *Evaluation stage*

Given its emphasis on recognition and action undertaken by an individual (Mitchell and Shepherd, 2010), the evaluation stage aligns with a firm context. The findings revealed various ways in which individual entrepreneurs are acting upon opportunities. For example, and also related to the VRIN attributes (Eisenhardt and Martin, 2000), some participants noted the strategic significance of networks with international importers:

*IP10: We have a direct rapport with a UK restaurateur and sell directly to him. We only have one single ‘player’ or importer and he is very loyal.*

*IP12: We started exporting to the UK recently... we found an importer who totally understood our philosophy.*

Figure 2 Here

In comparison, Spanish participants emphasised the importance of enhancing brand image through quality improvements, or diversifying through wine tourism (e.g., visits, cellar door sales):

*SP2: I am a true believer that, by offering quality, sooner or later people will embrace our concept...*

*SP4: We have noticed a growth in wine tourism activities. We have numerous families visiting, who are interested in Cava tastings.*

Thus, three of these comments place value on enhancing winery-importer-consumer networks and contacts, and reflect conclusions of contemporary research. Indeed, by focusing

on microfoundations of service innovation activities, Kindström et al. (2013) stress “the need for an extended, sometimes completely new, armory of underlying initiatives and processes” (p. 1066) as a key competitive element for firms.

### *Seizing*

Ensuing sensing and EA (attention and evaluation stages), seizing is suggested as the appropriate progression in the proposed model (Figure 2). In line with Teece (2012), mobilising resources took various forms. SP4’s business, for instance, filled a gap and found a niche by opening on weekends, as most other wineries in the region did not consider this option. In order to develop a stronger brand image, ‘tell the story’, and therefore convey the message of Prosecco DOCG’s more rigorous production practices, IP16’s firm had made investments in developing its physical infrastructure. Resources were also mobilised to increase internationalisation efforts (SP4): *“We are starting to explore other markets, and just started exporting to the USA.”*

Another respondent’s (SP10) comment clearly emphasised that firms were prepared to take financial risks while mobilising resources in order to build their internationalisation capacities: *“We would like to increase our exports; that’s why we hired a person full-time, and that is why we are prepared to make a loss currently to develop into other markets in the next few years.”* In agreement with Helfat and Peteraf (2015), SP10’s comment illustrates strategic astuteness, as well preparedness to make substantial- and irreversible- financial resources. Seizing future market opportunities also demanded a consistent strategy of maintaining high quality standards. In this regard, IP12 indicated that, recently, his winery had made substantial investments in equipment: *“The investment in vats, space, and utilities costs us more, but we are prepared to make this investment to guarantee maximum quality.”*

### *Transforming/reconfiguring*

Firms’ investments to seize existing opportunities and seek to adapt to uncertainty overlap into the reconfiguring/transforming process. Indeed, wineries undertook a number of approaches which are ongoing, laborious, and long-term orientated, demanding constant attention and investments to consolidate or conquer new export markets, to maintain or improve product quality, to build awareness among importers and consumers through educational activities, or to diversify into wine tourism. These processes may also include combining firms’ assets, such as resources and capabilities (Helfat and Peteraf, 2015) requiring adjustments (Teece, 2012).

### *The significance of motivation*

In the main, while the significance of maximising opportunities to make financial, positioning, and brand image gains to overcome uncertainty was underlined, other motivational factors proved equally valuable. For example, IP11 reflected on the future of the firm, and in its long-term goals: “... while everybody is talking about Prosecco, I would like to be able to develop markets where people would say: ‘I drink [Firm’s brand]’; that is our aspiration.” These findings align with Grégoire et al.’s (2011) research, which identifies motivations beyond financial gains that can trigger EA. More specifically, Mathias et al. (2015) explain that entrepreneurs’ passions for certain products or activities often lead them, even indirectly, to EA. As illustrated in the findings, motivation is also a sign of confidence. Moreover, actors’ predisposition to take- or not- action depends “on whether they are confident that what they “see” is an opportunity” (Davidsson, 2015, p. 685).

Furthermore, in agreement with IP15’s and SP15’s comments, numerous individuals accumulate years of experience prior to undertaking EA. Importantly, prior information, particularly information developed by working, can exert significant influence in entrepreneurs’ ability to synthesise, comprehend, or use new information (Mathias et al., 2015). Consequently, the significance of motivational factors is also incorporated in the proposed framework (Figure 2). As shown, in the end, the sequence of stages has implications for firms’ adaptation in the face of uncertainty, and, ultimately, for their competitive advantage and long-term sustainability.

### **Conclusions**

This research contributes to the academic literature in various forms. First, grounded on the EAT and DCA ideologies, the study proposes a framework which theorises a sequence of processes involving firm adaptation to uncertainty, specifically, in the context of Brexit. Notably, the framework postulates that sensing is an antecedent of and is reinforced by the EAT’s attention and evaluation stages, whereby anticipatory measures to adapt to uncertainty are followed by plans and strategies, then executed (seizing) and reappraised (transforming/reconfiguring). Second, the study examines firms operating in a very competitive environment, and in an industry with strong trade ties to the UK. Despite the potential impacts Brexit could have on firms and industry, to date the academic literature has not fully addressed this phenomenon. While this is true for the wine industry examined in this

paper, the greater ramifications of Brexit are still an active issue extensively researched into. This study contributes to furthering understanding in this area.

Third, and along with the previous contribution, the focus on firms' adaptation to uncertainty employing the DCA fills a gap in research. Indeed, while theoretical advancements have been made concerning DCs, this field "still lacks a strong empirical base" (Weerawardena and Mavondo, 2011, p. 1220). Fourth, the study employs the EAT in the context of adaptation in the wine industry, which, to date, has not been tested in empirical wine business research. As such, there is a conscious need to identify the strength of coalescing the EAT and DCA frameworks as a theoretical model to adapt to uncertainty. While the models on their own provide some viability to remedying uncertainty, elements not only overlap but in essence complement as indicated by this study.

These provide useful insights into how a globalised industry such as wine production and sales, actively seeks to deal with and remedy the threats arising from uncertainty. The framework extends understanding in this area and provides opportunities for further development in other industries and sectors.

It is important to bear in mind that primary data for this study was drawn from firms operating in the wine industry. While the theoretical framework has been developed utilising data that is robust and triangulated alongside being analytically generalisable (Welsh and Lyons, 2001) its applicability to other industries and sectors needs to be carefully considered.

### *Practical implications*

Sensing potential uncertain scenarios can be crucial for entrepreneurs to start planning ahead, and anticipate or adapt to trends and challenges emerging in the international business arena. Equally essential are the firms' resources and capabilities that allow them to develop contingency plans well into the future. For instance, some entrepreneurs (e.g., IP15, SP15) clearly viewed that building strategies was not only an ongoing concern, but also a very long process that extends across decades and generations and is revisited or reassessed to accommodate to new challenges and demands. Such long-term strategizing has clear practical implications for their domestic and international business strategies, allowing firms to build resilience and develop adaptive measures through their continuous learning and accumulation of knowledge. Resilience and adaptation were demonstrated in the various diversification foci, and the preparedness to make investments to position the firm, particularly internationally, and respond to uncertainty. Consequently, a key proposition from a practical perspective emerges from the findings and their implications:

*The ability to make timely and well decisions, coupled with continuous scanning of the environment for trends and opportunities, diagnosing potential issues, and the motivation to act through diversification strategies can equip firms with strong adaptive and resilient skills.*

#### *Theoretical implications*

The sequential stages and orchestration processes postulated in the proposed theoretical framework (Figure 2) underline the value of contemplating both the EAT and DCA to understand firm adaptation to uncertainty. This proposed sequence contributes to a more rigorous appreciation of firms' journey to become equipped with strategies and respond to both favourable and unfavourable conditions affecting their environment. Fundamentally, as supported by some participants' comments, sensing is a key antecedent and crucial part in this process. Indeed, entrepreneurs' ability to diagnose the current or future state of their industry environment, including recognise opportunities or challenges, sets the stage for their consideration of creative ways to overcome uncertainty or be in a competitive position.

The framework further proposes that while entrepreneurs perceive opportunities in general (attention stage), they then narrow these down to a firm level (evaluation stage), and seek to fully maximise them (seizing). The final orchestration process (reconfiguring) suggests the importance of continuous improvement, reassessing previous performance, making any necessary adjustments in order to cope with future uncertainty. Thus, while the usefulness of the framework in other business environments is yet to be confirmed, a second proposition is identified:

*Taking into consideration the DCA together with EAT is a valid theoretical approach, which contributes to a more exacting understanding of firm adaptation, and helps guide firms through situations of uncertainty due to external events.*

#### *Policy-related implications*

The numerous challenges that economic, political and other forms of uncertainty can create for entrepreneurs highlights the importance of the findings for policy-making. As some comments indicated (Table 3), the outcome of negotiations between the EU and the UK could have strong repercussions for future trade from and to the UK. Given the UK's significance as an importer of wines, the speed and rigour in which these negotiations are conducted could have important impacts for both importers and exporters. While it became clear that

entrepreneurs are looking for ways to adapt and gain competitiveness, they too need to work in a more stable environment, that is, with clear trade agreements.

### *Limitations and Future Research*

The study is limited to two different wine regions and two different countries. In addition, the total number of participating wineries is modest in comparison to the more than 200 family firms producing Prosecco Superiore and Cava. Furthermore, the research was conducted at one point in time, during July of 2017, and is limited to family firms. In order to enhance the robustness and quality of the data, future studies could address some of these limitations, for instance, considering other regions that traditionally have exported their products to the UK (e.g., Prosecco DOC, Jerez, Champagne, Rioja). Studies could also take a longitudinal approach, surveying wineries at different points in time to identify the effectiveness of firms' adaptation strategies.

To make the research more inclusive, studying the perceptions of importers and consumers in the UK on Brexit could help clarify the extent to which they anticipate macroeconomic impacts. This information could be invaluable, not only to these two groups but also to winery entrepreneurs, their industry distributors, and government. In addition, further consideration of the EAT and DCA, including the proposed framework (Figure 2) could help elucidate the appropriateness of combining these ideologies, or provide new theoretical insights in the investigation of uncertainty and firm adaptation.

Finally, it is also important to note the effect that the use of case studies may have on the ability to generalise results. While the approaches undertaken are robust, valid and provide viable conclusions, the nature of case studies and qualitative research require consideration of the overall generalisability to the wider environment. Further research that examines and tests the results here would be beneficial in identifying and enabling generalisability.

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