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Deposited in *Repositório ISCTE-IUL*:

2020-03-30

Deposited version:

Post-print

Peer-review status of attached file:

Peer-reviewed

Citation for published item:

Monteiro, P., Guerreiro, J. & Loureiro, S. M. C. (2020). Understanding the role of visual attention on wines' purchase intention: an eye-tracking study. *International Journal of Wine Business Research*. N/A

Further information on publisher's website:

10.1108/IJWBR-03-2019-0017

Publisher's copyright statement:

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Understanding the Role of Visual Attention on Wines' Purchase Intention: An Eye-Tracking Study

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Available online: <https://doi.org/10.1108/IJWBR-03-2019-0017>

ABSTRACT

Purpose: Wine bottles compete for consumers' attention in the shelf during the decisive moment of choice. The current study explores the role that visual attention to wine labels have on the purchase decision and the mediating role of quality perceptions and desire on such purchase behaviours. Wine awards and consumption situation are used as moderators.

Design/Methodology/Approach: The study was conducted in Portugal and thirty-six individuals participated in a 2 x 2 with-in subjects design (awarded/not awarded x self-consumption/social-consumption). For each scenario individuals' attention, perceptions of quality, desire and purchase intentions were recorded.

Findings: Data from eye-tracking shows that, during the purchase process, the amount of attention given to a bottle is determinant of individuals' purchase intentions, a relationship that increases in significance for bottles with awards and for when consumers are buying wine for a consumption situation involving a social environment. Also, both quality perceptions and desire are confirmed to positively influence wines' purchase intentions.

Originality/Value: Using an eye monitoring method this paper brings new insights to the wine industry by highlighting the impact that wines' labels and different consumption situations have on individuals' attention and purchase intention. Wine producers and retailers may benefit from the insights provided by the current study to refine their communication strategies, either by highlighting product characteristics and pictorial elements, as it is the case of the awards, or to communicate their products for different consumption situations.

Keywords: Wine; Eye-tracking; Wine Awards; Consumption Situation

1. INTRODUCTION

During the last 15 years international wine trade has grown more than 75% in volume and doubled in value (Pomarici, 2016). Such changes, which occurred mainly in countries from the Asia-Pacific region - China India, South-Korea and Singapore - (Marketline, 2019) have opened the door to new consumers and new ways to drink wine. Today, drinking wine is an experience, being not only a symbol of prestige but a socialization tool or a way to celebrate an event (Lockshin and Corsi, 2012). Contrary to other products, the consumption of wine can almost be compared to the consumption of aesthetic products in which the experience is fundamental for both the purchase and the post-purchase (Nowak, Thach and Olsen, 2006). Indeed, wine has the power to trigger both an emotional reaction - linked with pleasure and enjoyment – and a cognitive response, reflected in the capacity of evaluating its quality (Drennan et al., 2015). From the multiple cues that can influence wine purchase (e.g. region of origin, production year, brand, price, package, smell, taste), the wine's label is still considered one of the most important cues (Galati, Schifani, Crescimanno and Migliore, 2019). The wines' label is not only important to access the wine quality but is also capable of attracting attention and suggesting sensorial experiences beyond consumption (Escandon-Barbosa and Rialp-Criado, 2019). Liking a wines' label may be the first step in determining wine choice, because it has the ability to suggest “beauty, taste and satisfaction” (Laeng, Suegami and Aminihajibashi, 2016, p. 329), and it is also crucial on the formation of quality expectations and on triggering desire to acquire the product. Indeed, studies show that attention to visual cues are important for predicting choice (Pieters and Warlop, 1999; Shimojo et al., 2003). Therefore, such findings suggest that individuals' visual attention may also play an important role in the buying-process of wine bottles.

So far, most research on the antecedents of wine purchase, and specifically about wines' labelling and packaging, relies upon questionnaires in which participants are asked

to evaluate intrinsic and extrinsic cues according to their opinions and beliefs (Corduas, Cinquanta and Ievoli, 2013). However, little attention has been given to how visual attention may affect purchase intention, namely attention driven by autonomic reactions – those that are controlled by the autonomic nervous system and are very hard to control (Lockshin and Corsi, 2012; Guerreiro, Rita and Trigueiros, 2015).

This study explores how wine labels influence visual attention - mediated by quality perception and desire - ultimately affecting purchase intention. Simultaneously, the role of wine awards and the consumption situation as moderators of such relationships are studied. A mobile eye-tracking equipment is used to gather objective data on how consumers view and process visual cues because it minimizes the limitations of memory effects and communication delays that are present in self-reported questionnaires and is a proper technique to measure visual attention when analysing product packages (Rebollar et al., 2015).

2. LITERATURE REVIEW AND PROPOSED MODEL

2.1 Perceived Quality of Wine

The wine market is a very complex market with a high number of distinct brands, production regions/origins, labels, shapes, types and prices (Mueller, Lockshin, Saltman, and Blanford, 2010), making the consumer's choice very difficult. Therefore, consumers often rely on a large variety of cues and other drivers to make a decision (McCutcheon et al., 2009; Boncinelli et al., 2019; Lick et al., 2017).

Quality is one of the main purchasing drivers (Drennan et al., 2015). Yet, considering that a wine's quality is affected not only by the grapes variety used or the climacteric conditions of the year in which it is produced, but also by the ageing process utilized or how the bottle is stored (Wiedmann, Behrens, Klarmann and Hennigs, 2014)

and that it can only be assessed after consumption, it becomes extremely difficult for consumers to evaluate a wine's quality in an objective manner. Instead, the consumer uses different sources of information to infer which one better suits his preferences and/or quality requirements (Spiller and Belogolova, 2016). Such information may arise not only by the consumers' past experiences (Mueller, Osidacz, Francis and Lockshin, 2010) or knowledge about the product itself or the sector (Dodd, Laverie, Wilcox and Duhan, 2005; King, Johnson, Bastian, Osidacz and Francis, 2012), but also by product related factors (Barber and Almanza, 2006; Mueller, Lockshin, Saltman, et al., 2010; Sáenz-Navajas, Campo, Sutan, Ballester and Valentin, 2013; Veale, 2008) and recommendations from reliable sources (Dodd et al., 2005; Loureiro and Cunha, 2017).

Bloch (1995) highlights how a product's form and design can lead to positive responses such as an immediate liking or desiring of the product. Such studies were later confirmed by other scholars (Chrea et al., 2011; Norman, 2004; Thomas and Pickering, 2003). Indeed, the desire for consumption of some products is associated to the perception of high quality (e.g., Belk, 2011; Loureiro et al., 2018; Newton et al., 2018). The research conducted by Barber and Almanza (2006) and more recently by Celhay and Remaud (2018) shows that wines' packaging not only convey symbolic meaning to the brand but has a direct influence on consumers' purchase intention. Given the importance of environment cues for explaining the purchase decision in this context, the stimuli-organism-response (S-O-R) framework is applied to evaluate the impact that an external stimulus has on consumers' cognitive behavior (organism) and how it reflects on their willingness to buy the product (response) (Mehrabian and Russel, 1974).

Therefore, we expect that the wines' label (here representing the stimuli) will have an effect on behavioural responses mediated by visual attention, quality perception and desire. Hence, the following three hypotheses are formulated:

H1: The higher the wine's quality perception, the stronger it is one's purchase intention.

H2: Desire positively influences quality perception.

H3: The higher the wine's desire, the stronger the purchase intention.

Visual attention - an organismic response to stimuli - plays a major role in the decision-making process, being usually focused on cues that elicit pleasure and arousal (Shimojo et al., 2003; Guerreiro et al., 2015; Bloch, 1995; Lange, Issanchou and Combris, 2000). Likewise, research shows that products' that are looked longer, are more likely of being chosen and purchased (Pieters and Warlop, 1999; Laeng et al., 2016). However, studies on image quality and visual attention have shown that quality perceptions are reflected on saccade duration, which tend to be longer in the presence of lower image quality (Vuori, Olkkonen, Pölönen, Siren and Häkkinen, 2004). Such effect may be explained by the need for consumers to spend more time evaluating the bottle in order to make their informed decision due to a lack of readily available cues that may reduce the risk of a bad choice. On the other hand, higher quality perception may lead to a more expedited search time and information processing because the consumer does not need to evaluate the product in a thorough manner. Indeed, an investigation on consumers' evaluation of apples with external and internal defects has concluded that apples with defects did not retained the consumers' attention for long due to readily available quality markers (in the current case, negative quality markers) (Jaeger et al., 2018). Therefore, we propose that:

H4: Perceptions of higher quality have a negative effect on visual attention.

H5: Consumers' wine desire will positively influence their level of visual attention to the bottle.

H6: The higher the attention to a bottle of wine, the higher the purchase intention.

2.2 Awards and Certifications of Quality

A frequent source of information used in consumers' decision process is the presence of seals or certifications of quality on the products' packages. These are typically used as a promotional strategy and intend to convey the idea that the product was certified for quality by third parties. Indeed, Parkinson (1975) reveals that products exhibiting this kind of seals are more likely to be chosen and perceived as more desirable in comparison to products that have no certification seals. In fact, wine brands have been increasingly acknowledging the impact that medal stickers on the wine's label have on its image and purchase intention. Past research has shown that the exposition of awards or medals in wine's label are typically perceived by consumers as an indicator of the product's quality, and, therefore, increases the consumers' willingness to buy (Lockshin, Jarvis, Hauteville and Perrouty, 2006; Morey, Sparks and Wilkins, 2002; Orth, 2007; Schiefer and Fischer, 2008; Smith and Bentzen, 2011; Sáenz-Navajas et al., 2013). In fact, medals are the third most powerful influencer affecting the choice of wine bottles (Lockshin et al., 2009) and products with an award are perceived as more desirable than products that have no award (Parkinson, 1975). Such effect holds even though some consumers are skeptic about awards and describe them as sometimes confusing and misleading (Neuninger, Mather and Duncan, 2017). Thus, it is expected that the presence or absence of quality certificates (awards) can amplify or weaken the impact that the remaining cues have in determining individuals' choice and consequently their purchase intention, thus acting as a moderator of the relationships previously explored. However, past research has used mainly self-reported measures. Given that attention is an important predictor of purchase (Pieters and

Warlop, 1999) and that packaging is capable of attracting attention and suggesting sensorial experiences beyond consumption (Escandon-Barbosa and Rialp-Criado, 2019) we believe that autonomic measures such as visual attention measured by eye-tracking may show how this underlying mechanism works during the decision-making process. Thus, the following hypothesis is formulated:

H7: The results of the previous hypothesis will be stronger on bottles with awards rather than in bottles with none

2.3 Consumption Situation

Another key driver of the purchase intention is the situation/occasion to which the wine is purchased for (Hall et al., 2001). Indeed, according to Hall et al.'s (2001), both quality and the situation for which the wine is bought are the most critical drivers for wine choice. For example, if a consumer is purchasing a wine for a business-related occasion, he is more likely to take a "safe" option and go for one that he already knows – both in taste and quality. Oppositely, if he is buying a bottle of wine to drink alone, where the risk of a bad choice is substantial lower, then he is more likely to adopt an 'adventurous' attitude and choose a wine that he doesn't know much about (Hall, 2001).

In fact, Sherman and Tuten (2011) conclude that consumers are likely to spend 200 percent more in a bottle of wine if their primary motivation is to offer the bottle as a gift than if the intent to consume it at home. Moreover, consumers are usually pressured by subjective norms – the social pressure for people to behave using the same norms as the group (Ajzen, 1991) – therefore, if they are buying a product for a social event, they usually tend to think about how to satisfy the groups' interests. Likewise, Orth (2005) and more recently Boncinelli et al. (2019) have found that consumer's desired benefits will vary across each consumption situations. If the wine is bought for an anticipated situation involving a social environment then quality and social benefits will have a heavier

preponderance on choice than if it is bought for self-consumption, where value for money is more important (Boncinelli et al., 2019).

Therefore, we hypothesise that:

H8: The consumption situation to which the wine is bought for (self-consumption vs social consumption) will moderate the relationships previously articulated.

Figure 1 shows the proposed conceptual model.

-- INSERT FIGURE 1 AROUND HERE --

3. METHOD

Visual attention is an organismic response that emerges as an autonomic reaction to an environmental stimulus (Pieters and Wedel, 2004). Although attention may be measured using self-reporting methods, eye-tracking has been used in past research as an accurate proxy to measure attention (Krugman, Fox, Fletcher, Fischer and Rojas, 1994; Wedel and Pieters, 2000) and to understand information processing (Kroeber-Riel, 1984; Lohse, 1997). Eye-trackers collect both the number of glances and the duration of participants' glances when exposed to an external stimulus. The use of this physiological measure has been used to understand how attention may vary with ad familiarity and originality (Pieters, Warlop and Wedel, 2002), how different package designs may influence consumers' buying decisions and attention (Piqueras-Fiszman, Velasco, Salgado-Montejo and Spence, 2013; Rebollar et al., 2015) and to improve the comprehension of visual search (Lans, Pieters and Wedel, 2008). Such technique is used in the current paper as a proxy of attention.

3.1 Pre-Test

A total of 17 participants were instructed to look and examine four bottles, labelled with alphabet letters (from A to D), 2 with awards and 2 without any award, disposed in a way to simulate a real shelf scenario. Participants' perceived quality of each bottle was measured using a 7 Likert-type scale, from strongly disagree to strongly agree adapted from Yoo, Donthu and Lee (2000): "X is of high quality", "The likely quality of X is extremely high", "X must be of very good quality" and "X appears to be of very poor quality". As expected, a Kruskal-Wallis test showed that the perception of quality was different between the bottles ($\chi^2(1) = 1.790, p = .000$). Indeed, the findings revealed that the perception of quality was higher for the bottles with awards (F2) than for the bottles with no awards (F1) ($M_{F1} = 23.37, M_{F2} = 45.63$). Participants were then asked to rank the bottles' attributes from the most to the least important. Results from the pre-test revealed that the presence of awards and the country and region of origin of the wine were the most important attributes used to infer quality, followed by the attractiveness of the label and the brand name. Thus, to minimize influences from factors which are not the focus of the current research and to control such effects, the final study used only red wines from one of the most well-known wine production regions in Portugal – Alentejo, with no significant differences in terms of the production year and price. The closure of the bottles was also similar, varying only in colour - red or blue.

3.2 Design and Procedure

The experiment was designed to test how participants' attention influenced their purchase intention. A 2 x 2 (awarded/not awarded x self-consumption/social-consumption) within-subjects design was used. Previous knowledge of the wine's brand, aesthetics preferences or previous usage can impact wines' consumers' perceptions and decisions (Mueller, Osidacz, Francis and Lockshin, 2010; Dodd, Laverie, Wilcox and Duhan, 2005; King, Johnson, Bastian, Osidacz and Francis, 2012). Thus, to minimize biased results and attain

more robust conclusions, three different pairs of bottles of wine - table 1 - were used and presented to participants. Each participant was randomly assigned to one of those scenarios. Figure 2 shows the bottles presented to participants.

-- INSERT TABLE 1 AROUND HERE --

-- INSERT FIGURE 2 AROUND HERE --

Likewise, in the literature we may find several examples of how price influences individuals' perception of quality (e.g., Veale and Quester, 2009; Lalwani, and Shavitt, 2013). In fact, quality is higher as price increases, meaning that consumers' perception of price models the overall quality expectation and even its perception (Kim and Jang, 2013). Therefore, to eliminate any possible bias, prices were displayed alongside the product but with minimum differences between each other, to guarantee that it would not be a critical determinant.

Bottles were identified with two alphabet letters – A and B – which served as markers as well during the questionnaire. The bottles with an award were always identified with the letter A, while the bottles with no-award were always identified with the letter B. Figure 3 shows an example of one scenario.

-- INSERT FIGURE 3 AROUND HERE --

3.3 Apparatus

A mobile eye-tracker from Ergoneers (Ergonners, 2019) was used in the current study. Two Areas of Interest (AOIs) for each scenario were established using D-Lab software, each corresponding to one of the bottles. Given that the bottles were real and placed in a real environment, QR code markers were used to allow for AOIs to be set dynamically and adjust to the bottles in real-time. Attention was measured using the

percentage of glance time on the created AOIs per total glance time (AOI attention ratio) for each participant.

In the beginning of the experiment all participants signed a consent form and were informed about the technological apparatus, the timeline and procedures of the experiment. The participants sat approximately 60 cm from the table with the bottles and were instructed to limit their head movements, due to the equipment's sensibility.

After the mobile eye-tracker was placed in the participants head, the equipment was calibrated using 3 steps: the first was the adjustment of the camera so that the pupil of the participant was in the centre of the image, second, the pupil diameter was set in the software for each participant, and third participants were instructed to look at four points that limited their field of vision. After completing this process, the wine bottles were then put on the table, guaranteeing that individuals would only start examining it once the experiment started. Participants had approximately 35 seconds to listen to a pre-recorded audio exposing a consumption situation and to examine the bottles in front of them. In the first situation, participants were instructed to "imagine that you want to purchase a bottle of wine for your own pleasure, so that you may enjoy a glass of wine, alone, in the comfort of your own house". In the second situation, participants were instructed to "imagine that a friend is hosting a dinner at his home tonight and has invited you and some other friends as well. You do not want to go empty handed, so you want to buy a bottle of wine to offer him".

They were then asked about their purchase intention of each bottle. Finally, individuals were asked to fill in a questionnaire to assess their perceived quality and desire, as well as to control for socio-demographic characteristics of the individuals (gender, age, educational level, household income). Table 2 resumes the items that were used as measurements of each construct under analysis.

-- INSERT TABLE 2 AROUND HERE --

3.4 Participants

A total of 39 individuals (56% male and 44% female) agreed to voluntarily participate in the study. From these, 74% were aged between 18 and 24 years old, 15% were aged between 25 and 34 years old, and 10% had more than 45 years old. Most participants (87%) were students and the majority had a monthly household income between 2001 and 3000 euros. All had normal or corrected-to-normal vision and no monetary incentives were given for the participation in the experiment.

Due to poor posture during the experiment, three individuals which had incomplete scan-path data were discarded from further analysis. Therefore, the current study used data from 36 valid participants. This sample size is within the average number of participants in this type of experiments (e.g., Mobascher et al., 2009; Posada-Quintero et al., 2016).

4. RESULTS

A path modelling technique (PLS-SEM) was used to empirically test and analyse the conceptual model and the relationship among the constructs. AOI attention ratio was used as a single item measure because it was measured directly. Table 3 shows the mean AOI attention ratio for the overall experiment and per each condition.

-- INSERT TABLE 3 AROUND HERE --

One of the items of the construct Quality Perception (QP4 - “X appears to be of very poor quality”) was deleted from the original model due to its low and negative outer loading. The remaining outer loadings were found to be statistically significant. The internal reliability was also confirmed as both composite reliability and Cronbach’s alpha values were above the recommended thresholds (table 4). Items reliability was established as all

outer loadings were higher than .7 and every construct AVE was higher than .5. Nevertheless, collinearity among constructs was assessed through the evaluation of each item variance inflation factor (VIF). Since all fell below the threshold of 10 (Hair, Anderson, Tatham and Black, 1995) any problems with multicollinearity among the indicators were disregarded.

Finally, using Fornell and Larcker criterion and the Heterotrait – Monotrait correlation ratios, the AVE's square root of each construct was higher than the correlations of all other constructs and that each indicator's loading on its own construct was higher than the cross-loading of all other constructs, hence discriminant validity within the data was also confirmed.

-- INSERT TABLE 4 AROUND HERE --

4.1 Structural Model Evaluation

A bootstrapping using 5000 bootstrap samples was conducted and a value of .06 for the Standardized Root Mean Square Residual (SRMR) confirmed a good fit of the model, since it falls below the recommended threshold of .08 (Hair et al., 2017). Figure 4 shows that 30.2% of changes in quality perception can be predicted by one's desire of the wine and it confirms that the proposed model predicts a 24% variance in the intention to purchase. However, the R^2 value shows that quality perception and desire, contrary to what is expected, are weak predictors of the changes in attention.

Results shown in figure 4 confirm that desire has a positive and significant impact on quality perception ($\beta = .55$, $t = 11.86$, $p = .00$), thus as the desire for a bottle of wine increases, the higher its quality perception (**H2 is supported**). Moreover, quality perceptions ($\beta = .28$, $t = 3.42$, $p = .00$), desire ($\beta = .19$, $t = 2.00$, $p = .04$) and attention ($\beta = .23$, $t = 2.79$, $p = .01$) result in higher purchase intents, thus confirming hypothesis **H1**, **H3** and **H6**. Regarding the path from quality perception to attention, results show that

there is a negative relationship among the constructs, however, and contrary to what was expected, it is not significant ($\beta = -.006$, $t = .06$, $p = .95$). The same happens with the path from desire to attention which was also proved to be nonsignificant ($\beta = .053$, $t = .54$, $p = .58$), therefore **hypothesis 4 and 5 are rejected**.

-- INSERT FIGURE 4 AROUND HERE --

4.2 Multigroup Analysis

To test the last two hypotheses – **H7** and **H8** - a multi-group analysis was performed to analyse the impact of the moderators of the study (presence/absence of awards and the different consumption occasions to which wine can be bought for) in the structural model (see table 5).

Regarding the presence of awards in the wine bottles PLS-MGA results show that the path coefficient of attention to purchase intention is higher for awarded bottles ($\beta = .39$, $p = .00$) than for non-awarded bottles ($\beta = .05$, $p = .71$). Moreover, it is also verified that there is a significant difference of the presence/absence of awards in the relationship between quality perception and attention, which is more significant when an award is present in the wines' label ($\beta = -.24$, $p = .05$) rather than in its absence ($\beta = .09$, $p = .41$). In fact, in the case of bottles with awards there is a negative relationship between quality perception and attention, reinforcing the argument of H4.

Finally, the relationship between desire and quality perception is significant in both cases (awarded and non-awarded wines), however, the permutation p -value of this relationship does not allow us to conclude that the impact of one is stronger than the other, even though it is speculated that the impact in question would be stronger for awarded wines than for non-awarded, given that the permutation p -value is .94, which is almost .95.

Overall, **H7** is partially confirmed as it shows that there are some relations that are moderated by the presence of awards.

-- INSERT TABLE 5 AROUND HERE --

Concerning the consumption situation, results show that both the quality perception ($\beta = .36, p = .00$) and attention ($\beta = .45, p = .00$) influence more one's purchase intention when the wine is bought to be consumed in a social environment than if the intention is of self-consumption, which presents values of ($\beta = .13, p = .27$) and ($\beta = -.01, p = .93$) respectively. However, if the wine is bought for self-consumption the path of desire to purchase intention is more significant ($\beta = .39, p = .00$) than in the other case ($\beta = .03, p = .80$). It should also be noticed that desire influences quality perception in both situations, yet no significant difference exists among that difference. Overall, three different paths of the model are moderated by the consumption situation, which partially confirms **H8**. Table 6 shows the structural relationships across the different consumption situations.

-- INSERT TABLE 6 AROUND HERE --

5. DISCUSSION

The current study confirms that visual attention to wines' labels impact individuals' desire, which consequently affects their quality perception of the wine. Therefore, it may be inferred that the aesthetics of a wines' label not only directly increases the likelihood of the wine being bought, but it may also accomplish the same effect through the impact that it has on forming positive quality perceptions, which also leads to higher purchase intents.

Nevertheless, purchase intention is proven to be highly affected by individuals' wine desire, their quality perceptions and attention levels to the bottle of wine. These conclusions go in line with the literature and put in evidence the weight that wines labelling has on ones' expectations and choices (Lange et al., 2000; Lick et al., 2017; Lockshin and Corsi, 2012; Pieters and Warlop, 1999; Sherman, S. and Tuten, 2011; Wedel and Pieters, 2000). As Barber and Almanza stated: "consumers shop with their eyes" (2006: 85) and it is widely recognized the impact and influence that visual attention has on the buying experience (Pieters and Warlop, 1999). Indeed, vision is usually the first responsible for examining and receiving information about the product, hence affecting consequent behaviours (Fenko, Schifferstein and Hekkert, 2010; Guo et al., 2016).

However, when a moderator is introduced in the model some relationships become stronger and more significant while others lose their relevance. Awards, seals or certifications of approval have long been recognized as an important source of product-information and with a significant effect in consumers' decision-making (Parkinson, 1975; Schiefer and Fischer, 2008). Besides, since they are typically granted by third-parties/experts of the sector to products that meet certain standards, they tend to act as an indication of the wine's overall quality (Neuninger et al., 2017), and influence the attractiveness of a bottle of wine and individuals' attention levels.

Even so, the results of this study show a mediating effect of attention when awards are present in the wines' label. Here, quality perception has a negative and significant impact on attention and attention also has a strong effect on purchasing intentions. Another interesting finding is the effect of quality perception to attention in the absence of awards in which there is a positive relationship. These conclusions add fresh insights and different perspectives to the existing literature, in which there is evidence that

products with higher saliency, in this case, wine labels with awards, attract more rapidly consumers' attention but do not retain it for long periods and the opposite is true for bottles without awards (Jaeger et al., 2018; Vuori et al., 2004), confirming the existence of negative relationship between perceived quality and attention. Regardless, the role of visual attention on purchase intention cannot be disregarded, since it plays a major role on influencing consumers' preferences, choices and purchase acts (Laeng et al., 2016; Pieters and Warlop, 1999; Shimojo et al., 2003), which is strengthened in the presence of awards.

The current study also shows that the impact of quality perception and attention on purchase intention are higher for anticipated social consumption situations than for self-consumption situations. These results go in line and endorse the belief that there is a higher concern about quality and social benefits when the wine is bought to offer or to be drunk socially rather than when it is bought for self-consumption (Hall et al., 2001; Outreville and Desrochers, 2016; Boncinelli et al., 2019). Also, it also supports findings that show that the visual component of a bottle, in this case, the label, increases in importance for anticipated situations involving reference groups (Hirche and Bruwer, 2014), since it is expected that consumers will spend more time analysing the wines in those cases.

Thus, desire is more important and leads to higher purchase levels if the wine is bought to be consumed alone than if it is to drink in a social environment. Such results bring a new light to how the perception of risk may act as an enabler of certain purchases, in other words, one could say that if the risk of choosing a wine with less quality is taken from the equation, then individuals' are more willing to buy a bottle not because it has an award (which is frequently associated to higher quality and more important for occasions

with a social environment) but because they are simply searching for a wine for their personal enjoyment (Hirche and Bruwer, 2014).

6. CONCLUSION

The wine market is a highly fragmented one, which makes the wines' decision-making process one of the most difficult and complex ones, forcing consumers to rely on multiple cues to make their choice.

This research uses a combination of self-report and psychophysiological measures to access how visual attention to environmental cues may affect individuals' wine choice behaviour. In line with the literature it is confirmed that attractive wines' labels, reflected on one's desire to acquire it, also impacts perceptions of quality and both – quality perception and desire – leads to positive purchase intents. Nevertheless, it is established that consumers' cognitive level can also lead to a higher willingness to buy, with higher levels of attention registering higher purchase intention levels. The presence of awards was also found to affect visual attention. In fact, in the absence of awards, quality perception has a positive effect on attention, mostly because individuals feel the need to pay closer attention to the wine label to assess its perceived quality, however this does not reflect in higher purchase intents. On the other hand, in the presence of awards, a negative and significant effect is registered from quality perception to attention, confirming that if perceived quality exists, individuals' do not feel the need to fixate their attention on that bottle for long periods. However, on such cases, attention leads to higher purchase intentions. Thus, this research reinforces the effectiveness of awards as a marketing tool. The findings also suggest that for consumption situations involving a social environment, consumers are more concerned with the quality of wine, which reflects in purchase intentions. On the contrary, for self-consumption situations, purchase

intentions are mainly determined by consumers' liking (desire) of the wine's label. Moreover, attention also plays a major role when comparing different consumption situations, having a much stronger impact on purchase intentions when the wine is bought for an anticipated consumption situation with a more social character.

Wine producers may benefit from the insights provided by the current study to refine their communication strategies, either by highlighting product characteristics, as it is the case of the awards, or to communicate their products for different consumption situations.

For example, producers may use the current findings to adjust their product placement in wine tasting scenarios to allow their brand to become more salient and to better capture individuals' attention. For example, in the case of having no awards, producers should include messages in the label that highlight the product qualities to increase attention to the product. On the contrary, even when having awards in the label – which serve as a proxy of product quality - producers must draw attention to the label. Here pictorial elements are crucial to increase attractiveness (Laeng, Suegami & Aminihajibashi, 2016). Such effectiveness is also relevant for retailers, who may add increased benefits to the brand by showing the wine in a specific environment rather than alone, with little or no context involving it. For self-consumption environments, the communication message should highlight desire, while for social environments awards and quality should be stressed in the communication.

Finally, the current study also has implications for society in that it helps consumers to become more aware of the underlying mechanisms of choice in order to make more informed decisions.

6.1 Limitations and Further Research

Although the study has been conducted carefully, we may find limitations that could be avenues for further research. In the current study, although the region of origin of the

wine, year, and color of the label was controlled, small cues such as the brand name and price are available, and even though there was an effort to guarantee that the brand is not well-known, and that price is similar among bottles, small differences may affect the participants' attention and decisions. For example, if one single bottle was presented at a time that would allow other extraneous variables to be more thoroughly controlled such as attention bias. However, there was the concern to create an experiment that could simulate a real-world scenario in a shelf with many products in display to increase the external validity of the study. Although some studies in eye-tracking literature have showed evidences of a left visual field (LVF) bias (e.g. Massara, Porcheddu and Melara, 2014), other studies have also showed a contrasting effect in the case of pictorial elements in packaging (e.g. Otterbring et al., 2013). However, in the current paper there is no comparison of attention time between awards and no-awards but the study is focused on exploring if the relations between the constructs in each condition are different. In fact, the current study shows that in the case of awards there is a negative relation between quality perception and attention, while in the case of bottles with no awards there was no such significant relation. When consumers see the bottles with awards, which convey a higher level of quality perception they don't spend so much time analyzing it, which suggests there was no left visual field bias in this case.

Second, although a survey method usually allows for a higher number of participants, laboratory experiments usually have a lower number of subjects due to the complexity of the setup and the time it takes for all the experiment to be conducted. By contrast, eye-tracking allows researchers to capture autonomic behavior before subjects even start to rationalize their intentions. Thus, the advantages of conducting this type of experiment rely on exploring consumer behavior in a more natural way. Despite being a small number of participants, those numbers are in line with the number of participants in other studies

using psychophysiological measures in laboratory conditions (Mobascher et al., 2009; Posada-Quintero et al., 2016). However, replicating this research with a larger sample size would make it possible to strengthen the results obtained and explore others perspectives in the model.

Third, this research is also limited by the sample used. Since the experiment is only possible to perform in laboratory and, most of the participants belong to a younger age, it would be interesting to replicate the experiment with a more diversified group of participants and access if results would still be sustained or even if they could have more relevance in terms of explained variance.

Finally, this research only focused on the attentions' role as a mediator, however environmental visual cues can also affect individuals' emotional state, which is commonly perceived as being the result of the interaction of three orthogonal dimensions – pleasure, arousal and dominance. Therefore, it is suggested that, in future research, besides attention, the impact of affective responses on wines' purchase intention may also be explored, thus combining the use of eye-tracking with other psychophysiological methods such as electrodermal activity (EDA), a skin conductance procedure frequently used to study and determine emotional arousal with a great accuracy.

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