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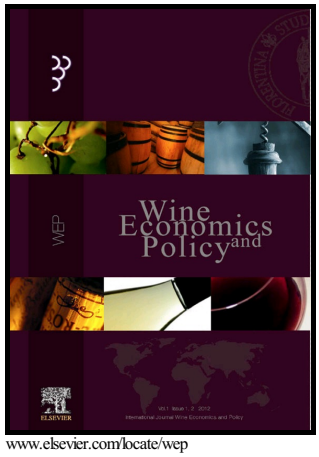

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One size does (obviously not) fit all: using product attributes for wine market segmentation

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Abstract

The intense competition affecting the wine industry in recent decades has forced wineries and retailers to reshape their marketing strategies on the basis of consumer preferences. The current study aims to identify such preferences and the effects they might have in influencing consumer decisions. Preferences for different wine attributes as well as the psychographic traits of respondents were revealed through a web-based questionnaire administered to 504 wine consumers living in the wider metropolitan area of New York. Best-worst scaling (BWS) was used to detect consumer preferences for eleven wine attributes. Based on individual best-worst scores, a latent

class segmentation analysis was implemented to classify consumers into four segments on the basis of psychographic characteristics such as involvement, subjective knowledge, innovativeness and loyalty proneness. The four segments identified (i.e. experientials, connoisseurs, risk minimizers and price-sensitive) differ significantly in terms of their preferences towards wine and psychographic characteristics, suggesting that a mass marketing approach is no longer suitable. Accordingly, managers need to adapt their marketing strategies to meet the preferences of different target groups. The results provide broad implications for marketers, wineries and retailers interested in successfully targeting consumers in a highly competitive market.

Keywords: best-worst scaling; consumer preferences; US wine consumers

1. Introduction

The global wine industry is currently facing profound changes both in terms of consumption and production (Hristov and Kuhar, 2015; Kalazić et al., 2010; Mariani et al., 2012; Seghieri et al., 2007). While consumers in more developed countries have reduced their per capita wine consumption in favour of other alcoholic beverages, consumers in new wine-producing countries have significantly increased the volume of wine consumed (OIV, 2015; Seghieri et al., 2007). Accordingly, the increasing production of wine worldwide is not supported by a symmetrically growing global demand, leading to the creation of a highly competitive global market (Hughson et al., 2004; Kalazić et al., 2010; Lombardi et al., 2016; Pickering et al., 2014; Seghieri et al., 2007). To keep pace with such changes and successfully compete on the market, wine producers have to adjust their supply and marketing strategies, adopting a systematic approach that takes into account the heterogeneity of consumer preferences (Kalazić et al., 2010; Lockshin and Corsi, 2012; Thiene et al., 2013).

Although general patterns can be described for wine consumers, major differences are also observed from one country to another, or among gender and generation cohorts. Typically, regular wine consumers are portrayed as highly educated (Thomas and Pickering, 2003), middle-aged and of higher-than-average income (Lockshin and Corsi, 2012; Thomas and Pickering, 2003, 2005). However, regular wine consumers also differ considerably in their specific preferences and consumption behaviour.

Wine is a unique product, characterised by a variety of attributes, both intrinsic (sensory) and extrinsic (brand, country of origin and label, among others) (Lockshin and Cohen, 2011; Lockshin and Hall, 2003; Spielmann et al., 2016). Wine is also a multifaceted product, being the result of the simultaneous interaction of soil, climate and people (Kalazić et al., 2010; Spielmann et al., 2016). The complexity of these factors, as well as their ability to influence both consumers'

preferences and buying behaviour, makes wine extremely interesting from a marketing point of view. Due to the broad varieties of wine styles available on the market, as well as the range of marketing strategies implemented, it is crucial for wine manufacturers to understand product attributes that maximise consumer-perceived product value (Pickering et al., 2014). To address these issues and allow for the large fragmentation in wine consumer preferences and profiles, market segmentation is becoming vital in wine marketing (Brunner and Siegrist, 2011). Segmentation allows the classification of consumers who show different needs, desires and traits, into subgroups that share common characteristics and homogeneous perceived value definitions (Barber et al., 2007; Brunner and Siegrist, 2011; Thomas and Pickering, 2003).

This paper aims to extend the existing literature on wine consumer segmentation by segmenting consumers on the basis of their preferences for specific wine attributes. Although the US represents the biggest wine market in the world in terms of value and volume (OIV, 2015), most of the studies on wine consumer segmentation have been carried out in the Australian market (e.g. Bruwer and Li, 2007; Lockshin et al., 1997), with few studies on American consumers (e.g. Kolyesnikova et al., 2008; Thach and Olsen, 2015). Moreover, most previous segmentation studies applied Discrete Choice experiments (e.g. Corsi et al., 2012; Lockshin et al., 2006; Mueller et al., 2010a), whilst the Best-Worst Scaling (BWS) approach has been applied only sporadically (e.g. Casini et al., 2009; Lockshin and Cohen 2011) and not on the US wine market. The purpose of the current study was to perform a market segmentation of consumers living in the wider New York metropolitan area, apply BWS to identify consumer preferences for specific wine attributes, and characterise the resulting market segments on the basis of psychographic features (involvement, subjective knowledge, innovativeness and loyalty proneness).

The remainder of the paper is organised as follows: the next section offers an overview of the previous literature on market segmentation in the wine industry. The methodology used in the study is then described, together with the questionnaire administered and the analytical tools applied. The paper then presents the study findings, defining the main characteristics of interviewees, exploring the observed differences among the segments identified. After extensive discussion of the findings, the paper closes with a summary of practical implications and research perspectives.

2. Study background

The adoption of a differentiated marketing approach leads to several benefits for wineries and retailers. Clear identification of customers' needs and wants enables companies to use their resources efficiently (Bruwer and Li, 2007): costs decrease due to companies' ability to focus on the

most attractive consumer targets (Barber et al., 2007; Dodd and Bigotte 1997; Thomas and Pickering, 2003); wineries can customise their offer on the basis of their customers' wants (Hughson et al., 2004); wine marketers gain insights to position the product on the market successfully (Kalazić et al., 2010), and can design effective marketing and communication strategies (Bruwer and Li, 2007; Johnson et al., 1991; Thach and Olsen, 2006).

To achieve these benefits, market segmentation is the first step (Brunner and Siegrist, 2011). However, due to the wide range of determinants affecting consumer perceptions, attitudes and purchasing behaviour towards wine, the literature suggests several criteria according to which wine consumers can be segmented. Such criteria include: a) socio-demographics (Ahmad, 2003); b) psychographics (Ahmad, 2003; Saayman et al., 2012), especially involvement (Barber et al., 2007; Lockshin et al., 1997; Quester and Smart, 1996) and knowledge (Hristov and Kuhar, 2015; Mitchell and Hall, 2001); c) lifestyle (Bruwer and Li, 2007; Bruwer et al., 2002; Johnson and Bruwer, 2003); and d) behaviour, such as frequency of consumption (Goodman et al., 2008; Thach and Olsen, 2015) and consumption occasion (Berni et al., 2005; Dubow, 1992). Based on the criteria implemented in the various segmentation studies, the consumer profiles derived and their ability to predict consumer behaviour correctly may differ considerably. This has led many scholars to suggest a combination of different segmentation approaches based on socio-demographics, lifestyle, wine knowledge and level of involvement (Ahmad, 2003; Kelley, 2015; Seghieri et al., 2007). Building on this suggestion, the current study incorporates different segmentation bases in a sequential form, i.e. starting with wine attribute preferences and then incorporating psychographic, behavioural and socio-demographic criteria.

In the past, marketers largely relied on socio-demographic characteristics to segment wine consumers (Barber et al., 2007). The reasons lay in the ease of such characteristics to implement (Arnold and Fleuchaus, 2008) and the resulting rapid estimation of the number of potential consumers in each segment (Bruwer and Li, 2007). Recently, scholars have pointed out the weakness of such variables (alone) in explaining consumer attitude and behaviour towards wine (Ahmad, 2003; Bruwer and Li, 2007; Bruwer et al., 2001).

An alternative segmentation scheme that has proved effective in the wine industry is that based on consumer preferences towards different wine attributes (e.g. Nunes et al., 2016). The latter have a direct and strong impact on wine choices, while preferences towards specific wine attributes are more likely to predict consumer buying behaviour (Lockshin et al., 2006). This segmentation scheme offers insights into which wine product features consumers like and want more of. Accordingly, wineries can target their market strategies based on consumer preferences.

The literature on the subject shows the positive effects of specific wine attributes (e.g. brand, origin, label, price, grape variety and awards) on consumer decisions (Casini et al., 2009; Gil and Sánchez, 1997; Lockshin and Cohen, 2011; Thiene et al., 2013). However, several differences can be drawn in these studies regarding the number and type of attributes accounted for, as well as the wines and countries investigated.

3. Methodology

3.1. Data collection and survey

The current paper focuses on the New York wine market which accounts for over 8% of all wine sales in the US (Pickering et al., 2014). A professional market research agency collected data online, via a web-based platform. The final sample was selected from the company's panel - consisting exclusively of US citizens - of wine buyers (individuals buying wine at least once in three months) living in the wider New York metropolitan area. The sampling method used was quota sampling. More specifically, interviewees were screened based on their age, gender, place of residence and frequency of wine consumption. The final sample includes 504 respondents (see a detailed description of the sample in the Results section).

The final questionnaire consisted of three sections, lasting, on average, 25 minutes. The first section addressed the BWS experiment aiming at identifying consumer preferences towards eleven wine attributes selected from the literature (Chrysochou et al., 2012; Lockshin et al., 2006; Nunes et al., 2016). Psychographic characteristics of consumers were then collected in the second section: consumers had to give their degree of agreement with specific statements related to wine-specific "involvement", "subjective knowledge", "innovativeness", and general "loyalty proneness". Involvement was assessed by adapting five items from the well-known scale by Mittal and Lee (1989), subsequently applied by many other scholars (e.g. Hollebeek et al., 2007; Lockshin et al., 1997, 2001), i.e. "*In general, I have a strong interest in wine*". Subjective knowledge was measured adapting the four-item scale by Flynn and Goldsmith (1999), i.e. "*I consider that I know more about wine than the average person*". To assess the willingness of consumers to try new wines, the study modified three items from the Domain Specific Innovativeness scale (DSI) by Goldsmith and Hofacker (1991), i.e. "*In general, I am among the last in my social circle to purchase new wines*". Lastly, respondents expressed their brand loyalty on a 5-item scale by Lichtenstein et al. (1990) and Raju (1980), i.e. "*I generally buy the same brands I have always bought*". Seven-point Likert scales with end-points 1=totally disagree and 7=totally agree were used for all the previously described measurements. In the last section of the questionnaire, the socio-demographic characteristics of

respondents (marital status, education, and annual family income) were collected, as well as the most frequently chosen wine purchase and consumption places.

3.2. Wine attributes and Best-Worst Scaling implementation

The current study assessed consumer preferences towards eleven wine attributes. The wine attributes investigated here were selected based on the literature (Chrysochou et al., 2012; Lockshin et al., 2006; Nunes et al., 2016) and represent those most likely to influence consumers in their purchasing decisions. The eleven attributes were as follows: previous experience, recommendations, price, grape variety, brand name, wine maker, country of origin, vintage, store promotions, certification (denomination of origin) and attractive front label.

To detect consumer preferences towards different wine attributes, the study applied the BWS approach. BWS has proven to be an effective technique to study consumer preferences in many different contexts, such as social and food sciences (e.g. Auger et al., 2007; Burke et al., 2014; Cohen, 2009). In the food context, BWS has been widely applied to identify the most important product attributes for consumers able to drive their purchasing behaviour (Lusk and Briggeman, 2009; McDonald and Rundle-Thiele, 2008). BWS has also been found to be useful in wine marketing research, since it allows determination of wine attributes that affect consumer preferences (Cohen, 2009; Goodman et al., 2008; Lockshin and Hall, 2003; Mueller et al., 2010a). The increasing interest in this method lies in the benefits related to its use. To this extent, interviewees can easily discriminate, among a set of options, the "best" and the "worst" (also called most and least) preferred attributes (Cohen, 2009; Jaeger et al., 2008). Moreover, BWS forces respondents to make trade-offs among attributes, identifying the maximally different pair of items (Flynn et al., 2007; Lee et al., 2008; Louviere and Islam, 2008). Since the method is based on the random utility theory (McFadden, 1974), the attributes selected are those providing the highest and lowest utility for respondents (Flynn et al., 2007). The choice of one attribute over another relies upon a latent scale that in our study is the level of importance that consumers ascribe to the different wine attributes (Louviere and Islam, 2008). Further, BWS is free of scales, and thus is not affected by the common bias influencing rating scales (Mueller and Lockshin, 2013). Accordingly, scalar equivalence is ensured, and results are easily comparable (Lockshin and Cohen, 2011; Mueller and Lockshin, 2013).

In the current study, participants had to rate the "most important" and "least important" attribute when purchasing a bottle of wine. BWS was performed with a Balanced Incomplete Block Design (BIBD)(11,11,5)[1].

4. Results

4.1. Sample description

The study was conducted in January 2015, collecting responses from 504 consumers. All respondents were older than 21 years of age, living in the New York metropolitan area, regular consumers of wine with a consumption frequency of at least once per week by almost three in four sample members (72.1 percent; Table 1). Psychographic measurements (involvement, subjective knowledge, innovativeness, and loyalty proneness) were collected to characterise respondents. The mean scores (and standard deviations) for these measurements are reported in Table 2 (all scores range between 1 and 7), together with the relative Cronbach alphas, varying from 0.82 to 0.94, which indicates the very high reliability of all scales.

Insert Table 1

Insert Table 2

4.2. Best-Worst Scaling analysis

Table 3 presents the BWS means per attribute (within the range of +5 to -5) and standard deviations for the entire sample. In particular, the number of times each attribute was chosen as best (most important) and worst (least important) was aggregated over all respondents to calculate the average best-worst score (B-W)/n for the total sample. The results indicate that previous experience is far the most important attribute in wine purchasing (2.6), followed by recommendations (1.0), price (0.6), grape variety (0.5) and brand name (0.4). Not surprisingly, attractive wine labels received the lowest score (-1.9). These outcomes are consistent with previous relevant studies of Bernabéu and colleagues (2012), Casini et al. (2009), and Lockshin and Cohen (2011). However, the standard deviations of best-worst scores highlight a large degree of heterogeneity in individual attribute importance, underlying the possible existence of consumer segments with different patterns of preferences towards specific wine attributes.

Insert Table 3

[1] To assign the eleven wine attributes into best-worst choice sets, a symmetrical BIBD of eleven sets with five items per set was selected. As each of the eleven items appeared five times across the design, the counting based B-W scale is limited in the range [−5 +5].

4.3. Market segmentation analysis

Based on individual BWS scores, a latent class segmentation analysis (Mueller and Rungie, 2009) was implemented, resulting in four consumer groups. The Bayesian Information Criterion (BIC) and the log likelihoods (LL) were applied to select the optimal number of segments. ANOVA was used to individual-level BWS scores of each attribute to test whether segments significantly differ in the importance of each attribute. The results revealed significant differences for all eleven attributes. The four segments were defined as: the "experientials", the "connoisseurs", the "risk minimizers" and the "price sensitive" (Figure 1).

Insert Figure 1

The first and largest segment are the *Experientials* (34 percent of the sample), as it includes individuals that most value previous experience (3.88), followed by recommendations (2.14). Subjects in this group belong to both genders (56 percent females), are more educated compared to individuals of the other segments (34 percent are MSc or PhD degree holders), as well as higher-income earners (68 percent have a higher than average income). They are the most innovative of all segments when it comes to wine (mean score 4.33), and the second most involved in the wine category and more knowledgeable about wine.

The second segment are the *Connoisseurs* (29 percent of the sample). They value grape variety (1.37), wine maker (1.34), brand name (0.85) and country of origin (0.30), while they assign much less importance to store promotions (-1.89) and price (-0.86). They are mostly males (60 percent), have the second-highest percentage of highly educated consumers (29 percent MSc or PhD degree holders), but the lowest percentage of high-income earners. These consumers are the most involved in the wine category of all; have the highest subjective knowledge of wine (mean score: 5.2), and tend to remain more loyal to their choices compared to the other segments. Moreover, they are the least innovative consumers when it comes to wine.

The third segment are the *Risk minimizers* (18 percent of the sample); individuals of this group value previous experience highly and, more than the other segments, recommendations (3.41 and 2.22 respectively), while they also value a variety of other cues, i.e. price (1.18), and brand name (0.68). They are mostly females (70 percent), have the third-highest percentage of highly educated consumers (28 percent MSc or PhD degree holders), and the highest percentage of high-income earners of all segments. They are the least innovative of all when it comes to wine, the

second-least involved in the wine category, while they show the lowest tendency to remain loyal to their choices of all segments.

The last group comprises the *Price sensitive* wine consumers (18 percent of the sample). Respondents in this segment value price (3.31), as well as store promotions (1.65) far more than the other segments. They are mostly females (73 percent), have the lowest education level of all segments, and the second-lowest percentage of high-income earners. They have the lowest score of all segments in terms of involvement in the wine category, subjective knowledge about wine, and innovativeness in their wine choices (mean scores: 4.22, 3.40 and 3.93 respectively). However, they tend to remain quite loyal to their choices.

Further, post hoc Tukey tests investigated the paired statistical significant differences ($p< 0.05$) among cluster means in terms of psychographic characteristics of consumers (Table 4). As table 4 shows, Risk minimizers and Price sensitive segments display similar characteristics in terms of involvement, subjective knowledge and innovativeness. By contrast, Experientials and Connoisseurs differ in three out of four psychographic measurements, whilst their average scores in loyalty proneness are similar.

Insert Table 4

5. Discussion

The results shed light on the importance that different wine attributes have on consumers' wine choices. Consumers display different preferences towards wine. Thus, marketers have to put marketing mix strategies in place able to incorporate wine product attributes most preferred by consumers and able to drive their purchasing behaviour.

BWS findings reveal a clear preference of US consumers for specific wine attributes, such as previous experience and recommendations. The high scores assigned to these attributes suggest the aptitude of consumers to make their choices undertaking a range of risk reduction strategies. To address the risks arising from the purchase of such a complex product as wine, consumers rely on their direct experience. Moreover, they look for information from different sources, such as wine magazines, family members, friends, and sales staff to improve their knowledge and make better decisions (Hristov and Kushar, 2015). However, the findings reveal a lack of interest among consumers in front labels and certification (denomination of origin). The above results are largely in accordance with previous studies carried out in the US by Chrysochou et al. (2012) and Lockshin and Cohen (2011). These scholars shed light on the importance that different wine attributes (13 in their study) have in influencing consumers' choices. Both studies identified "tasted the wine

previously" and "someone recommended it" as the most preferred attributes, while the "attractive front label" among the least preferred.

The largest segment in our study (i.e. the Experientials) shares similar characteristics in terms of preferences towards the wine attributes investigated, attaching the highest scores to previous experience and recommendations. The high level of subjective knowledge indicates an adequate degree of confidence that, in turn, explains the tendency of these consumers to base their choices on their previous experiences with wine (Atkin et al., 2007; Canziani et al., 2016; Perrouty et al., 2006; Vigar-Ellis et al., 2015). Moreover, the Experientials also tend to look for information from different sources in order to improve their expertise and acquire useful knowledge on which to base their future purchasing behaviour (Casini et al., 2009; Hristov and Kushar, 2015). Since they consider themselves wine experts (Viot, 2012), the Experientials tend to avoid recommendations from friends or sales staff, preferring more impersonal sources such as wines guides or other specialised magazines (Casini et al., 2009; Vigar-Ellis et al., 2015). Further, the interest shown in learning about wine suggests an openness of these consumers to try different new wines (Bruwer and Li, 2007). The high level of innovativeness identified in this segment also supports this evidence.

Connoisseurs represent the second biggest segment in our analysis. These consumers are mainly well-educated males, displaying the highest level of involvement and subjective knowledge among the segments analysed. Connoisseurs tend to demonstrate a predetermined purchasing behaviour based on more complex cognitive processes that involve the analysis of several attributes (Barber et al., 2007; Lockshin and Cohen, 2011; Perrouty et al., 2006; Seghieri et al., 2007). In other words, these consumers have a clear idea about what they want and look for when purchasing wine, placing more emphasis on few specific attributes. Moreover, the high loyalty proneness found in this segment suggests that these consumers have a range of brands (or wines) that meet their expectations in terms of attributes sought, among which they choose when they have to buy a wine (Jarvis et al., 2007). They also show a keen interest and motivation in reading more about wine and its characteristics, looking for different information sources (Hristov and Kushar, 2015). Searching for information, they aim to either improve their personal knowledge or confirm information and beliefs previously stored in their mind (Bruwer and Li, 2007; Canziani et al., 2016). These findings are consistent with previous studies in terms of socio-demographics, psychographics, and attributes identified. Hristov and Kushar (2015) identified knowledgeable consumers as male with higher education (often specialised in wine), eager to acquire information during the purchase process. They are less susceptible to expert recommendations, preferring to build their own opinions and then make their decisions on the basis of personal experience (Casini et al., 2009; Vigar-Ellis et al.,

2015). Lastly, these consumers take specific attributes into great account in their decision-making process such as origin of wine, grape variety and brand name (Hollebeek et al., 2007; Lockshin and Cohen, 2011; Seghieri et al., 2007; Viot, 2012).

A further segment of wine consumers may be termed Risk minimizers, including mainly females, with low levels of involvement, innovativeness and loyalty proneness. Their psychographic characteristics are reflected in the preferred attributes (previous experience, recommendations, price and brand name), revealing the predisposition of these consumers to use heuristics (e.g. brand, price) to simplify their decisions (Barber et al., 2007; Chrysochou et al., 2012; Yuan et al., 2005). Past experience and recommendations also play a central role in Risk minimizers' decision-making process. Indeed, these consumers rely on the information already stored in their mind, as well as recommendations by friends and sales staff to reduce the risks of making the wrong choice (Barber et al., 2007; Lockshin et al., 2001). Previous studies identified similar results, highlighting that consumers making their choices rely first on direct experience and recommendations, and then on extrinsic quality cues such as price, brand name, label, medals and grape variety (Atkin et al., 2007; Balestrini and Gamble, 2006; Barber et al., 2007; Casini et al., 2009; Chrysochou et al., 2012; Vigar-Ellis et al., 2015; Yuan et al., 2005).

The last segment, the Price sensitive, shares similar traits with the Risk minimizers, but differs in its preferences for particular wine attributes. As highlighted by the high BW scores assigned to price and store promotion, price-sensitive consumers show a preference for buying wine mainly in promotion. According to Seghieri et al. (2007), these consumers seem to have unfixed choices when purchasing wine: they consider all the options available on the shelves and their decisions are then driven by price (Seghieri et al., 2007). Consumers in this segment also display low levels of involvement and subjective knowledge. These outcomes are in line with previous studies which identified greater price sensitivity among less involved consumers (Hollebeek et al., 2007; Lockshin and Cohen, 2011; Lockshin et al., 2001; Quester and Smart, 1998). Moreover, the high loyalty proneness detected in this segment supports the results of Jarvis et al. (2007), who identified a higher effect of price on consumer loyalty compared to other wine attributes (e.g. grape variety, region and brand).

6. Conclusion

Wine is a complex and multifaceted product whose attributes play a key role in guiding consumers' decision-making processes (Chrysochou et al., 2012). Understanding what consumers want and look for when purchasing wine allows companies to set up marketing strategies with a view to meeting consumers' expectations, improving their shopping experience and creating long-term

relationships. This study addressed such issues, revealing consumers' preferences towards eleven wine attributes.

The results provide practical implications for marketers, wineries and retailers on how to target the different consumer segments. To this extent, BWS scores reveal a clear effect of specific attributes on consumers' wine choices. To address these choices and encourage wine purchase, retailers should organise their wine department in accordance with such preferences. For instance, information about the grape variety, wine maker, brand name and country of origin should be easily detectable to attract connoisseurs. As for wine communication, recommendation proved to be a crucial attribute for experientials and risk minimizers. However, the different level of involvement displayed by these segments suggests that they prefer to look for different information sources. Since highly involved consumers (experientials) show a preference for acquiring information from impersonal sources, wineries should promote the spread of tasting notes in specialized wine magazines as well as evaluations from reliable critics (Vigar-Ellis et al., 2015). Risk minimizers (little involved), on the other hand, seek less information about wine and tend to rely on recommendations from others to make their choices (Casini et al., 2009).

An important limitation of this study concerns the description of the scenario implemented for best-worst analysis: the scenario illustrates a common purchase situation and no distinction was suggested between the environment (on-premise or off-premise) and consumption occasion (such as everyday or special event). In contrast, Ritchie (2007) identified differences in consumer behaviour according to whether wine was purchased for private or public situations. A further limitation of this type of study, based on a direct elicitation method, lies in the predictably low scores of the attributes related to packaging, as these are likely to be subject to unconscious processing and direct perception-behaviour links (Mueller et al., 2010b). Lastly, the study did not include colour graphics or other visual elements that were used in other research to improve the realism of consumer choices (Annunziata et al., 2016; Hollebeek et al., 2007; Mueller et al., 2010a). Accordingly, the results may suffer from hypothetical bias due to shortcomings in the questionnaire, which poorly resembled a real purchasing situation.

Further research needs to be undertaken in several directions. In an attempt to address one of the core limitations of the current study, it would be worth analysing wine consumer preferences for selected attributes in a more specific consumption occasion (i.e. casual dinner, home dinner). Furthermore, it is also very likely that the relative importance of the attributes will be different on the aggregate and segment level for specific wine price levels (luxury compared to basic wines). Finally, a research design incorporating more attributes would also increase the realism of the study and hence positively contribute to the external validity of the research findings.

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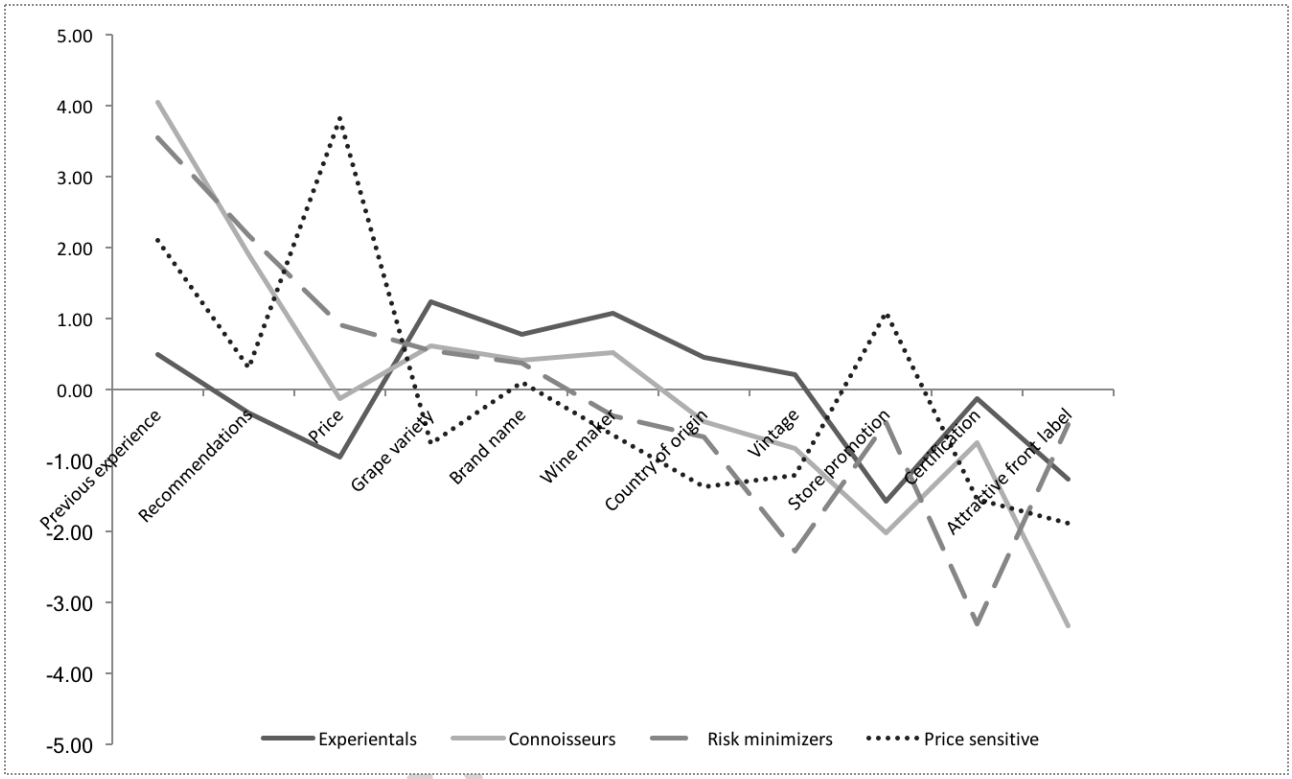

Figure 1: Best-Worst Scaling ? Latent class segmentation results

Tables

Table 1 - Sample description (*N=504*)

Variable name	N	%
Gender		
Male	216	42.9%
Female	288	57.1%
Age cohort		
21 – 30	89	17.7%
31 – 40	123	24.4%
41 – 50	82	16.2%

51 – 60	144	28.6%
> 60	66	13.1%
Marital status		
Married	302	59.9%
Single	140	27.8%
Divorced or other	62	12.3%
Education		
Completed some high school	3	0.6%
High school graduate	38	7.5%
Completed some college	81	16.1%
College degree	199	39.5%
Completed some postgraduate	42	8.3%
Master's degree	110	21.8%
Doctorate, law or professional degree	31	6.2%
Annual family income *		
Below national average	67	13.3%
Similar to national average (i.e. $53,000/year family pre-tax)	134	26.6%
Above national average	303	60.1%
Wine consumption frequency		
More than once per week	208	41.3%
Once per week	155	30.8%
2-3 times per month	85	16.9%
Once per month	27	5.4%
Once per 2 months	10	2%
Less than once per 2 months	19	3.8%
Favourite wine purchase location *(multiple choice)*		
Big-box retailer	125	24.8%
Members-only warehouse	92	18.3%
Convenience stores	98	19.4%
Drug stores	44	8.7%
Liquor stores	444	88.1%
Wineries	151	30%
Online wine stores	45	8.9%
Other *(most frequently mentioned: Local wine stores)*	13	2.6%
Favourite wine drinking location *(multiple choice)*		
At home	475	94.2%
In upscale restaurants	308	61.1%
In casual restaurants	313	62.1%
In club/lounge/bar	174	34.5%
Wine bar	151	30.0%
Theatre/dance/art activity	71	14.1%
Other	21	4.2%

* The question was framed as follows: "Is your family pre-tax income less, about the same or more than €53,000/year?"

Table 2 - Psychographic characteristics of consumers (scale 1-7)

Psychographic variables	Mean	S.D.	Cronbach's α
Involvement	**4.7**	**1.3**	**0.819**
In general, I have a strong interest in wine.	4.7	1.7	
Wine is very important to me.	4.7	1.6	
Wine matters a lot to me.	4.7	1.6	
I get bored when older people talk about wine. (Reversed)	4.6	1.9	
Wine is a relevant product category to me.	4.8	1.6	
Subjective knowledge about wine	**4.2**	**1.6**	**0.942**
I consider that I know more about wine than the average person	4.1	1.8	
I think that I know more about wine than my friends	4.2	1.8	
I have a lot of knowledge about how to choose wine	4.2	1.7	
I have a lot of knowledge about how to evaluate the quality of wine	4.2	1.7	
Innovativeness in wine purchasing	**4.1**	**1.5**	**0.819**
In general, I am among the last in my social circle to purchase new wines. (Reversed)	4.2	1.8	
Compared to others in my social circle, I do little shopping for new wines. (Reversed)	3.9	1.7	
In general, I am the last in my social circle to know the newest wine trends. (Reversed)	4.1	1.8	
Loyalty Proneness	**4.3**	**1.4**	**0.930**
I generally buy the same brands I have always bought.	4.6	1.5	
Once I have made a choice on which brand to purchase, I am likely to continue to buy it without considering other brands.	4.3	1.6	
Once I get used to a brand, I hate to switch.	4.3	1.6	
If I like a brand, I rarely switch from it just to try something different.	4.2	1.6	
Even though certain products are available in the number of different brands, I always tend to buy the same brand.	4.4	1.5	

Table 3 - Sample-level BWS results

Attribute	Mean	S.D.
Previous experience	2.6	2.2
Recommendations	1.0	2.1
Price	0.6	2.3
Grape variety	0.5	2.0
Brand name	0.4	1.8
Wine maker	0.3	1.5
Country of origin	-0.4	2.0
Vintage	-0.9	1.8
Store promotion	-1.0	2.1
Certification (denomination of origin)	-1.3	2.0
Attractive front label	-1.9	2.1

Table 4 - Segment differences in terms of consumer psychographic characteristics

	Experientials	Connoisseurs	Risk-minimizers	Price sensitive
Psychometric measurements				
Involvement	4.73a	5.20b	4.39a	4.22a
Subjective knowledge	4.23a	4.95b	3.58c	3.40c
Innovativeness	4.33a	3.91b	4.14b	3.93b
Loyalty proneness	4.26a	4.58a	4.15b	4.30a