

Atkin, Tom; Wilson, Damien; Thach, Liz; Olsen, Janeen E.

Article

Analyzing the impact of conjunctive labeling as part of a regional wine branding strategy

Wine Economics and Policy

Provided in Cooperation with:

UniCeSV - Centro Universitario di Ricerca per lo Sviluppo Competitivo del Settore Vitivinicolo,
University of Florence

Suggested Citation: Atkin, Tom; Wilson, Damien; Thach, Liz; Olsen, Janeen E. (2017) : Analyzing the impact of conjunctive labeling as part of a regional wine branding strategy, Wine Economics and Policy, ISSN 2212-9774, Elsevier, Amsterdam, Vol. 6, Iss. 2, pp. 155-164, <https://doi.org/10.1016/j.wep.2017.10.003>

This Version is available at:

<https://hdl.handle.net/10419/194538>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<https://creativecommons.org/licenses/by-nc-nd/4.0/>



Analyzing the impact of conjunctive labeling as part of a regional wine branding strategy[☆]

Tom Atkin, Damien Wilson^{*}, Liz Thach, Janeen Olsen

Sonoma State University, Rohnert Park, CA, USA

Received 5 June 2017; received in revised form 28 September 2017; accepted 11 October 2017

Available online 23 October 2017

Abstract

Research studies have proven that place-based/regional branding methods have a positive effect on brand equity and economic benefits for companies. However, very small or specific regions may be confusing to consumers, so conjunctive labeling – or the process of advertising both a larger region and the sub-region of origin for a product – is suggested as a remedy for this situation. This study analyzes the impact of conjunctive labeling by comparing two national samples of consumers, before and two years after, conjunctive wine labeling was introduced in Sonoma County. The results show a higher awareness for both Sonoma County and its sub appellations (AVAs) after conjunctive labeling was introduced than before. This demonstrates the potential benefit of associating sub-regional appellations with larger wine regions.

© 2017 UniCeSV, University of Florence. Production and hosting by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Keywords: Regional branding; Appellations; Wine marketing; Conjunctive labeling; Place-based marketing

1. Introduction

1.1. The growth of place based branding and regional marketing

Increased use of place-based branding for small food and beverage producers, within a defined geographic area, warrants investigation of the success of this promotional strategy. Wine producers see place-based branding as a way to promote the unique appeal of their particular location to buyers. Studies have shown that place based marketing does have a positive effect on enhancing brand equity and creating economic benefits for firms (Tustin and Lockshin, 2001, Papadopoulos and Heslop, 2002; Hall, 2003; Lee and Arcodia, 2011; Christensen et al., 2015).

There is growing evidence that consumers, as well as producers, have preferences for products based on geographical

representation (Rendleman et al., 2016). The value consumers find in messages touting a product's place of origin has increased because many people are more conscious about their diet, and in response, they have adopted “buy local” beliefs (Ruth-McSwain, 2012). According to Rose et al. (2008), consumers who prefer to purchase locally grown products respond well to promotional appeals emphasizing place based branding.

Evidence illustrates the fact that regional identities are being created for a wide range of products around the world. In the wine sector there is a long tradition of relying on place as a means to convey a product's unique characteristics, and to serve as a cue for quality. Wines from diverse regions such as Bordeaux, Napa, and Barolo, just to name a few examples, possess reputations based on their strong association with the place in which they are produced. For this reason, wine provides an appropriate context for the study of regional branding. Johnson and Bruwer (2007) even demonstrated the value in both creating awareness and influencing perceptions through the promotion of a regional identity in wine.

Caldwell and Freire (2004) found distinctive differences between branding a country, versus a region or city, suggesting

Peer Review under the responsibility of UniCeSV, University of Florence
^{*}Corresponding author.

E-mail addresses: tom.atkin@sonoma.edu (T. Atkin),
wilsodam@sonoma.edu (D. Wilson), Liz@lizthach.com (L. Thach),
janeenolsen@gmail.com (J. Olsen).

that smaller sub regions should focus more on functional aspects of the product. However, in the food industry, adding a regional designation to a product in addition to state designation offers the potential for the producer to charge a price premium (Hu et al., 2012). The increasing divergence in wine region identities into zones, regions and sub-regions, suggests that a repeated, consistent message of the value of a geographical identity has a greater opportunity of creating and retaining salience in the minds of consumers. Consequently, this study investigates the value of attaching the reputation of a smaller American Viticultural Area (AVA) to the reputation of the larger region through “conjunctive labeling” (having the larger region on all wine label imprints). The region of Sonoma County is the focus of this research because producers began to implement the use of conjunctive labeling for wine in 2014 (Sonoma County Vintners 2016).

1.2. The emergence of wine appellations

An appellation is a geographical designation that is usually defined by law, and is used for food and beverages. Wine appellations are some of the oldest in the world, with references from Pliny the Elder in 154 BC describing Falernian from the slopes of Mt. Falernus south of Rome, as well as mention of wine regions in the Bible, such as wine from Sameria. The oldest legally protected vineyard zone was established in Chianti, Italy in the early 1700s, followed by the Tokay region in Hungary in the 1730s and the Douro region of Portugal in the 1750s. However, it was not until 1935 in France that a rigorous appellation system was implemented under the Institut National des Appellations d'Origine (INAO), through the creation of AOC certification. As a result, today most major wine regions have some type of legal system to define wine appellations, emulating the European application of the original French standard (European Commission, 2016).

1.3. American viticultural areas

In the US, local and regional wine appellations are called American Viticultural Areas, or more commonly, AVAs. An AVA is defined as “a designated US grape growing area, which is distinguished by unique geographical features (US Dept of Treasury, 2011, p. 1).” These features usually include distinctive climate and geographic features, and often a history of winemaking in the region. AVAs do not guarantee quality of wine or require specific viticulture processes, but instead communicate an authentic and distinctive winegrowing region. Furthermore, there is no standard size for an AVA in terms of acreage. They can be quite small in size or span multiple states.

The first AVA authorized by the Bureau of Alcohol, Tobacco and Firearms (BATF, now the TTB) was for the region of Augusta, in the state of Missouri, on June 20, 1980. Napa Valley became the second US AVA and California's first AVA in 1981. Napa Valley wine leaders also made a conscious decision to name its other more specific regions in the valley as “nested AVAs,” and require conjunctive labelling

so that all wineries must include the name “Napa Valley” on the label. Therefore, a winery located in the Rutherford sub AVA, could include both Rutherford and Napa Valley on the label, but Napa Valley must always be present. In a research study investigating this decision and Napa Valley's role as a world-recognized wine region, Taplin (2011) identified the cooperative activities of the community of vintners as crucial to their growth and success.

1.4. Conjunctive labeling in the US and abroad

The concept of conjunctive labeling for wine is rather rare in the United States. Napa Valley was the first region to require conjunctive labeling in 1990 as part of California Business & Professions code #25240. All Napa Valley wineries are mandated to include the term “Napa Valley” on the front label in a regulated font size, regardless of whether or not they also include one of the Napa Valley sub-AVAs, such as Rutherford. Not complying with the rule could result in the California Alcohol Beverage Control revoking the winery license (Wine Compliance Alliance, 2015). Furthermore the wine label will not be approved by the TTB, the federal agency that regulates wine labels in the US. Sonoma County was the second region to implement a conjunctive label rule (Rives, 2011), going into effect on January 1, 2014. Most recently the Monterey Wine region announced they will begin conjunctive labeling, and California Governor Jerry Brown signed a bill confirming this will go into effect on January 1, 2019 (Monterey Wines, 2015).

As of November 30, 2016, there were 239 AVAs in the contiguous United States (Alcohol and Tobacco Tax and Trade Bureau, 2016). That is a lot of AVAs for consumers to consider in their purchasing decisions. A proposed means to strengthen the recognition of these smaller AVAs is to follow the model initiated by Napa Valley vignerons, and to tie a sub-regional AVA name to the larger region through conjunctive labels. Conjunctive labelling is specifically defined as labelling of a wine to show both region and sub-regions of origin (Sonoma County Vintners, 2016). However conjunctive labelling is not common in the US, despite the success of Napa Valley as a role model.

Conjunctive labeling has long been accepted in Europe, and is one of the major methods in which wine regions, or smaller groups of wineries within a larger region, can gain international brand recognition. One of the oldest is Chateaufort du Pape, which requires wineries to use a special crest on bottles of wine produced in the region. Rioja also implemented a very successful conjunctive labeling campaign as far back as 1926 by requiring that approved wineries include a small seal on the back label. Today that seal doubles as a security system – guaranteeing the authenticity of the wine within the bottle (Rioja Wine, 2014). The famous black rooster symbol on bottles of wine from the Chianti Classico region (Bell, 2016), and the prestigious eagle motif on bottles of wine classified as VDP in Germany (VDP, 2016) are other examples of similar systems.

Conjunctive labelling is becoming a more common practice in other wine producing countries, like Spain and New Zealand. Spanish wine labelling is controlled by the European law on the organization of the wine market. These regulations are administered by the Office of the Deputy Director-General of Quality Wines, which is an agency of the Ministry of Agriculture. For wine destined to be classified as a ‘Wine of Quality’, it must first be associated with a specific region of production, which must be indicated on the label. Additionally, if the grapes sourced for making the wine are from within a specific, and recognized, plot of land or vineyard that is acknowledged by the authorities, then the name of that plot or vineyard may be used in addition to the indication of the region of production. Such concepts are examples of conjunctive labelling in effect outside of the United States (European Union 2006).

Before conjunctive labeling was approved in Sonoma County, many of the county's sub-AVAs conducted their own marketing activities. For example the Sonoma Valley Wineries Association actually started the Sonoma Wine auction, which today is a fundraiser including all Sonoma County wineries. The Russian River Valley Winegrowers Association hosts a Paulee wine dinner each autumn, and the wineries in Northern Sonoma County still work together to produce the very popular Barrel Tasting Weekend, which attracts thousands of tourists every March to taste wine and buy futures. Today these types of marketing activities hosted by the sub-AVAs continue, but Sonoma County Vintners and the Sonoma County Winegrape Commission work very closely to insure that there is a focused and united marketing strategy for all Sonoma County wine regions. This includes conducting both national and international tasting events, inviting sommeliers each year to attend the Sonoma Summit, hosting a Barrel Auction where retailers can purchase futures of Sonoma County wines, sponsoring Taste of Sonoma for consumers to taste local wines and foods, and now overseeing the Sonoma County Wine Auction, with proceeds going to local charities (SVC, 2016). In 2017, this auction achieved a record-breaking \$5.2 million (Melnik, 2017). These achievements are noteworthy, but the question of whether they would be more effective as events promoting a sub-region, or as part of a larger AVA, is of most interest to producers within the region.

Consequently, the aim of this study is to determine if Sonoma County can follow Napa Valley's success in establishing salience for the region in the mind of the consumer through the use of conjunctive labeling. We present an overview of awareness of various wine areas leading to a comparison of the awareness of Sonoma County and the smaller AVA's within that region both before and after adopting a conjunctive approach on their wine labels.

2. Review of the literature

2.1. Perceptions of a regional identity

Creating a place-based identity is often suggested as a strategy for success in the wine sector. The difficulty is that its

proponents communicate mixed messages on what to do in regards to implementing such a strategy. In numerous consumer goods industries, the market leaders typically show the direction on which competitors may follow (Helms, 1997). For example, small producers in the soda market can follow Coca-Cola and Pepsi, while food marketers can follow the examples of large companies such as Unilever and General Mills. However, the wine sector's largest companies frequently adopt opposing strategies, making the cues for smaller producers much harder to divine. As Gray (2016) explained, Constellation is one of the largest wine companies in the world and invests heavily in the acquisition of wine brands, while the world's largest family-owned wine company, Gallo, invests heavily in location through the acquisition of vineyards. The former company's strategy depends primarily on creating brand name awareness, while the latter expects regional salience for the grapes used in wine production to help generate sales. Both of these approaches can incorporate elements of regional branding, but it is not the overall thrust of their marketing strategies.

Nevertheless, there is a growing body of evidence in the food and beverage industries showing a trend in the production and communication of products tied to regional identities. The practice is gaining more popularity for a variety of reasons, including the need to present a unified image, the need to protect a locality's identity in the face of national and international competition, and the prospect of promoting the larger regional identity to help gain consumer acceptance. Contò et al. (2014) proposed the purpose of establishing a regional identity is to inform, educate and promote specific product or location characteristics. Christensen et al. (forthcoming) expanded on these findings to establish a framework for illustrating how a regional identity is recognized as a means for creating economic benefits to wine producers and wine regions. Clearly, the anticipated economic benefits remain the driver behind the adoption of region or place based marketing.

Recent research in Italy has shown that promoting the agro-food sector has significant impacts on tourism (Santeramo et al., 2017). There is a segment of tourists, defined as wine tourists, who take the wine product to be a primary reason to travel to a place. For other segments, the wine product serves to make a particular destination more attractive. The synergistic relationship between the wine industry and Italian tourism was analyzed using an econometric model. Santeramo et al. (2017) concluded that exploiting the synergies between the wine sector and the tourism industry could foster the economic development of the regional economy. Conjunctive labelling for wine is one such synergistic tool that could provide economic benefits to a region beyond just the wine sector. Increased awareness of wine regions and AVAs can contribute to tourism also.

The implication for those connected with the development of a strategy to attract wine tourists and consumers is that if a region's image is positive, then local producers benefit by contributing to the development of this regional identity (Orth et al., 2012). The bottom-line is that establishing a positive

regional identity helps generate tourism and its subsequent revenues, as [Engelbrecht et al. \(2014\)](#) illustrated in the case of South Africa. Similarly, wine producers in smaller AVAs may benefit from collaboration not only with those producers located in their own AVA, but also with others located within the larger region. Following this prescription should lead to the generation of increased awareness for the positive characteristics of the smaller AVAs.

2.2. Awareness precedes perception

Marketing practice in wine illustrates that consumers must first be made aware of a region's existence before perception can be effectively conveyed. One factor contributing to the creation of awareness is the mere repetition effect ([Cacic et al., 2011](#); [Luck, 2012](#)). Advertising practice has relied on consumers being exposed to an advertisement enough times in order for the message to create awareness in viewers' minds. This process has been generalised to the creation of brand awareness ([Barwise and Ehrenberg, 1987](#); [Luck, 2012](#); [Romaniuk et al., 2003](#)), and is replicated similarly for creating regional awareness in wine production areas ([Cacic et al., 2011](#)).

Researchers have found that a third of respondents indicated that a place of origin is a consideration in wine purchasing ([Engelbrecht et al., 2014](#)). Their findings illustrated that regions that communicated a clear and consistently appealing message helped influence purchasing behavior from amid an ocean of geographically indistinct alternatives ([Engelbrecht et al., 2014](#)). Thus, regional organizations can be led to believe that a geographic identity must be repeatedly promoted in order to gain traction in the consumer's mind. However, even though the process of communicating an additional indicator of regional identity as a means to create awareness is the starting point of many communication strategies, the value as an ongoing promotional tool is questioned by some wine communicators. Further, emerging evidence suggests there are diminishing returns as additional wine areas are created and promoted beyond the number of those that already exist. There are fears that the growing abundance in promoted wine regions is becoming overwhelming to the wine consumer ([Engelbrecht et al., 2014](#)). Recently, opinion pieces from leading wine writers question the rationale behind an increase in the number of designated wine areas, claiming that this abundance of choice is an issue in need of redress ([Gray, 2014](#); [Heimoff, 2015](#)).

2.3. Wine appellations as a regional identifier

Information about the place of origin of a product is often employed by consumers to make inferences about the quality of the product ([Balestrini and Gamble, 2006](#); [Showers and Showers, 1993](#)). Wine is a product that has a very close connection to its place of origin and thus, it has been shown to be a useful to consumers as a factor in decision making when purchasing wine ([Duhan et al., 1999](#)). International research has shown that the geographic origin of wine is the most important

attribute for consumers in both Australia and New Zealand ([Atkin et al., 2007a](#)). Origin information has a halo effect that helps consumers make inferences about unfamiliar wines. [Jarvis and Rungie \(2002\)](#) found that the category "well known region" had the highest stated choice utility among all respondents in their study. Accordingly, the geographic information can be a useful tool for conveying a wine's appeal to consumers.

2.4. Relationship of geographic information to product quality

Consumers often refer to geographic information to make inferences about the quality of the product ([Verlegh and Steenkamp, 1999](#)). Regional reputation and quality can be key drivers of consumer demand ([Foti et al., 2011](#)). Furthermore, wine quality programs associated with regions and AVA's have been shown to help penetrate regional metropolitan markets ([Rendleman et al., 2016](#)).

Among the cues on a wine package that may influence the consumer's evaluation are country of origin, region of origin and sub-regional appellation (AVA). The wine's vintage, grape variety, style, and vineyard may also appear on the label. The geographic origin of the wine has been shown by recent studies to be perceived as an indicator of quality and may be used as the basis of a purchase decision ([Duhan et al., 1999](#)). Taken as a whole, the previous research suggests that consumers will use a wine's region of origin as a cue for quality, and since their awareness of larger designations will likely be greater than that of smaller AVAs, the larger regions will be a greater factor in making quality evaluations.

2.5. Wine consumer attributes impacting the importance of regional identification

Many consumer attributes have been identified which are important to wine marketers and merit consideration for inclusion in this study. Wine consumption frequency, and consumer involvement were factors explored by [Bruwer and Johnson \(2010\)](#) in an examination of the attributes that contribute to interest in place-based marketing. A willingness to learn about wine was positively related to the importance of region in making wine purchasing decisions. With research on learning consistently indicating that repetition and reinforcement aid the process, the current study's research propositions were based on the specific variables included in the analysis of frequency of wine consumption and gender.

2.5.1. Frequency of wine consumption

Frequent wine drinkers are important to wine marketers because they have a tendency to purchase wine in greater volume, and their experience with wine may shape the opinion of others ([Thach and Olsen, 2015](#)). It has been suggested that high frequency wine drinkers were more likely to focus on wines from a premium region ([Goodman et al., 2006](#)), therefore suggesting they must be paying attention to region of origin. But it appears that light wine buyers, who purchase wine less frequently, may also consider region of origin in

their purchases. It appears that those who purchase less frequently prefer wines from countries with which they are most familiar (Chrysochou et al., 2011). In either case, region of origin plays a role in the selection process. While previous research is not conclusive, it is possible the greater frequency of wine consumption leads to greater personal experience and wine knowledge, which may impact the use of region of origin information.

2.5.2. Gender

Gender is an important demographic variable in wine research and was chosen for inclusion in this study. Atkin et al. (2007b) investigated the impact of a consumer's gender on buying decisions and responses to the wine purchasing situation. They found that there was a clear difference in the coping mechanisms of each gender when sufficient information could not be obtained. The most popular method for both men and women was to rely on region of origin. Women, however, showed a stronger tendency to rely upon secondary criteria such as medals won, price, and label artwork.

Atkin and Johnson (2010), in a later study, also found that men rely on regional information to a greater extent than do women. However, research findings have not always been so conclusive. For example, this study found that gender was not a significant predictor of preferring wine from a well-known region versus a lesser-known region (Goodman 2006). However, in some markets gender may influence consumers' preferences for wines for different well-known regions. For example, Fulconis and Viviani (2006) report Romanian men had a stronger preference for French wines and Romanian women had a stronger preference for Italian wines. While somewhat tentative at this point, it appears that men may use regional information more, or at least differently, than women do.

3. Research propositions

This research analyzes differences between two studies' findings over a distinct period of time. The first was a study conducted in 2008 regarding US consumer awareness of Sonoma County as a region, as well as the smaller AVA within its borders at that time. This study was completed before conjunctive labeling was introduced to Sonoma County. Therefore, a second research study was launched in 2016 to determine if US wine consumers showed a any difference in awareness of wine region AVAs, two years after the conjunctive labeling law went into effect.

As such, the results of the two studies were compared as a means to evaluate a series of research propositions on the impact of conjunctive labeling on wine region awareness in the minds of wine consumers. These hypotheses are as follows:

H1. Consumers will use a wine's country, state, and specific appellation or AVA as an important cue when judging the quality of the wine.

H2. A larger regional designation, such as state or county, will be more heavily utilized in consumers' evaluation of wine quality versus smaller appellations and AVAs.

H3. The different levels of awareness of regions and appellations will vary by consumer attributes between 2008 and 2016. The specific attributes are:

H3.1. High frequency wine drinkers will exhibit greater awareness of AVAs than lower frequency wine drinkers.

H3.2. Based on the literature review, it is predicted that gender will affect awareness of AVAs.

4. Methodology

A survey methodology was used to gather data to address the research hypotheses. The first survey was developed in 2008, and was administered as an online survey to a convenience sample of 409 US adult wine drinkers, utilizing the services of Survey Sampling International. Results were initially published in 2010 (Atkin and Johnson, 2010) and subsequently elsewhere (Atkin and Newton, 2012; Atkin and Thach, 2012). The second survey administered in 2016, included the same original questions as well as the addition of one item regarding *sustainability* in the list of attributes used to judge wine quality. This attribute was added because the topic of sustainably-made wines has become more important in the past several years in the US, and is also a differentiation factor being used to communicate Sonoma County wine brands.

The 2016 survey was administered in the same online fashion as the 2008 survey by Survey Sampling International, and resulted in data from 403 US adult wine drinkers. In both cases, respondents were a self-select sample from the company's panel participants, and although they were a geographically diverse group of US wine drinkers, neither sample is a random sample of the general population. Furthermore, both samples were not composed of the same respondents. However, in analyzing sample demographics, there were many similarities between both data sets and the makeup of the two samples are discussed below, and in Table 1.

4.1. Survey development

In order to measure the attributes used by consumers to evaluate quality of wine, the standard rating scale of decision-making cues adopted by Goodman et al. (2008) was used. This included items such as brand, vintage, country, region, appellation, etc. Respondents were instructed to check all that criteria that applied to their evaluation process. Survey respondents were then asked to "please name up to 5 wine regions (specific regions, not whole countries) in the United States or around the world". The purpose of this open-ended question was to determine how familiar they were with different wine regions when using unaided recall and they were not allowed to return to that section after completing it.

Awareness of a range of wine places of origin was measured by asking respondents to rate their awareness from a list of

geographic areas including well known regions (Bordeaux, Napa Valley, Sonoma County) and several smaller appellations within Sonoma County. Respondents indicated their choices on a 5-point Likert scale using poor (1) to great (5) as the endpoints.

In order to measure *consumer attributes*, a variety of standard wine scales were used. For consumption frequency, we used the original [Wine Market Council \(2008\)](#) definition stating that those who drink wine at least once per week are considered to be *core* wine consumers, and those who indicated they drink less often than at least once per week were considered to be *marginal* wine consumer. All respondents were initially screened to ensure they purchased a bottle of wine at least once in the past year. These questions all help define a respondent's *involvement* with wine, which helps explain different levels of consumer product knowledge, according to [Zaichkowsky \(1985\)](#). Finally, standard demographic questions

regarding gender, age, education level, marital status, and state of residency were included in the survey.

4.2. Sample demographics for 2008 and 2016 surveys

There were many similarities between the two samples, as illustrated in [Table 1](#). For example, the gender split was quite close with 47% male in 2008 as opposed to 45% male in 2016, and 53% female in 2008 vs 55% female in 2016. The ages of respondents tended to be similar, though more young people responded to the 2016 survey than compared to the 2008 survey. This may be because more members of the younger Millennial generation were of legal drinking age in 2016, and they are reported to be the largest US wine drinking generation ([Wine Market Council, 2016](#)).

In terms of state origin, respondents from both the 2008 and 2016 samples came from 46 states. Six of the seven states with the most responses were the same as in 2008, with California, New York, Illinois, Florida, Texas, Pennsylvania and New Jersey having the highest percentages. This matches with US wine sales data showing these states as being in the top 10 for wine sales ([Beverage Information Group, 2014](#)). The remaining 39 states each contributed less than 4% each to the sample.

5. Results

5.1. Do consumers utilize geographic indicators in their selection process?

To address H1 concerning consumers' use of a wine's geographic origin when evaluating quality, a series of questions were analyzed. The first of these questions asked respondents to check their usage of wine decision-making cues when determining the quality of the wine inside the bottle. [Fig. 1](#) shows a comparison of the information sources that each group preferred.

A higher, 76.7% of the 2008 survey respondents indicated that they utilized brand more often than other possible attributes when evaluating wine quality by the label. In the 2016 sample, that proportion of respondents was lower (69.7%). In both surveys, the country of origin and then region of origin follow in order of popularity with respondents.

Table 1
Survey description comparisons between 2008 and 2016 studies.

	2008 Survey	2016 Survey
Total Respondents		
	409	403
Gender		
Male	47%	45%
Female	53%	55%
Age Group		
21-29	14.4%	17.0%
30-39	18.8%	26.3%
40-49	26.0%	16.2%
50-59	16.6%	18.5%
60 and over	24.3%	22.0%
Respondent Provenance	2008 Survey	2016 Survey
Total States Listed	46	46
California	16.5%	11.2%
New York	8.8%	10.2%
Illinois	4.0%	8.2%
Florida	9.8%	6.7%
Texas	5.0%	6.2%
Pennsylvania	6.3%	4.5%
New Jersey	3.8%	4.2%



Fig. 1. Reported quality indicators when evaluating wine choices.

This evidence supports H1, being the proposition that consumers will use a wine's country, state, and specific appellation or AVA as an important cue when judging the quality of wine.

5.2. Do Wine consumers focus on state, county or region in their evaluations?

While the utilization of brand evaluation was somewhat lower in the 2016 sample, the country of origin criterion is of greater importance, while the region criterion is similar between the samples. The percentage of respondents using appellation or AVA was lower, at 13.7% in 2016, when compared to 19.7% of respondents in 2008. The criterion of alcohol content was the only criterion to be higher in the 2016 sample when compared to the results of the 2008 sample.

This result provides support to the idea that US consumers are not absorbing the detailed information conveyed by an increasing number of smaller appellations. Consumers in 2016 continue to rely more upon larger geographical and political entities such as region, country and state, than smaller appellations. The lower usage of appellation information may indicate that US consumers may suffer from information overload concerning the quantity and complexity of smaller appellations, such as those outlined in specific AVA's. These findings lend support for H2.

5.3. Consumer awareness of wine regions

The reduction in the use of smaller appellations or AVAs as a cue for quality is also borne out in the consumers' ability to name wine regions without prompting. This was an open-ended question where respondents were asked to name up to five wine regions worldwide with no hints or reference about country, state, region, or appellation. Table 2 illustrates the results of this analysis.

Napa again received the most mentions in 2016, with 207, followed by California with 107 mentions. Sonoma County was third with 79 mentions. It is interesting to note that the larger political regions were more familiar to the 2016 sample (i.e. California, France, Italy), while the smaller entities such as Napa, Sonoma, Bordeaux, and Champagne received fewer mentions in 2016 than in 2008. Respondents in 2016 do not

illustrate the same level of awareness of wine regions within countries as was observed in 2008.

In order to get a more accurate quantitative picture of the results, respondents were asked to rate their awareness of the wine from several regions and general appellations on a 5-point Likert scale from 1 (poor) to 5 (great). Tellingly, the mean awareness of Sonoma County was higher in the 2016 sample (3.21) than the 2008 sample (2.86). Consistently with established theory that larger regions have greater awareness than smaller regions, Sonoma County was better known by wine consumers than any of the sub-regions contained within the County's boundaries. This consistent order of considerations affirms that H2 is supported.

Interestingly, even though the larger County benefited from a higher level of awareness in the 2016 sample, each of Sonoma County's sub-regions showed an even greater increase in awareness in the latter study. The mean awareness for each of the sub-regions was greater in 2016, with increases ranging from .53 to .88. The increase in the mean for Sonoma County was only .35. Table 3 illustrates these findings.

5.4. Do varying consumer attributes impact wine region awareness levels?

In order to test H3, hypotheses propose that the difference in awareness between 2008 and 2016 for regions and appellations will vary based upon the specific consumer attributes of H3.1: frequency of wine consumption; and H3.2: gender. The findings are discussed below.

5.5. Impact of wine consumption frequency on regional awareness

This information was used to see if the difference in regional awareness varies by frequency of wine consumption. For each of the regions and AVAs, a one-way analysis of variance was performed using the consumption habits of wine consumers to split the respondents into two groups, core and marginal. The results show that the 2016 sample consumed wine more frequently (73%) than the 2008 sample (65.7%). Subsequent to the means comparison analysis, the difference in mean awareness ranking was conducted for the AVAs subjected to conjunctive labelling regulations. Independent, two-sample tests revealed statistical differences by consumption frequency

Table 2
Respondent awareness of major wine regions.

Indicated Region	2008 Survey Frequency Mentioned	2016 Survey Frequency Mentioned
Don't Know	743	690
Napa	259	207
Sonoma	96	79
California	79	107
Bordeaux	52	51
Champagne	44	35
France	26	56
Italy	25	54

Table 3
Respondent awareness of wine sub-regions from 2008 and 2016.

Region/AVA	Mean 2008	Mean 2016	Awareness Difference
Sonoma County (to)	2.86	3.21	.35
Russian River Valley	1.47	2.03	.56
Dry Creek Valley	1.32	2.06	.74
Carneros	1.16	1.69	.53
Green Valley	1.09	1.97	.88

Differences significant at $p < .000$.

Table 4
Difference in wine sub-regional (awareness) knowledge for high and low involved wine consumers in 2016 study when compared to 2008 study.

	Core 2008	Core 2016	Difference	Marginal 2008	Marginal 2016	Difference
Sonoma County	3.12	3.43	0.31	2.37	2.62	0.25
Russian River Valley	1.78	2.24	0.46	0.90	1.42	0.52
Dry Creek Valley	1.54	2.30	0.76	0.88	1.41	0.53*
Carneros	1.41	1.92	0.51	0.71	1.05	0.34**
Green Valley	1.29	2.17	0.88	0.72	1.40	0.68

All differences in bold are significant for the Mann–Whitney test of difference with 99% confidence.

*Mann–Whitney significance test of difference in means with 95% confidence ($Z = -2.083$, sig 0.037).

**Mann–Whitney significance test of difference in means with 90% confidence ($Z = -1.861$, sig 0.063).

Table 5
Gender differences in wine sub-region knowledge between 2008 and 2016 studies.

	Male 2008	Male 2016	Difference	Female 2008	Female 2016	Difference
Sonoma County	3.17	3.35	0.18	2.56	3.14	0.58
Russian River Valley	1.79	2.28	0.49	1.18	1.85	0.67
Dry Creek Valley	1.62	2.24	0.62	1.02	1.93	0.91
Carneros	1.47	1.95	0.48*	0.89	1.50	0.61
Green Valley	1.35	2.10	0.75	0.89	1.86	0.97

All differences in bold are significant for the Mann–Whitney test of difference with 99% confidence.

*Mann–Whitney significance test of difference in means with 95% confidence ($Z = -2.244$, sig 0.025).

in the distribution of responses between the 2008 and 2016 samples, as shown in Table 4, below.

The notable finding is that weekly or more frequently consuming respondents (Core consumers) not only indicate a greater level of awareness of each AVA, but the 2016 respondents returned a significantly higher mean value of awareness for AVAs subjected to conjunctive labelling regulations than respondents categorized in the non-core category of wine consumers. The greater frequency with which core wine consumers drink wine would be an explanation consistent with the well-established literature on exposure frequency leading to greater retention of new concepts (Krugman 1977, Bornstein and Craver-Lemley 2016).

Smaller AVAs performed better in the awareness metric in 2016 compared to 2008, specifically among core wine

consumers. Awareness of Sonoma County was greater among non-core consumers in the 2016 sample, with a mean of 2.62, compared with a mean of 2.37 in 2008. The difference among core consumers was greater with the 2016 sample having a mean value of .31 more than the 2008 sample. This is important to wine marketers because core consumers represent a greater share of wine sales. The increases were generally greater among the core consumers as opposed to marginal consumers, with Russian River Valley being an exception. These findings lend support to H3.1.

5.6. Impact of gender on wine regional awareness

Independent, two-sample tests revealed statistical differences by gender in the distribution of responses between the 2008 and 2016 samples, as shown in Table 5, below. The AVA awareness rankings illustrate the difference in mean values between responses from the 2008 and 2016 samples, grouped by respondent gender. The notable finding is that female respondents returned a significantly higher mean value of awareness for all AVAs subjected to conjunctive labelling regulations, when compared to the difference in results between samples for males.

Even though men indicated a greater mean awareness of these AVAs in both studies, females illustrated a substantial narrowing of the difference by indicating a greater awareness of AVAs in 2016, when compared with the 2008 findings. Again, conjunctive labeling could well be attributed as the reason for the higher awareness of these AVAs in the important segment of the market comprised of women.

The results of these analyses support H3.2. The difference in the level of awareness between 2008 and 2016 on regions and appellations did vary based upon the consumer attributes of wine consumption frequency and gender.

6. Discussion

This study has several implications, from both an academic and managerial perspective.

6.1. Academic perspective

In terms of adding to the body of academic knowledge, the results support previous research illustrating that regional wine branding is important and helps to increase consumer awareness of a region (Tustin and Lockshin, 2001; Papadopoulos and Heslop, 2002; Hall, 2003; Lee and Arcodia, 2011; Christensen et al., forthcoming). Furthermore, the use of conjunctive labeling in Sonoma County illustrates that more consumers in the 2016 sample reported an awareness of individual AVAs when compared to the 2008 sample. This suggests that conjunctive labeling is a useful branding tool, with consumers remembering sub regions to a greater degree when established within larger regions.

Likewise, this study supports previous research illustrating that certain consumer attributes are more apt to respond to campaigns creating awareness of regional identifiers (Bruwer

and Johnson, 2010). For example, consumers who consumed more wine reported higher awareness levels of Sonoma County as a region and several of its AVAs. Furthermore, gender played a role in that more men in the study reported a higher level of knowledge of the Sonoma County region and AVAs than women. However, it is possible this may also be due to the fact that men have been shown to prefer to flaunt their knowledge about wine as a way to show off, whereas women prefer to use wine as a social lubricant (Thach, 2012). It should be noted however that women are showing greater awareness of AVAs in 2016 than they did in 2008. This may be because the Sonoma County conjunctive label is now appearing in grocery stores and retail shops, and more women shop and purchase wine than men in these locations (Thach, 2012).

6.2. Management implications

When comparing the 2008 and 2016 studies, it is important to recognize the fact that there was greater geographic awareness at all levels – both regionally and at the AVA level – suggesting that conjunctive labeling has had an impact. Given this conclusion, most regional wine marketing managers and associations should consider the benefits of a collaborative regional marketing program, as well as agreement on branding, brand story, and logo. Though this can often be a challenging process in the wine industry, where individual producers may have differing viewpoints on branding, the payoff from working together to promote a regional wine brand appears to be worth it. This also supports the findings of Taplin (2011) illustrating that a cohesive regional effort can result in growth and success.

The fact that other regions in California are considering adopting conjunctive labeling, such as San Luis Obispo (Caputo, 2016), is further testament in support of this regional wine branding tool. Overall, these results show that it is possible to combat the diminished awareness of small appellations by linking them to the larger regional appellation, which may be more familiar to consumers.

7. Limitations, future research and conclusion

There are several limitations with this study, resulting in opportunities for future research. An obvious one is the fact that two different samples of consumers were used for data collection, and therefore the findings may be influenced by different sample attributes. Furthermore, the samples were obtained through panel participants and the method of obtaining respondents could have introduced sample bias as well. Despite these two issues, the fact that both samples very similar in demographics, provided a wide geographic representation of 46 US states, and were large in size – both being over 400 respondents – attempts to offset some of these concerns. However, in the future, it would be useful to obtain a representative sample providing a true longitudinal study with the same respondents over time.

Other limitations, which are often found in time-elapsing studies, include differences in the environment, economy, value

systems, pricing, politics, and other factors that may impact brand perceptions and purchase decisions. Also the fact that the first study was conducted in 2008, in the midst of a global recession, and the second study in 2016, when the economic situation had improved in the US, could have impacted results.

In conclusion, this study set out to analyze whether regional branding and conjunctive wine labeling would help to improve wine regional awareness in the mind of consumers. The results show that there was a greater level of prompted awareness at the regional level, and even more so for the smaller appellations of the county. Therefore, conjunctive labeling offers potential value as a marketing tool for use in other small regions, where positive connections can be made in the consumer's mind to a larger region from which it is associated.

Conflict of interest

None declared.

References

- Alcohol and Tobacco Tax and Trade Bureau, 2016. TTB | Wine | American Viticultural Area (AVA). US Department of the Treasury. Retrieved on April 24 2016 from <https://www.ttb.gov/wine/ava.shtml>.
- Atkin, T., Johnson, R., 2010. Appellation as an indicator of quality. *Int. J. Wine Bus. Res.* 22 (1), 42–61. <http://dx.doi.org/10.1108/17511061011035198>.
- Atkin, T.S., Newton, S.K., 2012. Consumer awareness and quality perceptions: a case for Sonoma County wines. *J. Wine Res.* 23 (2), 155–171.
- Atkin, T.S., Garcia, R., Lockshin, L., 2007a. A multidimensional study of the diffusion of a discontinuous innovation. *Australas. Mark. J.* 14 (2), 17–33.
- Atkin, T.S., Nowak, L., Garcia, R., 2007b. Women wine consumers: information search and retailing implications. *Int. J. Wine Bus. Res.* 19 (4), 327–339.
- Atkin, Th. S., Thach, L., 2012. Millennial wine consumers: risk perception and information search. *Int. J. Wine Econ. Policy* 1 (1), 54–62.
- Balestrini, P., Gamble, P., 2006. Country-of-origin effects on Chinese wine consumers. *Br. Food J.* 108 (5), 396–412.
- Barwise, T.P., Ehrenberg, A.S.C., 1987. Consumer beliefs and awareness. *J. Mark. Res. Soc.* 29, 88–94 (No. XX pp.).
- Bell, E., 2016. How a Rooster Wound Up on Every Bottle of Chianti Vinepair. com. Available at: <https://vinepair.com/wine-blog/how-a-starving-rooster-made-chianti-classico-famous/>.
- Beverage Information Group, 2014. Beverage Alcohol State Facts & Regulations. Fact Book, Norwalk, CT.
- Bornstein, R.F., Craver-Lemley, C., 2016. Mere exposure effect. *Cognitive Illusions: intriguing Phenomena in Judgement. Think. Mem.*, 215–234.
- Bruwer, J., Johnson, R., 2010. Place-based marketing and regional branding strategy perspectives in the California wine industry. *J. Consum. Mark.* 27 (1), 5–16.
- Cacic, J., Tratnik, M., Kljusuric, J.G., Cacic, D., Kovacevic, D., 2011. Wine with geographical indication – awareness of Croatian consumers. *Br. Food J.* 113 (1), 66–77.
- Caldwell, N., Freire, J.R., 2004. The differences between branding a country, a region and a city: applying the Brand Box Model. *J. Brand Manag.* 12 (1), 50–61.
- Caputo, T., 2016. Waiting the Hardest Part for Paso Robles AVA Petition. *Vineyard Winery Manag.* (Available at) <https://www.vwmmedia.com/magazine/exclusive.asp>.
- Christensen, B.C., Kenney, M., Patton, D., 2015. Regional identity can add value to agricultural products. *Calif Agr.* 69 (2), 85–91.
- Chrysoschou, P., Lockshin, L., Habenschuss, S., and Trinh G., 2011. Does the behaviour of heavy and light wine buyers differ? In: Proceedings of the 6th International Wine Business & Marketing Conference, June 9–10th, Bordeaux, France.

- Contò, F., Vrontis, D., Fiore, M., Thrassou, A., 2014. Strengthening regional identities and culture through wine industry cross border collaboration. *Br. Food J.* 116 (11), 1807–1788.
- Duhan, D.F., Kiecker, P.L., Areni, C.S., Guerrero, C., 1999. "Origin information and retail sales of wine". *Int. J. Wine Mark.* 11 (3), 44–58.
- Engelbrecht, J., Herbst, F., Bruwer, J., 2014. Region-of-origin (ROO) certification as marketing strategy in the South African wine market. *Int. J. Wine Bus. Res.* 26 (2), 139–162.
- European Commission, 2016. Geographical indications and traditional specialities. *Agric. Rural Dev.* (http://ec.europa.eu/agriculture/quality/schemes/index_en.htm) (Accessed 15 May 2016).
- European Union, 2006. Council Regulation (EC) on the protection of geographical indications and designations of origin for agricultural products and foodstuffs, Pub. L. No. 510/2006, § Foodstuffs, 510 EU054. Retrieved from (<http://www.wipo.int/wipolex/en/details.jsp?id=1458>).
- Foti, V.T., Pilato, M., Timpanaro, G., 2011. Assessment of results from quality control systems in the Sicilian winemaking industry through the use of multi-varied analysis. *New Medit.* 10 (3), 39–48.
- Fulconis, F., and Viviani, J., 2006. Segmentation of the Romanian wine market. In: *Proceedings of the 3rd International Wine Business & Marketing Conference*, July 6th, 2006 Montpellier, France.
- Goodman, S., Lockshin, L., and Cohen, E., 2006. Using the Best-Worst method to examine market segments and identify different influences of consumer choice. In: *Proceedings of the 3rd International Wine Business & Marketing Conference*, July 6th, Montpellier, France. Article available at: (<http://hdl.handle.net/2440/35335>).
- Goodman, S., Lockshin, L., Cohen, E., Fensterseifer, J., Ma, H., D'Hauteville, F., Siriex, L., Orth, U., Casini, L., Corsi, A., Jaeger, S., Danaher, P., Brodie, R., Olsen, J. and Thach, L., 2008. International Comparison of Consumer Choice for Wine: A Twelve Country Comparison. In: *Proceedings of the 4th International Conference for the Academy of Wine Business Research*, Sienna, Italy, July 2008.
- Gray, B.W., 2014. California AVAs: too much of a good thing. *WineSearcher.com*. (<http://www.wine-searcher.com/m/2014/10/california-avas-too-much-of-a-good-thing>) (Accessed 24 April 2016).
- Gray, B.W., 2016. Constellation buying brands rather than wineries. *Wine News Featur.* (<http://www.wine-searcher.com/m/2016/04/constellation-buying-brands-rather-than-wineries>) (Accessed 24 April 16).
- Hall, J., 2003. Branding Britain. *J. Vacat. Mark.* 10 (2), 171–185.
- Heimoff, S., 2015. Is California running out of new AVAs? *Steveheimoff.com*. Available at: (<http://www.steveheimoff.com/index.php/2016/04/25/is-california-running-out-of-new-avas/>) (Accessed 24 April 16).
- Helms, M.M., 1997. Planning prospects for industry followers. *Mark. Intell. Plan.* 15 (3), 135–141.
- Hu, W., Batte, M.T., Woods, T., Ernst, S., 2012. Consumer preferences for local production and other value-added label claims for a processed food product. *Eur. Rev. Agric. Econ.* 39 (3), 489–510.
- Jarvis, and Rungie, C., 2002. Loyalty towards a well known brand or a well known region? A conjoint approach using actual purchase data", *Proceedings of the 27th World Congress of the International Office of Wine and Vine (OIV)*, Bratislava.
- Johnson, R., Bruwer, J., 2007. Regional brand image and perceived wine quality: the consumer perspective. *Int. J. Wine Bus. Res.* 19 (4), 276–297.
- Krugman, H.E., 1977. Memory without recall, exposure without perception. *J. Advert. Res. J. Advert. Res.* 17, 7–12.
- Lee, I., Arcodia, C., 2011. The role of regional food festivals for destination branding. *Int. J. Tour. Res.* 13 (4), 355–367.
- Luck, K., 2012. The delicate art of rebranding: retaining equity while creating a fresh face. *J. Brand Strategy* 1 (1), 50–56.
- Melnik, P., 2017. Sonoma County Wine Auction raises record \$5.2 million in first year at La Crema Estate. *Press Democrat*. Available at: (<http://www.pressdemocrat.com/news/7410072-181/sonoma-county-wine-auction-marks?Artslide=0>).
- Monterey Wines, 2015. Monterey County Conjunctive Labeling. *Monterey-wines.org*. Available at: (<https://montereywines.org/labeling/>).
- Orth, U.R., Stöckl, A., Veale, R., Brouard, J., Cavicchi, A., Faraoni, M., Larreina, M., Lecat, B., Olsen, J., Rodriguez-Santos, C., Santini, C., Wilson, D., 2012. Using attribution theory to explain tourists' attachments to place-based brands. *J. Bus. Res.* 65 (9), 1321–1327.
- Papadopoulos, N., Heslop, L., 2002. Country equity and country branding: problems and prospects. *Brand Manag.* 9 (Nos 4-5), 294–314.
- Rendleman, C.M., Hoemmen, G.A., Altman, I., Taylor, B., Moon, W., Smith, S., 2016. Wine industry competitiveness: a survey of the Shawnee Hills American Viticultural Area. *Wine Econ. Policy* 5 (1), 4–13. <http://dx.doi.org/10.1016/j.wep.2016.03.002>.
- Rioja Wine, 2014. Guarantee Labels. *Riojawine.com*. Available at: (<http://us.riojawine.com/en/75-guarantee-labels.html>).
- Rives, S., 2011. Conjunctive Labeling Comes to Sonoma County. *Lexology.com*. Available at: (<https://www.lexology.com/library/detail.aspx?G=fede44fc-9657-47f1-a1d2-1ff433f009f3>).
- Romaniuk, J., Sharp, B., Paech, S., Driesner, C., 2003. Brand and advertising awareness: a Replication and extension of a known empirical generalisation. *Australas. Market. J.* 12, 70–80 (No. XX pp).
- Rose, N., Serrano, E., Hosig, K.H., Haas, C., Reaves, D., Nickols-Richardson, S.M., 2008. The 100-Mile Diet: a community approach to promote sustainable food systems impacts dietary quality. *J. Hunger Environ. Nutr.* 3 (2-3), 270–285.
- Ruth-McSwain, A., 2012. Eating green: coverage of the locavore movement. *J. Ext.* 50 (5) (Retrieved from) (<http://www.joe.org/joe/2012october/a7.php>).
- Santeramo, F.G., Seccia, A., Nardone, G., 2017. The synergies of the Italian wine and tourism sectors. *Wine Econ. Policy* 6 (1), 71–74. <http://dx.doi.org/10.1016/j.wep.2016.11.004>.
- SCV, 2016. (Sonoma County Vintners). Our Wine Activities. *Sonomawine.com*. Available at: (<http://sonomawine.com/wine-activities/>).
- Showers, V.E., Showers, L.S., 1993. The Effects of Alternative Measures of Country of Origin on Objective Product Quality. *Int. Mark. Rev.* 10 (4), 53–67.
- Sonoma County Vintners, 2016. Conjunctive Labeling. Retrieved on 24 July from (<http://sonomawine.com/learn/conjunctive-labeling/>).
- Taplin, I.M., 2011. Network structure and knowledge transfer in cluster evolution: the transformation of the Napa Valley wine region. *Int. J. Organ. Anal.* 19 (2), 127–145.
- Thach, L., 2012. Time for wine? Identifying differences in wine-drinking occasions for male and female wine consumers. *J. Wine Res.* 23 (2), 134–154.
- Thach, L., Olsen, J., 2015. Profiling the high frequency wine consumer by price segmentation in the US market. *Wine Econ. Policy* 4 (1), 53–59.
- Tustin, M., Lockshin, L., 2001. Region of origin: does it really count? *Aust. N. Z. Wine Ind. J.* 16 (5), 139–143 (September-October).
- US Department of Treasury, 2011. TTB | Wine | American Viticultural Area (AVA) [Facts and Overview]. Retrieved June 6, 2016, from (<https://www.ttb.gov/wine/ava.shtml>).
- VDP, 2016. The VDP Classification. *VDP.de*. Available at: (<http://www.vdp.de/en/vdp/klassifikation/the-refined-vdpclassification/>).
- Verlegh, W., Steenkamp, J., 1999. A review and meta-analysis of country-of-origin research. *J. Econ. Psychol.* 20, 521–546.
- Wine Compliance Alliance, 2015. Give Napa Valley Credit or Lose Your License. *Winecompliancealliance.com*. Available at: (<http://www.winecompliancealliance.com/give-napa-valley-credit-or-lose-your-license>).
- Wine Market Council, 2008. Consumer Tracking Study, available from (www.winemarketcouncil.com).
- Wine Market Council, 2016. Wine Market Council stands by their 2016 consumer research on Millennials wine consumption habits, Press Release, March 24, 2016. Available at: (http://winemarketcouncil.com/wp-content/uploads/2016/03/FinalRev_WMC2016ResearchCorrections_March2016.pdf).
- Zaichkowsky, J.L., 1985. Measuring the involvement construct. *J. Consum. Res.* 12, 341–352 (6/5/2017; 9/28/2017; 10/11/2017).