

Mestrado em Gestão de Informação
Master Program in Information Management

Consumers' wine knowledge and perceptions about wine labels and packaging

Catarina Pitta Esteves Pires Lopes

Dissertation presented as the partial requirement for
obtaining a Master's degree in Information Management

NOVA Information Management School
Instituto Superior de Estatística e Gestão de Informação
Universidade Nova de Lisboa

**CONSUMERS´WINE KNOWLEDGE AND PERCEPTIONS ABOUT WINE
LABELS AND PACKAGING**

by

Catarina Pitta Esteves Pires Lopes

Dissertation presented as the partial requirement for obtaining a Master's degree in Information Management, with a specialization in Marketing Intelligence

Advisor: Cristina Isabel Galamba de Oliveira de Costa Marreiros

May 2020

ACKNOWLEDGEMENTS

Firstly, I would like to express my gratitude to my thesis advisor, Professor Cristina Galamba Marreiros, for all the support and rigor through the whole process. Particularly, I am grateful for all the insights and quality guidance that she provided me with.

Secondly, my sincere thanks to Rita Rivotti and João Grave, who directly contributed to this thesis with their knowledge, helping me to adapt my research (survey) to the Portuguese market. Their help was unparalleled for the conclusion of this work.

I am also thankful for my family and friends' support and for their patience at the most critical phases, helping me to stay motivated and never give up. Specially, I want to thank my sister Sofia for always helping with my doubts.

Finally, I would like to give a special thanks to all the people who collaborated in this study by answering the online survey.

ABSTRACT

This study intended to understand how consumers with different types of wine knowledge perceive wine labels and packaging.

Firstly, the concept of wine consumer knowledge was investigated following the typology of Ellis & Caruana (2018). The typology splits consumers in four groups: Experts, Snobs, Modest and Novices. Secondly, the wine packaging was analyzed following Silayoi & Speece's (2007) approach: the wine label information was analysed as the primary informational element; and label design, shape, size and type of closure were analysed as the primary visual elements. The data was gathered through an online survey conducted with 306 Portuguese wine consumers. The analysis of the results involved measures of descriptive statistics and inferential statistics.

The findings of this study showed that the importance of wine label information is significantly higher for the Experts than for the Neophyte and Modest groups. Additionally, there were statistically significant differences on the importance of the informational elements on wine label for the four groups. However, the same cannot be concluded about the perceptions and acceptance of visual elements on wine packaging. In fact, results showed that there were no statistically significant differences among the four groups.

For those working in the marketing field, especially in the wine sector, these results provide relevant insights: consumers value information on the wine label in the purchase process; despite the increasing appearance of innovative packaging, consumers prefer labels with traditional designs and bottles with cork; when creating wine labels, marketers should give more attention to the Expert group compared to other groups.

KEYWORDS

Wine knowledge; Consumer perceptions; Wine; Packaging; Labels

RESUMO

O presente estudo pretendeu perceber como os consumidores com diferentes tipos de conhecimento sobre vinho percebem os rótulos e embalagens de vinhos.

Em primeiro lugar, o conceito de conhecimento do consumidor de vinho foi investigado de acordo com a tipologia de Ellis e Caruana (2018). Esta tipologia divide os consumidores em quatro grupos: *Experts*; *Snobs*; *Modestos* e *Noviços*. Em segundo lugar, a embalagem de vinho foi analisada seguindo a abordagem de Silayoi & Speece (2007): a informação do rótulo do vinho foi analisada como o principal elemento informativo; e o design do rótulo, forma, tamanho e tipo de fecho da garrafa foram analisados como elementos visuais primários. Os dados foram recolhidos através de um questionário *online* realizado a 306 consumidores de vinho portugueses. A análise dos resultados envolveu medidas de estatísticas descritiva e estatística inferencial.

Os resultados deste estudo mostraram que a importância da informação no rótulo do vinho é significativamente maior para os *Experts* em comparação com os grupos *Noviços* e *Modestos*. Além disso, encontraram-se diferenças estatisticamente significativas na importância dos elementos informativos do rótulo do vinho para os quatro grupos. No entanto, não se pode concluir o mesmo relativamente às percepções e aceitação dos elementos visuais das embalagens de vinho. De facto, os resultados não mostram diferenças estatisticamente significativas entre os quatro grupos nestes factores.

Para aqueles que trabalham na área de marketing, especialmente no sector vinícola, estes resultados fornecem informações relevantes: os consumidores valorizam a informação no rótulo do vinho no processo de compra; apesar do crescente aparecimento de embalagens inovadoras, os consumidores preferem rótulos com designs tradicionais e garrafas com rolha de cortiça; ao criar rótulos, os profissionais de marketing devem dar mais atenção ao grupo dos *Experts* em comparação com os restantes grupos.

PALAVRAS-CHAVE

Conhecimento de vinho; Percepções do consumidor; Vinho; Embalagens; Rótulos

TABLE OF CONTENTS

1. INTRODUCTION	1
1.1. Background and problem identification.....	1
1.2. Study objectives	2
1.3. Study organization.....	2
2. LITERATURE REVIEW	4
2.1. Consumer product knowledge	4
2.1.1. Consumer wine knowledge	5
2.1.2. Wine knowledge typology	6
2.2. Packaging and labels	8
2.2.1. Functions and elements.....	8
2.2.2. Wine packaging and label.....	9
2.2.2.1. Informational elements on wine packaging	10
2.2.2.2. Visual elements on wine packaging.....	11
2.3. Research questions and conceptual model	13
3. METHODOLOGY	15
3.1. Research design.....	15
3.2. Measurement of variables	15
3.3. Data collection.....	19
3.4. Data analysis.....	20
4. RESULTS AND DISCUSSION	22
4.1. General sample characteristics	22
4.2. Consumers' perceptions of wine labels and packaging	24
4.2.1. Importance of informational elements on wine label.....	24
4.2.2. Attitudes and perception of visual elements on wine packaging	25
4.2.3. Acceptance of visual elements on wine packaging	27
4.3. Consumers' wine knowledge and perceptions of wine labels and packaging.....	28
4.3.1. Wine knowledge typology: subjective knowledge and objective knowledge.....	28
4.3.2. Consumers' wine knowledge and perceived importance of wine label informational elements.....	30
4.3.3. Consumers' wine knowledge and attitude towards visual elements on wine packaging....	32
4.3.4. Consumers' wine knowledge and acceptance of visual elements on wine packaging	33

5. CONCLUSION	34
5.1. Main conclusions and implications of the research.....	34
5.2. Limitations and future research.....	35
6. BIBLIOGRAPHY	37
7. APPENDIX	44
Appendix 1: Online Survey.....	44
Appendix 2: Repeated Measures ANOVA for attitude towards wine label design.....	52
Appendix 3: Repeated Measures ANOVA for attitude towards shape, size and type of closure.....	55
Appendix 4: Repeated Measures ANOVA for acceptance of wine label.....	58
Appendix 5: One Sample T-test for acceptance of wine label design.....	59
Appendix 6: Repeated Measures ANOVA for acceptance of shape, size and type of closure.....	60
Appendix 7: One Sample T-test for acceptance of shape, size and type of closure.....	61
Appendix 8: Pearson’s correlation (Objective knowledge and subjective knowledge).....	62
Appendix 9: Chi-Square Test of Independence (Wine Typology Demographics Characteristics).....	63
Appendix 10: One-way ANOVA.....	65
Appendix 11: MANOVA.....	66
a) Consumers’ wine knowledge and perceived importance of wine label.....	66
b) Consumers’ wine knowledge and attitude towards labels design.....	68
c) Consumers’ wine knowledge and attitude towards shape, size and type of closure.....	68
d) Consumers’ wine knowledge and acceptance of labels design.....	69
e) Consumers’ wine knowledge and acceptance of shape, size and type of closure.....	69

TABLE OF FIGURES

Figure 1 - Wine knowledge types, Ellis & Caruana (2018).....	6
Figure 2 - Conceptual model of the study.....	14
Figure 3 - Wine label designs, Sherman & Tuten (2011) - Adapted version.....	18
Figure 4 - Shape, size and type of closure, Nesselhauf et al. (2017) - Adapted version.....	18
Figure 5 - Respondents' wine consumption frequency.....	23
Figura 6 - Responsible for wine purchase.....	23
Figure 7 - Respondents' wine purchase frequency.....	24

LIST OF TABLES

Table 1 - Subjective wine knowledge scale, Flynn and Goldsmith (1999) - Adapted version.....	16
Table 2 - Objective wine knowledge test questions - Adapted version.....	16
Table 3 - Value the overall importance of information on wine labels, Tootelian & Ross (2000).....	17
Table 4 - Informational elements on wine label, Thomas & Pickering (2003) - Adapted version.....	17
Table 5 - Sample characteristics (N=306).....	18
Table 6 - Frequency of importance of information on wine label.....	24
Table 7 - Mean and standard deviation for informational elements on wine label.....	25
Table 8 - Mean and standard deviation for attitudes towards wine labels designs.....	26
Table 9 - Mean and standard deviation for attitudes towards shape, size and type of closure.....	27
Table 10 - Mean and standard deviation for the acceptance of labels design.....	28
Table 11 - Mean and standard deviation for the acceptance of shape, size and type of closure.....	28
Table 12 - Mean and standard deviation for subjective wine knowledge.....	29
Table 13 - Frequency for objective wine knowledge	29
Table 14 - Subjective knowledge Cronbach's alpha.....	29
Table 15 - Consumer wine knowledge typology.....	30
Table 16 - Consumers' wine knowledge and perceived importance of informational elements on label.....	32

1. INTRODUCTION

This chapter splits in three main sections. Firstly, it conceptualizes the research topic: consumers wine knowledge and perception about wine packaging and labels. Secondly, it identifies the study's objectives. And finally, it introduces the study organization.

1.1. Background and problem identification

The global wine industry is changing in terms of consumption. Since 2014 it has been observed a steady growth in global consumption (OIV, 2018). According to the annual report of the International Organization of Vine and Wine, in 2018, Portugal was the country with the highest per capita consumption of wine in the world, with an average of 62 liters consumer per person per year. Indeed, this increase of consumption "has resulted in a dramatic rise in the number of wineries, wine brands, labels, bottle shapes and colors, styles of closures, regional designations, and grape varieties"(Barber & Almanza, 2006, p.84).

In fact, the strong competition in the wine market has forced wineries and retailers to re-think their marketing strategies taking into account the heterogeneity of consumer preferences (Pomarici, Lerro, Chrysochou, Vecchio, & Krystallis, 2017).

According to Ellis & Mattison Thompson (2018) wine is a complex and information-intensive product with a multitude of attributes, both intrinsic - the physical-chemical aspects of the wine, which are unique in each product and cannot be modified without changing the product (Boncinelli, Dominici, Gerini, & Marone, 2019) - and extrinsic - the external aspect of the product (Ellis & Mattison Thompson, 2018). Due to this complexity, it is crucial to understand which type of wine attributes are best valued by the different groups of consumers in order to target various market segments effectively (Velikova, Howellv, & Dodd, 2015).

Taking into account that consumers are not typically able to taste wine in a retail store, extrinsic attributes such as packaging and labels have an important role on consumers' decision (Lockshin, Jarvis, d'Hauteville, & Perrouty, 2006). Although is it possible to find some studies about the influence of wine packaging and labels on consumers perceptions (e.g. Barber & Almanza, 2006; Henley, Fowler, Yuan, Stout, & Goh, 2011; Sherman & Tuten, 2011; Rocchi & Stefani, 2006;), there seems to exist little research on this field focusing on the perceptions of consumers according to their knowledge about wine. Consumer's knowledge plays a key role on consumer purchase behaviour (Vigar-Ellis, Pitt, & Berthon, 2015); indeed what consumers know about a product affects many aspects of their perceptions and purchase behaviour.

Ellis & Caruana (2018) proposed a wine knowledge typology based on the relation between two different types of knowledge, objective and subjective knowledge, with the aim of providing a useful basis for segmentation of the wine market. Based on that typology, this research extends existing literature by investigating the relationship between consumers wine knowledge types and their perception of wine packaging and labels. Furthermore, this investigation will help marketers who work in wine sector, to refine their strategies by adjusting the attributes of the packaging and labels when targeting segments of the market with different types of wine knowledge. Actually, from a marketer's point of view, it is also interesting to determine which attributes should be present on the label and to understand the impact of innovative wine packaging considering the segment's preferences. This is especially important because the wine market is increasingly more mature and, as a response, brands need to invest on innovative packaging to gain competitive advantage more than ever.

In short, the question that drives the research efforts of this dissertation is: How consumers with different types of wine knowledge differ on their perceptions regarding wine packaging and labels?

1.2. Study objectives

The main objective of the study is, therefore, to understand consumers' perceptions of wine label and packaging considering their type of wine knowledge.

In order to reach the main objective, some specific objectives must be attained:

- Understand the different types of consumers' wine knowledge according to Ellis & Caruana (2018) typology, and their main characteristics as a segment;
- Analyse which are the main elements in packaging and labels valued by consumers according to their wine knowledge type;
- Understand if consumer's perceptions and attitudes regarding wine packaging and labels vary among consumers with different types of wine knowledge;
- Evaluate the acceptance of innovative wine packaging among consumers with different types of wine knowledge.

1.3. Study organization

This dissertation is organised in five main chapters: introduction, literature review, methodology, results and discussion, and conclusion.

After the introduction that contextualizes the present study and its objectives, the second chapter consists of a literature review, where the topics regarding consumer wine knowledge and wine

packaging and labels are discussed. Additionally, the research questions and a conceptual model are presented.

The following chapter is related with the methodology – it describes the different phases of the investigation, the measurement of the study's variables, the data that was collected and also explains how the data was analysed.

The fourth chapter presents the analysis of the main results of the study, using both descriptive statistics and inferential statistics. Firstly, it describes the general sample characteristics, after analysis respondents' perceptions of informational and visual elements on wine packaging, and lastly develops the wine knowledge typology and provides answers to the research questions.

Finally, the last chapter highlights the main conclusions of the study, as well as its limitations and some suggestions for future researches.

2. LITERATURE REVIEW

This chapter aims to review some existing literature on two main topics: consumers wine knowledge and wine packaging and labels. Firstly, it introduces the concept of consumer product knowledge, followed by an overview of how it applies specifically to the wine consumer and, finally, it covers the wine knowledge typology. The second part of the chapter explains the importance of packaging elements and functions, and then outlines how these visual and informational elements are applied in the wine packaging market. Lastly, research questions and a conceptual model are developed for the present research.

2.1. Consumer product knowledge

The concept of consumer product knowledge has been discussed in several research studies, particularly regarding the role of product knowledge in distinct aspects of consumer behaviour. The majority of these studies argue that consumers with high and low product knowledge have different ways of making decisions, evaluations and searching and processing information (e.g. Alba & Hutchinson, 1987; Bettman & Park, 1980; Brucks, 1985; Lee & Lee, 2011; Rao & Monroe, 1988; Sujan, 1985).

Indeed, consumer product knowledge is the amount of information hold in consumer's memory and their self-perception about their product knowledge as well as their familiarity and experience with a product before an external search occurs (Alba & Hutchinson, 1987; Brucks, 1985; Rao & Sieben, 1992). Consumer knowledge can be conceptualized and measured according to three different perspectives: familiarity (Alba & Hutchinson, 1987; Rao & Monroe, 1988), objective knowledge and subjective knowledge (Brucks, 1985). Familiarity is defined "as the number of product-related experiences that have been accumulated by the consumer" (Alba & Hutchinson, 1987, p.412). In fact, is familiarity, or past experience with the product, that sets the foundation for both objective and subjective knowledge (Dodd, Laverie, Wilcox, & Duhan, 2005).

The present research focuses particularly on objective and subjective consumer's knowledge as concepts that measure consumer product knowledge. Objective knowledge is considered the accurate and factual knowledge that consumers hold in their memory (Brucks, 1985), in other words, is the "real knowledge" of consumers (Bruwer, Chrysochou, & Lesschaeve, 2017). This concept is strongly related with consumer's expertise, which includes "cognitive structures and processes" (Alba & Hutchinson, 1987, p.411). In fact, a developed objective knowledge is what allows consumers to better analyse, elaborate and remember product information. Consumers with high objective knowledge with few resources and less cognitive effort can reach identical understanding of the product as consumers with lower levels of objective knowledge (Alba & Hutchinson, 1987).

The term subjective knowledge is defined as “consumer’s perception of the amount of information they have stored in their memory” (Flynn & Goldsmith, 1999, p. 59) and, in a certain way, subjective knowledge reflects the confidence that consumers have about their own knowledge (Alba & Hutchinson, 2000). It can be easily measured by challenging consumers to speak about their own perception of acquaintance with a specific subject (Ellis & Mattison Thompson, 2018), thus, there is no “correct” or “incorrect” answers (Ellis & Caruana, 2018). In contrast, to measure objective knowledge is crucial to develop a product-specific test, which includes correct and incorrect answers that define consumer’s knowledge (Forbes, Cohen, & Dean, 2008). Additionally, Guo & Meng (2008) state that when consumers evaluate or make decisions about products, subjective knowledge has more impact than objective knowledge.

In short, understanding the levels of consumer product knowledge allows a better understanding of consumer’s behaviour (Guo & Meng, 2008), particularly consumer’s decision-making.

2.1.1. Consumer wine knowledge

Wine is an information-intensive product (Pomarici et al., 2017), since it provides consumers with an immense amount of information such as origin, grapes, vintage, winemaker, and also information about what food it is best paired with (Vigar-Ellis, Pitt, & Berthon, 2015). A considerable number of marketing researchers have studied consumer knowledge on the wine sector, in particular regarding the topic of extrinsic and intrinsic cues used in consumers’ wine choice (Ellis & Caruana, 2018). For instance, Japanese consumers with higher levels of objective knowledge used more intrinsic cues (such as colour, flavour and variety of the wine) than extrinsic cues (such as price and packaging) in their purchase decisions (Bruwer & Buller, 2012) .

Other studies found out that more knowledgeable wine consumers consider a higher number of attributes as important when making a wine purchase than less knowledgeable consumers (Aurier & Ngobo, 1999; Charters, Lockshin, & Unwin, 1999; Rasmussen & Lockshin, 1999; Viot, 2012). Viot (2012) highlights that the most important attributes are not the same for the experts and the novices. The study demonstrates that experts give particular importance to attributes such as vintage and region of production in wine decision-making and novices are more concerned about price and vintage. A previous study has shown that colour, price and bottle design were the most valued attributes to the novices (Aurier & Ngobo, 1999).

Additionally, researchers noticed that low self-confidence consumers preferred modern colours and classic label information (Barber, Ismail, & Taylor, 2007; Lockshin & Corsi, 2012), contrarily to self-confident consumers, who are more likely to experiment products with a new label or packaging design (Bearden, Hardesty, & Rose, 2001; McClung, Freeman, & Malone, 2015). Orth & Krška (2001),

in a study in Czech Republic, concluded that less knowledgeable wine consumers considered medals displayed on bottles as a relevant indicator of wine quality and value.

To conclude, Velikova et al., (2015) highlight that experts and novices vary in the amount of content and organization of their wine knowledge, thus they value different wine attributes in their wine choices.

2.1.2. Wine knowledge typology

When it comes to wine knowledge typology, there is a useful and interesting way to segment the wine market. Vigar-Ellis, Pitt, & Berthon (2015) were the first to develop it, although, it was the study of Ellis & Caruana (2018) that described each segment with more detail. The segments resulted from the relationship between objective and subjective wine knowledge. In order to measure consumer's objective wine knowledge, the authors applied the five-question test developed by Forbes et al. (2008), and to measure consumer's perception of their own knowledge (subjective knowledge) the Flynn & Goldsmith (1999) nine-item scale was used. Hence, the authors identified four different wine knowledge types (figure 1).



Figure 1. Wine knowledge types, Ellis & Caruana (2018)

The segment that has low level of objective and subjective wine knowledge is called Neophytes or Novices. Consumers in this segment are aware of their lack of wine knowledge although they like to consume wine (Ellis & Caruana, 2018). Novices are more likely to be young wine drinkers that perceive some risk in their wine purchasing decisions. Moreover, due to their lack of confidence, they will mostly rely on awards, promotions and fun and catchy labels that attract their attention (Ellis & Thompson, 2018). However, some researchers have noticed that consumers prefer wines with a

classic design packaging whether the segments are considered Novices or not (Campbell & Goodstein, 2001; Celhay & Passebois, 2011; Viot, 2012).

In contrast with Neophytes there are the wine Experts. These consumers differ in the amount, content and organization of their knowledge about wine (Velikova, Howell and Dodd, 2015; Bruwer, Chysochou and Lesschaeve, 2017) and also value different attributes when choosing a bottle of wine (Velikova et al., 2015; Viot, 2012). Experts have high levels of both objective and subjective wine knowledge; therefore, their memory structures are more complex and specific than in Novices (Alba & Hutchinson, 1987; Vigar-Ellis, Pitt, & Caruana, 2015). It is also known that experts are considered for opinion seekers a credible information source (Ellis & Caruana, 2018).

Snobs have high subjective but low objective wine knowledge. Consumers on this segment believe that they know a lot about wine but, actually, they do not – they are overconfident. Thus, this type of consumers tends to use wine terminology in order to demonstrate what they think they know (Ellis & Caruana, 2018). In fact, they are likely to be influenced by opinion leaders or wine awards, which gives them more confidence. This segment is more likely to be brand loyal, and thus less price sensitive (Ellis & Caruana, 2018).

Finally, the Modest have low subjective and high objective wine knowledge, contrary to Snobs (Ellis & Caruana, 2018). In other words, although this segment possesses wine knowledge, they lack confidence in the process of wine selection (Barber, Almanza and Donovan 2006), therefore, they are more conservative in their purchase behaviour (Ellis & Caruana, 2018).

It is important to point out that wine knowledge typology has been applied in recent wine studies (Ellis & Thompson, 2018; Robertson, Ferreira, and Botha, 2018;). In their study, Ellis & Thompson (2018) attempted to understand the effects of the combination of subjective and objective consumer's wine knowledge and their influence on variety-seeking behaviour in wine purchasing. The researchers have concluded that Snobs and Experts are more variety seeking and, consequently, they give more attention to new wines in the market, in contrast to Modest and Neophytes who lack of self-confidence. Regarding the second study, Robertson, Ferreira, and Botha (2018) have examined the effects of consumer's objective and subjective knowledge of wine on the relative importance of four extrinsic wine cues such as price, age, brand and region of origin. The attribute price was the most important among all segments. Snobs were the segment that ranked "expensive wines" as their least preferred level price. Furthermore, Experts and Modest considered the region of origin as the second most important attribute, highlighting "well-known region of origin" as the most preferred level of region. On the other hand, Novices and Snobs gave importance to wine brand, attaching a high level of preference for "well-known brands". Finally, the attribute age represents the

less important attribute for Novices, Experts and Snobs.

According to the mentioned studies, the knowledge factor plays a key role on consumers' choice and behaviour – indeed, what consumers know about a product affects many aspects of their perceptions and purchase behaviour. As such, this study aims to validate the impact of this variable on wine label and packaging, to do so, it is important to review the existing literature on this topic.

2.2. Packaging and labels

Packaging “includes all the activities of designing and producing the container for a product” (Kotler & Keller, 2012 p.346). According to Agariya, Johari, Sharma, Chandraul, & Singh (2012) packaging is defined as the wrapping material used to contain, identify, describe, protect, display and promote the product in order to make it marketable and clean. The authors further suggest that label is an important part of packaging.

Indeed, packaging and labels play a key role in consumer decision-making due to the impact it has on attracting consumer's attention. Additionally, they also influence consumer's perception of the product (Rundh, 2005). In order to have a deep understanding of packaging and labels is crucial to understand its functions and elements.

2.2.1. Functions and elements

Nowadays, packaging has a more extensive role than solely protecting a product. Indeed, when researchers study the functions of packaging, they are starting to relate both logistics and marketing (Prendergast & Pitt 1996). As a marketing tool, the objective is to promote the product, increasing visibility and provide customers with more information (Abdullah, Kalam, & Akterujjaman, 2013; Silayoi & Speece, 2007). There are some factors that contribute to the increased importance of packaging as a marketing tool, such as: “Self-service”- nowadays products are sold on a self-serve basis. Customers pass by an average of 300 products per minute in the halls of supermarkets and retails stores, therefore, packaging should be able to attract consumer's attention; “Consumer affluence”- consumers are willing to pay more in order to have a more appealing packaging; “Company and brand image” - the importance that packaging has on consumer's recognition of the company and brand; and “Innovation opportunity”- it means the possibility to get differentiation, uniqueness or innovation through packaging (Kotler & Keller, 2012). The authors (Kotler & Keller, 2012) further suggest that some marketers consider packaging as the fifth “P” of the marketing-mix, along with product, price, place and promotion, though the majority of marketers consider packaging as an integral part of the product.

Packaging as a marketing tool can be analysed according to two different perspectives: visual elements and informational elements (Silayoi & Speece, 2007). The visual elements include image, design, typography, colours, shape and size of packaging. However, in literature, the shape, size and material can also be named as structural components of packaging (Ampuero & Vila, 2006; Underwood, 2003). The informational elements are mainly related with product information and technologies used in the packaging (Silayoi & Speece, 2007). Essentially, consumers find most information elements on labels. The label is an essential part of the packaging that identifies the product or brand. Kotler & Keller (2012) highlight the label as the essential part of the product that describes the confection details.

The influence of packaging and its elements on consumer's decision-making process can be demonstrated by evaluating the importance of its separate elements on consumer's preferences (Ehsan & Lodhi, 2015). For instance, Ehsan & Lodhi, (2015) have studied the influence of brand packaging elements on the consumer's buying behaviour of FMCG. The study found out that among the different aesthetic elements of packaging, colour is one of the most appealing elements to consumers and that the label of the product helps consumers to make choices and it also provides appropriate information such as the proper usage of the product.

Despite the overall importance of each element of packaging and label in FMCG products, the objective of this study is to better understand its importance on wine packaging and labels. Further on, the most relevant studies regarding this topic will be discussed.

2.2.2. Wine packaging and label

Packaging in the wine industry can be more complex compared to other fast moving consumer goods, due to the fact that wine packaging incorporates a large number of interrelated attributes, some of which are historical and traditional, such as the type of closure and the bottle shape (Atkin & Newton, 2012; Barber & Almanza, 2006). However, due to the growth in the number of wineries, more and more the wine producers want to stand out in the wine market and, to do so, packaging in wine industry is changing and traditional and historical attributes are taking innovative forms (Nesselhauf et al., 2017).

Following Silayoi & Speece (2007) packaging's approach, this study examines wine label's information as the primary informational elements, and label design, shape, size and bottle closure of wine packaging as the primary visual elements.

2.2.2.1. Informational elements on wine packaging

The informational elements on wine packaging are mostly present on the label. Indeed, the label is an important source of information for wine consumers as it provides them with both intrinsic and extrinsic information (Sherman & Tuten, 2011; Thomas & Pickering, 2003). Intrinsic information is mostly related to grape variety, region, producer, vintage and wine style. Extrinsic information is the information that marketers can control such as price, style of packaging and labelling, brand name (Quester & Smart, 1996; Sherman & Tuten, 2011) and QR codes (Higgins, McGarry Wolf, & Wolf, 2014).

Several studies have found that product information delivered via the label such as grape variety, brand name, and price are among the most important cues consumers use in wine choice decision (Barber & Almanza, 2006; Sherman & Tuten, 2011; Thomas, 2000; Thomas & Pickering, 2003). Additionally, other elements such as taste information and food pairings are also seen as items consumers use to assess wine before purchase (Chaney, 2000; Henley et al., 2011; Lockshin & Corsi, 2012).

The information elements are usually present in both front and back labels. Usually, the front label foment consumers' interest and the back label provides them with more detailed information (Rocchi and Stefani, 2006), including grape variety, alcohol percentage, volume in the bottle, and vintage (Henley et al., 2011). Baber & Almanza (2006) suggested that the front label cue "country of origin" is the most important attribute for consumers when purchasing a bottle of wine, followed by back labels cues such as "style of wine" and "description of wine". Mueller, Lockshin, Saltman, & Blanford (2010) concluded that ingredient information on back labels had a large negative impact on consumers' perceptions.

Apart from these traditional attributes, Higgins et al., (2014) highlighted the importance of QR codes on front and back labels as a cost-effective way to provide extra information about wine at the point of purchase. Higgins et al., (2014) concluded that QR codes are mostly used by consumers who usually seek specific information about wine such as its sustainability and local of production. The authors named these consumers as connoisseurs or experts.

Some studies have also suggested that label information might be more important for consumers than visual packaging attributes, such as the colour and shape of the bottle (Mueller, Lockshin, & Louviere, 2010; Puyares, Ares, & Carrau, 2010). However, "consumers are more likely to read the label to check that the product information is consistent with their needs if the package make it seem that the product is worth investigating more carefully" (Silayoi & Speece, 2007, p.1502).

2.2.2.2. Visual elements on wine packaging

Wine consumers are impacted by the total packaging design - label design, shape, size, colour of the bottle and type of closure (Barber & Almanza, 2006; Henley et al., 2011; Rocchi and Stefani, 2006).

Wine label design

When developing a label design marketers should consider which colours, shapes, texture and fonts better characterize the wine brand (Barber et al., 2007; Lockshin & Corsi, 2012). For most consumers, package design is the reflection of the quality of the product and the brand (Barber & Almanza, 2006). For instance, in the old wine world a classic and traditional label was associated with high quality, therefore design changes were often avoided. Nowadays, wine labels are getting more sophisticated and wine producers have become more creative by using labels with modern and contemporary colours that combine exotic shapes and sizes (Barber et al., 2007; Jennings & Wood, 2013).

There are some studies that have used distinct classifications regarding wine label design. According to Sherman & Tuten (2011) there are three different genres of labels design: the Traditional design that uses classic and typical images of “coats-of-arms”, “chateaux” and “vineyards”; Contemporary design which focuses more on a “sense of style” and modern design; and finally Novelty labels that use “fun” as the main factor to attract the consumers, these labels are often characterized for having animals images (Sherman & Tuten 2011, p.223). Subsequently, the authors concluded that traditional labels designs are still associated with high quality wine while contemporary and specifically novelty styles are perceived as cheap and low quality. Furthermore, Orth & Malkewitz (2008) found out that “natural” and “delicate” wine designs were associated with high quality, in contrast to “massive” and “contrasting” designs that were perceived as inexpensive wine.

Therefore, it can be concluded that the evolution of wine packaging has not changed consumers’ perception of how label design should look like, and that they prefer traditional labels and colours over complex design with unusual colour combinations (Lockshin & Corsi, 2012). A recent study conducted by Tang, Tchetchik, & Cohen (2015) with Hong Kong Chinese consumers also confirmed the aforementioned. However, the authors verified that a specific segment of younger consumers prefer “elegant contemporary” labels. The label designs used on this study were similar to those used by Boudreaux & Palmer (2007) – “traditional with châteaux”, “modern classic”, “modern vibrant,” “modern contemporary”, and “elegant contemporary” (Tang et al., 2015, p. 15). Boudreaux & Palmer (2007) suggested that labels with images had the strongest effect, and that wine related images such as grapes had the highest score. On the other hand, labels that used unusual animals were the least

preferred. Additionally, Elliot & Barth's study (2012) showed that millennials tend to prefer non-traditional design opposing older consumers, who prefer traditional labels.

Finally, another classification of label design was provided by Barber et al., (2007). The authors classified label design as classic (formal and traditional in style and characteristics); modern (reflects recent times including elements of present lifestyle) and contemporary Art Deco (style of the 1925-1940 time periods that use geometric design, bold colours and graphics). The authors concluded that respondents with low self-confidence are more likely to choose modern label colour and classic label information.

Shape, size, type of closure

According to Nesselhauf et al., 2017, consumers can find different types of packaging shape, size and type of closure for wines: bottles with corks, screw caps, bag-in-box, tetra Pak and StackTek (plastic containers for casual activities and outdoor events – the container is appropriate for just a single person). The aim of the study was to analyse the Germans' perceptions and acceptance of innovative wine packaging, concluding that consumers' acceptance of screw caps is significantly higher than that of bag-in-box and StackTek. The study also noticed that the acceptance of the last two was similar.

The majority of researchers emphasized that cork is perceived as an indicator of high quality, as opposed to screw caps, large bottles and bag-in-box which are associated with lower quality (Atkin & Newton, 2012; Barber & Almanza, 2006; Barber, Almanza, & Donovan, 2006; Higgins et al., 2014). A study conducted by Atkin, Garcia, & Lockshin (2006) showed that consumers who are more likely to adopt screw caps are more interested and involved with wine and have a higher income level. Moreover, some studies have shown that the preference for a wine closure type is strongly related with the type of occasion the wine is consumed (Barber, Taylor, & Dodd, 2009).

Finally, some authors argued that bottle shape is strongly related with the region of the wine - "there are many wine producing areas that have adopted unique wine bottle shapes that became the traditional bottle for wines of that region" (Puyares et al., 2010, p.684).

2.3. Research questions and conceptual model

Viot (2012) highlighted that the most important attributes are not the same for the Experts and the Novices. The study demonstrated that Experts give particular importance to attributes such as vintage and region of production in wine decision-making and Novices are more concerned with price and vintage. A study conducted by Robertson, Ferreira, and Botha (2018) highlighted that Experts and Modest considered the region of origin as the second most important attribute, in contrast to Novices and Snobs that gave more importance to wine brand.

Considering the aforementioned there are some insights that prove that consumers with different wine knowledge value the elements of wine packaging differently. Therefore, the present study intends to answer the following research question:

RQ1: Do Experts, Snobs, Modest and Neophytes value wine label information differently? If so, which are the main elements on labels valued by each group?

According to literature consumer attitudes towards visual elements of wine packaging tend to be consistent over the years: the evolution of wine packaging has not changed the consumers' perception of how label design should look like, and they prefer traditional labels and colours over complex design with unusual colour combinations (Lockshin & Corsi, 2012). Traditional label designs are still associated with high quality wine, while contemporary and specifically novelty styles are perceived as cheap and low quality. Boudreaux & Palmer (2007) suggested that labels with images had the strongest effect, and that wine related images such as grapes had the highest score in terms of quality. On the other hand, labels that used unusual animals were the least preferred. The majority of researchers emphasized that cork is perceived as an indicator of high quality, as opposed to screw caps, large bottles and bag-in-box which are associated with lower quality (Atkin & Newton, 2012; Barber & Almanza, 2006; Barber et al., 2006; Higgins et al., 2014).

Thus, although there are some insights in literature about perceptions of consumers towards labels and wine packaging is still unknown if the variable "knowledge" influences those attitudes and perceptions. Thereby, the following research question was formulated:

RQ2: Do Experts, Snobs, Modest and Neophytes have the same perception and attitudes towards visual elements on wine packaging (design, shape and type of closure)?

Consumer's product knowledge plays an important role in determining new product adoption" (Wenben Lai, A. 1991, p.56). Some researchers suggest that consumers with different levels of knowledge will choose different types of wine closures (Barber, Taylor, & Dodd, 2009). Moreover,

“owing to the lower level of knowledge, low-involvement consumers might be more open to information about new packaging forms”(Nesselhauf et al., 2017, p. 289).

Considering the previous the present study aims to answer the following research question:

RQ3: Do Experts, Snobs, Modest and Neophytes have different levels of acceptance of visual elements on wine packaging (design, shape and type of closure)?

The conceptual model presented on figure 2 illustrates the relationships under study.

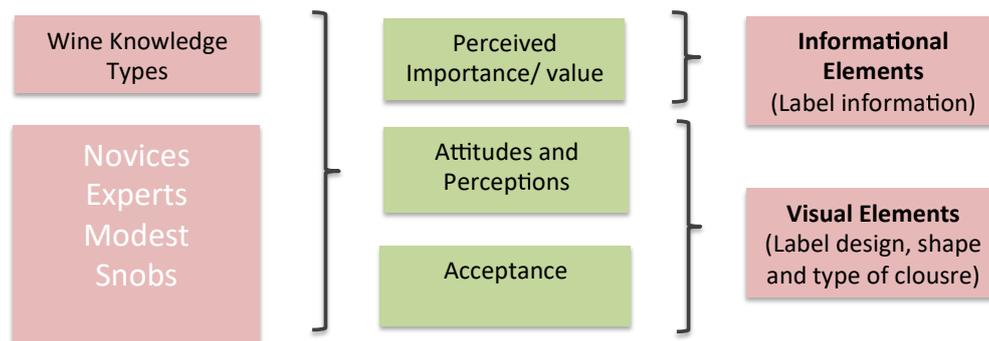


Figure 2. Conceptual model of the study

3. METHODOLOGY

This chapter presents and justifies the methodology used to reach the goals of the study. More specifically, this chapter consists of four main sections: the first section outlines the different phases of the investigation; the second describes the measurement of the variables used to answer the research questions; the third describes the procedures for data collection; and, lastly, the fourth section explains how the data was analysed.

3.1. Research design

The literature review was the first stage of this investigation, from which the research questions to be answered on this study were developed.

In order to obtain data for the study, a survey was designed with the study's variables described in chapter 3.2 (Measurement of variables). To ensure that the survey was understandable and explicit, it was crucial to go through a pre-test phase that is described in chapter 3.3 (Data collection). After the changes, the survey was published online during two weeks.

The collected data was analysed through IBM SPSS (Statistical Package for Social Sciences) 25. The statistical analysis involved descriptive (absolute and relative frequencies, means and standard deviations) and inferential statistics, as further explained in section 3.4 (Data analysis).

3.2. Measurement of variables

The items of the scales used to measure the variables under study were taken from previous research and adapted to suit the objectives of the present study.

a) Consumers' wine knowledge: subjective knowledge and objective knowledge

Subjective wine knowledge was measured following the study of Ellis & Caruana (2018) that used the scale from Flynn & Goldsmith (1999)(Table 1). The original scale has nine-items, on this study was just used eight-items (explanation in chapter 3.4). All scale items were measured using a seven-point Likert scale ranging from 1 "Strongly Disagree" to 7 "Strongly Agree". Two reverse-scored items were used to ensure the consistency of responses. According to Barber et al. (2008), Johnson & Bastian (2015), and Ellis & Caruana (2018) the scale of Flynn & Goldsmith (1999) is one of the most used in research related with wine industry. Indeed in the study of Ellis & Caruana (2018) the nine-items scale of Flynn & Goldsmith (1999) exhibits a Cronbach's alpha of 0.93, which indicates a very good reliability.

Variable	Items
Subjective Wine Knowledge	I know pretty much about wine
	I know how to judge the quality of a bottle of wine
	I think I know enough about wine to feel pretty confident when I make a purchase
	I do not feel very knowledgeable about wine (R)
	Among my circle of friends, I'm one of the "experts" on wines
	I have heard of most of the new wines that are around
	I can tell whether a bottle of wine is worth the price
Compared to most other people, I know less about wines (R)	

Table 1. Subjective wine knowledge scale, Flynn and Goldsmith (1999) - Adapted version

Regarding objective wine knowledge, it has been found by researchers that there is a lack of consistency in measuring this concept, due the fact that each study proposes its own scale (Bruwer & Buller, 2012; Velikova et al., 2015; Ellis & Caruana, 2018). In this study, the objective wine knowledge was measured following the study of Ellis & Caruana (2018) that used the five-item scale of Forbes et.al (2008). The scale consists of five multiple-choice questions about wine, each featuring five choices, of which one is the correct answer. The five-questions were adapted to the Portuguese market, with the collaboration of a well-known Portuguese winemaker from Casa Santos Lima (Table 2).

Question	Answer choices (correct choice in italics)
Which of the following grape varieties is red?	Viosinho
	Arinto
	<i>Touriga Nacional</i>
	Antão Vaz
	Don't know
Which of the following grape varieties is Portuguese?	Cabernet Sauvignon
	Malbec
	<i>Touriga Franca</i>
	Chardonnay
	Don't know
Where is located the wine region of green wines?	<i>Minho</i>
	Trás-os-Montes
	Beira inteior
	Alentejo
	Don't know
Which sugars that are present in grapes transform themselves into alcohol during the alcohol fermentation process?	Sucrose and Maltose
	<i>Glucose and Fructose</i>
	Lactose and Galactose
	Trealose and Fructose
	Don't know
How does the colour tone evolve during the red wine aging process?	From violet to greenish
	<i>From violet to brownish</i>
	From red to bluish
	From red to brownish
	Don't know

Table 2. Objective wine knowledge test questions - Adapted version

b) Informational elements on wine label: perceived importance/value

Two different approaches to measure the importance of information on wine label were used in the present research.

Firstly, in a more generic approach that measures the overall importance of information on wine labels, the respondents were asked to indicate how important the labels information was to them, on a range of 1 (Very important) to 5 (Not at all important). This question was based on the study of Tootelian & Ross (2000), about product labels (Table 3).

Question	Answer choice
Overall importance of information on wine label	Important
	Uncertain
	Very important
	Not at all important
	Not very important

Table 3. Value the overall importance of information on wine labels, Tootelian & Ross (2000)

Secondly, a more specific approach, which measures the importance of each informational item present on wine labels was introduced. The measurement items were taken and adapted from the research of Thomas & Pickering (2003) about the importance of wine label information. The main goal of this question was to evaluate the importance of descriptive elements on wine label. Thus, visual elements such as “Image, picture, logo” and “Colours used on labels” were not considered. In total eleven descriptive elements were included, and one item modified (explanation in chapter 3.4). The items were measured through a seven-point importance scale, which varied from very little importance (1) to very great importance (7) (Table 4).

Variable	Items
Informational elements on wine label	Wine company name
	Wine brand name
	Awards and medals
	Winemaker name
	How wine was made
	History of wine region
	Food and wine paring
	Alcohol level
	Grape variety
	Vintage
	Type of person wine would appeal

Table 4. Informational elements on wine label, Thomas & Pickering (2003) - Adapted version

c) Visual elements on wine packaging: attitudes/perceptions

Labels design

The labels design and the scale to measure the labels preferences were based on the insights from the study of Sherman & Tuten (2011). The labels were created to represent visually three different design styles: Traditional (typical image of coats-of-arms, classic font and neutral colours), Contemporary (modern font and design) and Novelty (image of an elephant as a “fun element” and differentiating factor, where strong colours are prevalent). To prevent possible biased opinions

caused by the informational elements such as the wine’s country of origin, age and type, each label contained the same information: brand name (Quinta de Cima – fictional name), country (Portugal), year (2019), variety (red wine). The labels were designed by Rita Rivotti, who is a well-known designer in the wine packaging industry (Figure 3).

To measure attitudes and perceptions towards the labels design a five-point Stapel Scale was used. In the original study (Sherman & Tuten, 2011), the authors used seven adjectives. In this study, to ensure the survey was not too long, it was decided to reduce the list and only use the following five adjectives: “Good”, “Complex”, “Cheap”, “High Quality” and “Common”.

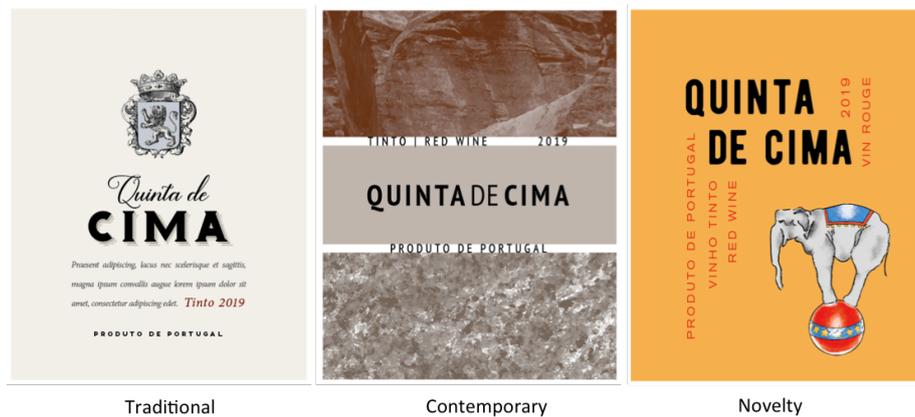


Figure 3. Wine label designs, Sherman & Tuten (2011) – Adapted version

Shape, size and type of closure

The choice of different packaging with various shapes, sizes and types of closure was mainly based on the research of Nesselhauf et al. (2017) that analysed consumers’ perception of innovative wine packaging. More specifically, the experiment featured four different packaging options: bottles with corks (the most typical), screw caps, bag-in-box and StackTek (the most unusual). The packaging were illustrated on the survey through images (Figure 4). To explore the attitudes towards the different packaging options, the five-point Stapel Scale was used once again for the five adjectives mentioned above.



Figure 4. Shape, size and type of closure, Nesselhauf et al. (2017) - Adapted version

d) Visual elements on wine packaging: acceptance

The acceptance of wine labels' design and packaging were measured through participants intention to buy, using the expression "I would buy wine with this label" in a seven-point Likert scale for the wine labels, and "I would buy wine in this packaging", for shape, size and type of closure (Nesselhauf et al., 2017). Once again, both labels' design and packaging were illustrated on the survey through images.

3.3. Data collection

The data for this study was collected using a survey.

The survey (Appendix 1) was divided into six parts, and all questions were mandatory with closed answers.

- In the first part, participants could find an explanation of the purpose of this study and were also informed about the Garrafeira Nacional's draw that raffled a €25 voucher among the people who completed the survey. The contest was created as an incentive to motivate wine consumers to participate on the survey and get a larger sample for the study.
- In the second part there were mainly filter questions to exclude participants, which were not part of the study sample. To be part of the study, the participants were required to be older than 17 years old and wine consumers. In case they did not meet these requirements, they could not answer the survey, and were informed so.
- The third part of the survey was mainly composed by questions regarding wine consumption and purchase.
- The fourth part aimed at testing the knowledge variables, specifically the two types of knowledge: subjective and objective. The objective knowledge test took place first to ensure that the answers were realistic and that would not be biased by the subjective question.
- The fifth part of the survey was mostly related to the wine labels and packaging – at the beginning the participants were asked about their preferences on the informative elements of wine packaging; then, the participants had the chance to express their attitudes, preferences and finally the acceptance of wine with the different label designs and different packaging as well.
- The last section collected the participant's socio-demographic data, such as their nationality, gender, education and current occupation.

To ensure that the survey was understandable and explicit, it was crucial to go through a pre-test phase where six people revised it in person, including two people from the wine industry. Taking into account their insights, some questions and items of the scales were reformulated to create a last version of the survey to be published online. For example, some items of the subjective wine knowledge scale were repeated and ambiguous (such as: "I do not feel very knowledgeable about wines" and " When it comes to wine, I really don't know a lot", therefore it was suggested to eliminate the item: "When it comes to wine, I really don't know a lot". Also, considering the Portuguese market it was suggested the modification of the item "Winemaker history" to "Winemaker name". Finally, the adoption of a simpler and clearer writing was suggested. After the changes, the survey was published online during two weeks.

The survey was written in Portuguese and it was designed to target only Portuguese speaking individuals, who buy and consume wine. The survey was implemented online in Google forms, due to its simplicity and ease of use. Most participants were recruited through private and group messages on WhatsApp and Facebook.

A convenience sample was used: a non-probabilistic sample technic that involves a selection of the sample elements based on their availability. Its advantages are simplicity and speed: get the highest number of possible answers in a short period of time (Cooper & Schindler, 2016).

3.4. Data analysis

As mentioned before, the collected data was analysed through the statistical software – IBM SPSS (Statistical Package for the Social Sciences) 25.

The statistical analysis involved measures of descriptive statistics (absolute and relative frequencies, means and respective standard deviations) and inferential statistics. The level of significance chosen to reject the null hypothesis was $(\alpha) \leq 0.05$. The following statistics were used: the Repeated Measures ANOVA, One Sample T-test, Cronbach's alpha consistency coefficient, the Pearson's correlation coefficient, Chi-Square Test of Independence, the One-way ANOVA and the MANOVA.

In order to used the statistics aforementioned, some assumptions should be considered. The distribution of values was accepted on variables in samples with dimension bigger than 30, according to the central limit theorem. The homogeneity of variances was analysed with the Levene's test. The sphericity assumption and the homogeneity of variance and covariance matrix were also analysed (Marôco, 2007).

More specifically, the Repeated Measures ANOVA compares means across one or more variables that are based on repeated observations of the same group of participants. In other words, "Repeated-measures" is a term used when the same participants participate in all conditions of an experiment" (Field, 2009,p.458). In the present study, Repeated Measures ANOVA was carried out in order to compare and analyse the mean scores across different type of wine label designs, as well as different type of wine packaging given by the same group of consumers.

Additionally, a One Sample T-test was run to compare the values obtained in the study with a theoretical average of distribution for the acceptance of visual elements on wine packaging.

Furthermore, following Ellis & Caruana (2018) research, the Cronbach's alfa method was applied to evaluate the internal consistency of the measurement scale of subjective knowledge. Also, Pearson's correlation was calculated to explore the correlation between objective and subjective wine knowledge.

The Chi-Square Test of Independence was performed to give a comparative analysis of demographic characteristics of wine knowledge groups. The Chi-Square assumption that there should be less than 20% of the cells with expected frequencies below 5 was analysed. In situations where this assumption was not satisfied, the Chi-Square test by Monte Carlo simulation was used.

Lastly, One Way ANOVA and MANOVA were used. The One Way ANOVA "compares several means, when those means have come from different groups of people (Field, 2009, p.388). In this study, the technique was used to determine if there were any statistically significant differences among the four groups in perceived importance of wine labels information (one dependent variable). Moreover, a multivariate analysis of variance (MANOVA) was performed to compare the responses of the four groups in dependent variables correlated with each other, such as the wine informational elements, the different type of label designs, shape, size and types of closure. In short, "MANOVA can be thought of as ANOVA for situations in which there are several dependent variables" (Field, 2009, p.585).

4. RESULTS AND DISCUSSION

This chapter presents the main results of the research. The first section describes the general sample characteristics using both relative and absolute frequencies; the second section analysis the results of the survey regarding respondents' perceptions of informational and visual elements on wine packaging using descriptive statistics, Repeated Measures ANOVA and One Sample T-test; the last section develops the wine knowledge typology and provides answers to the three research questions through One Way ANOVA and MANOVA.

4.1. General sample characteristics

A total of 328 valid answers were collected, including 22 respondents that were not considered part of the study target (under eighteen years old and/or non wine consumers). Therefore, the final sample was composed of 306 people. The sample characteristics are presented on Table 5. The sample was well distributed regarding gender, with 53.9% male and 46.1% female. When it comes to age, there were two age groups that stood out: the age group of 55-64 years old with 26.5% and the group of 45-54 with 24.5%. Regarding education level, the majority of respondents had a higher level of education: 45.1% with Bachelor degree and 40.5% with Post-Graduate/Masters degree. Concerning professional situation, the majority of respondents worked for others (59.8%) and 27.8% were self employed. Both the unemployed and students represented 6.2% of respondents.

In summary, the most common respondent of the survey is a man, aged between 55-64 years old, with a Bachelor degree that works for others.

Demographic Variables	Absolut Frequency	Relative Frequency
<i>Gender</i>		
Female	141	46.1%
Male	165	53.9%
<i>Age</i>		
18-24	36	11.8%
25-34	58	19.0%
35-44	45	14.7%
45-54	75	24.5%
55-64	81	26.5%
> 65	11	3.6%
<i>Education</i>		
High School	36	11.8%
Bachelor's Degree	138	45.1%
Post - Graduate / Master's Degree	124	40.5%
PhD	8	2.6%
<i>Professional Situation</i>		
Unemployed	19	6.2%
Work for other	183	59.8%
Self Employed	85	27.8%
Student	19	6.2%

Table 5. Sample characteristics (N=306)

Additionally, it was relevant to analyse consumers' behaviour in terms of their wine consumption and purchasing. It is notable that the frequency of wine consumption was quite high: 36.6% of respondents consume wine several times a week, and 25.2% consume it once per week. Only a small group of people (7.5%) consumes wine once per month or less (Figure 5).

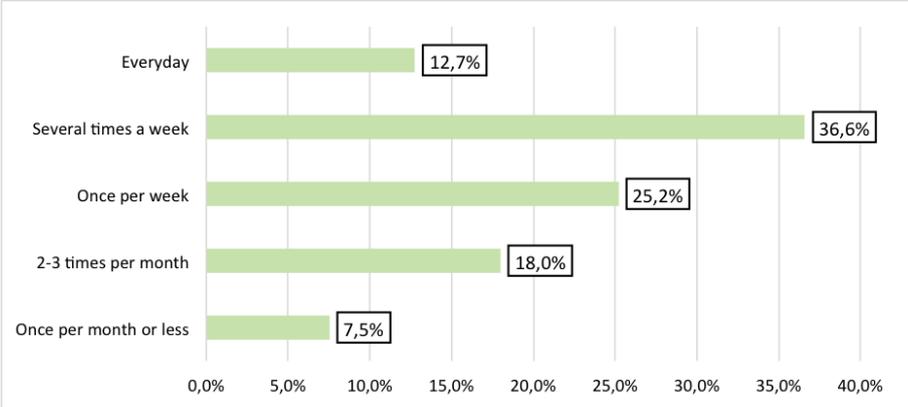


Figure 5. Respondents' wine consumption frequency

Regarding wine purchasing (Figure 6), almost half of the respondents answered that they are responsible for the purchase, although not always (48%).

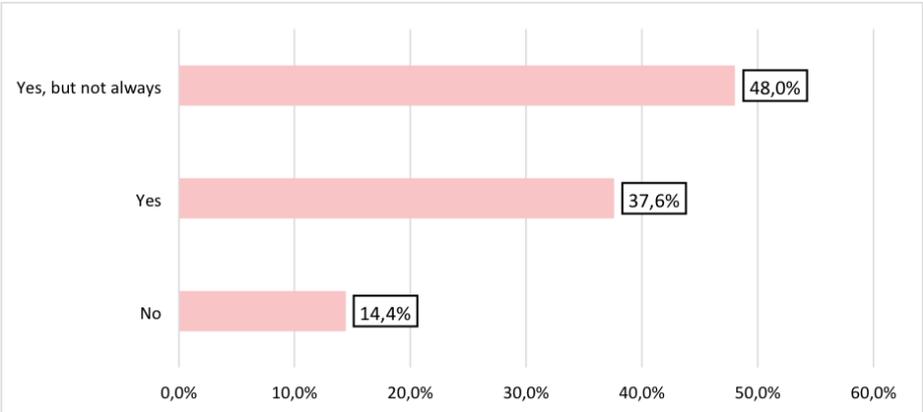


Figure 6. Responsible for wine purchase

In contrast to wine consumption frequency, wine purchase frequency is low. For the ones who usually buy wine (262 respondents), 43.5% buy once a month or less, and 38.2% buy 2 to 3 times per month (Figure 7).

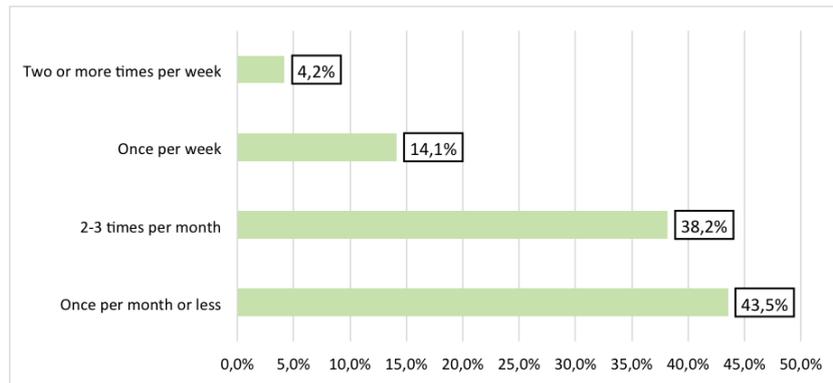


Figure 7. Respondents' wine purchase frequency

4.2. Consumers' perceptions of wine labels and packaging

This section intends to analyse the results of the survey regarding consumers' perception of wine labels and packaging, and also compares them with studies that were used as a basis for the design of the conceptual model and the survey. This point is split in three sub-sections: importance of informational elements on wine labels; attitudes and perceptions of visual elements on wine packaging; and acceptance of visual elements on wine packaging.

4.2.1. Importance of informational elements on wine label

Over half of respondents (52%) considered label information "Important", whereas 37.6% considered it "Very important". Only a small percentage of them answered that it was "Not very important" (2.9%) or "Not important at all" (0.7%) (Table 6). These results are in line with the Tootelian & Ross (2000) study in United States, where most of the respondents (53.5%) also considered the information on the label "Important", and 27.4% considered it "Very important".

Importance of information on wine label	N	%
Important	159	52.0
Uncertain	21	6.9
Very important	115	37.6
Not at all important	2	0.7
Not very important	9	2.9
Total	306	100.0

Table 6. Frequency of importance of information on wine label

Concerning informational elements on wine labels, respondents considered "Vintage" (mean of 5.45), "Grape variety" (mean of 5.32) and "Alcohol percentage" (mean of 5.18) the most important elements of the wine label. In contrast, other elements such as "Type of person wine would appeal to" (mean of 2.92) and "Winemaker name" (mean of 3.92) were considered less important. The items: "Winemaker name", "Food and wine paring" and "Type of person wine would appeal" had the higher standard deviations, indicating diversity in respondents' answers (Table 7).

Informational elements on wine label	Mean	Standard Deviation
Wine company name	5.05	1.68
Wine brand name	5.17	1.68
Awards and medals	4.52	1.63
Winemaker name	3.92	1.75
How wine was made	4.16	1.70
History of wine region	4.23	1.69
Food and wine pairing	4.07	1.79
Alcohol level	5.18	1.73
Grape variety	5.32	1.68
Vintage	5.45	1.64
Type of person wine would appeal	2.92	1.84

Note: Scale of 1 "Little importance" to 7 "Very great importance"

Table 7. Mean and standard deviation for informational elements on wine label

In the study of Thomas & Pickering (2003), the items "Wine company" (mean of 5.12), "Wine brand name" (mean of 4.95) and "Awards and medals" (mean of 4.86) were considered the most important items. And the lowest scored item was the "Type of person the wine would appeal" (mean of 2.49). In the same study, consumers were also asked to mention other elements that they thought were important on wine labels, and the two elements that were mentioned the most were "Grape variety" and "Vintage year" – results that are in line with the present study.

4.2.2. Attitudes and perception of visual elements on wine packaging

Label design

The measurement of the attitudes towards the different wine labels' design is summarised in Table 8. The results of Repeated Measure ANOVA are presented in Appendix 2. Wine with the traditional label design was significantly better rated, with qualities such as "Good", "Complex" and "High quality," than the wine with contemporary ($p = .001$) and novelty ($p = .001$) labels design. Furthermore, the differences between the evaluation of novelty and contemporary labels were not statistically significant for the adjective "Good" ($p = .424$) and "High quality" ($p = .266$). The difference between those labels was statistically significant ($p = .004$) only for the adjective "Complex".

Also, the wine with the novelty label design was better rated regarding the adjective "Cheap" (mean of 2.80) than the wine with traditional (mean of 2.18) and contemporary (mean of 2.77) labels design. The differences between the evaluation of novelty and contemporary labels were not statistically significant for the adjective "Cheap" ($p = .658$).

Lastly, wine with the contemporary labels design was better rated regarding the adjective "Common" (mean of 2.78) than wine with traditional (mean of 2.35) and novelty (mean of 2.66) labels design.

The differences between the evaluation of contemporary and novelty labels were not statistically significant for the adjective “Common” ($p = .135$).

Overall, it can be concluded that the traditional label was more associated with the adjectives “Good”, “High quality” and “Complex”, while contemporary and novelty labels were more associated with the adjectives “Common” and “Cheap”, respectively. These results are in line with the findings from the study of Sherman & Tuten (2011).

Labels design	Mean	Standard Deviation
Traditional		
Good	3.16	1.10
Complex	2.71	1.13
Cheap	2.18	1.07
High Quality	3.2	1.03
Common	2.35	1.16
Contemporary		
Good	2.30	0.99
Complex	2.18	1.00
Cheap	2.77	1.22
High Quality	2.36	0.91
Common	2.78	1.24
Novelty		
Good	2.25	1.05
Complex	1.99	1.02
Cheap	2.8	1.36
High Quality	2.29	1.01
Common	2.66	1.33

Note: Scale of 1 – “Doesn’t apply to the referred wine” and 5 – “Does apply to the referred wine”

Table 8. Mean and standard deviation for attitudes towards wine labels designs

Shape, size and type of closure

Table 9 presents the measurement of attitudes towards shape, size and type of closure. The results of Repeated Measure ANOVA can be seen in Appendix 3.

Cork was significantly better rated on the adjectives “Good”, “Complex” and “High quality” than screw caps ($p = .001$), bag-in-box, ($p = .001$) and StackTek ($p = .001$). Additionally, the differences among the evaluation of screw caps, bag-in-box and StackTek for the adjectives “Good”, “Complex” and “High quality” were also statistically significant ($p < .05$). Bag-in-box was significantly better rated on the adjectives “Cheap” and “Common” than cork ($p = .001$), screw caps ($p = .001$) and StackTek ($p = .019$). Also, the difference between the evaluation of screw caps and StackTek was not statistically significant for the adjectives “Cheap” ($p = .240$) and “Common” ($p = .378$).

In summary, wine with cork was more associated with the adjectives “Good”, “Complex” and “High quality”, while wine with other packaging such screw caps, bag-in-box and StackTek (more innovative type of packaging) were more connected to adjectives such as “Cheap” and “Common”.

The findings from this research supports previous research that concluded that cork is perceived as an indicator of high quality, as opposed to screw caps, large bottles and bag-in-box, which are perceived to have lower quality (Atkin & Newton, 2012; Barber & Almanza, 2006; Barber, Almanza, Donovan, 2006; Higgins et al., 2014).

Shape,size and type of closure	Mean	Standard Deviation
Cork		
Good	3.96	1.14
Complex	3.34	1.26
Cheap	2.16	1.11
High Quality	3.72	1.11
Common	2.53	1.15
Screw Caps		
Good	1.85	0.97
Complex	1.66	0.87
Cheap	3.26	1.54
High Quality	1.94	1.00
Common	3.05	1.47
Bag-in-box		
Good	2.01	0.91
Complex	1.79	0.87
Cheap	3.54	1.44
High Quality	2.11	0.93
Common	3.23	1.42
StackTek		
Good	1.58	0.84
Complex	1.54	0.86
Cheap	3.37	1.58
High Quality	1.63	0.89
Common	2.98	1.57

Note: Scale of 1 – “Doesn’t apply to the referred wine” and 5 – “Does apply to the referred wine”

Table 9. Mean and standard deviation for attitudes towards shape, size and type of closure

4.2.3. Acceptance of visual elements on wine packaging

The results of respondents’ acceptance / intention to buy the three wine labels design are presented in Table 10 and Repeated Measure ANOVA is presented in Appendix 4. Significant differences among the three label designs ($p < .05$) were found showing that respondents have higher acceptance of the traditional label design and lower of the novelty label design.

Furthermore, to compare the values obtained in the study with the theoretical mean of the distribution, a One-Sample T-test was conducted (Appendix 5). This T-test showed that the

acceptance of wine with traditional label design is significantly higher than the midpoint of the scale (4 – neither agree nor disagree), and the acceptance of wine with contemporary and novelty label designs were significantly below the midpoint of the scale.

Acceptance of labels design	Mean	Standard Deviation
Traditional	4.88	1.83
Contemporary	3.28	1.68
Novelty	2.85	1.78

Note: Scale of 1 "Strongly disagree to 7 "Strongly agree"

Table 10. Mean and standard deviation for the acceptance of labels design

Respondents demonstrated a higher acceptance of wines with cork and lower of wines in StackTek (Table 11). There were statistically significant differences among the four types of wine packaging, except for screw caps and bag-in-box ($p = .958$) (Appendix 6).

The T-test highlights that the acceptance of wines with cork is significantly higher than the midpoint of the scale (4 – neither agree nor disagree), and the acceptance of wine with screw caps, bag-in-box and StackTek were significantly below the midpoint of the scale (Appendix 7).

Acceptance of shape, size and type of clousure	Mean	Standard Deviation
Cork	6.01	1.50
Screw Caps	2.96	1.91
Bag-in-box	2.95	1.71
StackTek	1.60	1.12

Note: Scale of 1 "Strongly disagree to 7 "Strongly agree"

Table 11. Mean and standard deviation for the acceptance of shape, size and type of closure

4.3. Consumers’ wine knowledge and perceptions of wine labels and packaging

This section is divided in four sub-sections. The first sub-section aims to analyse the measures of objective and subjective wine knowledge in order to create the wine knowledge typology following Ellis & Caruana’s study (2018). The other sub-sections provide answers to the research questions of the study.

4.3.1. Wine knowledge typology: subjective knowledge and objective knowledge

As it can be observed in Table 12, the mean of subjective wine knowledge items was low, which indicates that respondents were not very confident on their wine knowledge. Also, the standard deviation was not high for the majority of the items, which shows that respondents feel similarly about their wine knowledge, except in the item “I do not feel very knowledgeable about wine”, which had a higher standard deviation (1.91) indicating that were diverse answers among the respondents.

Subjective wine knowledge	Mean	Standard Deviation
I know pretty much about wine	3.36	1.56
I know how to judge the quality of a bottle of wine	3.56	1.48
I think I know enough about wine to feel pretty confident when I make a purchase	3.91	1.54
I do not feel very knowledgeable about wine (R)	4.54	1.91
Among my circle of friends, I'm one of the "experts" on wines	3.01	1.66
I have heard of most of the new wines that are around	3.03	1.60
I can tell whether a bottle of wine is worth the price	3.23	1.54
Compared to most other people, I know less about wines (R)	4.90	1.60

Note: Scale from 1 "Strongly disagree" to 7 "Strongly agree"; (R)= Reverse scored

Table 12. Mean and standard deviation for subjective wine knowledge

Statistics on objective knowledge questions can be seen in Table 13. The question that had more correct answers was the first one ("Which of the following grape varieties is red"), where 84% respondents answered correctly. In contrast, the question that had more wrong answers was the last one ("How does the colour tone evolve during the red wine aging process"), which only 19% of respondents answered correctly.

Question	Wrong		Correct	
	N	%	N	%
Which of the following grape varieties is red	48	16	258	84
Which of the following grape varieties is Portuguese	70	23	236	77
Where is located the wine region of green wines	70	23	236	77
Which sugars that are present in grapes transform themselves into alcohol during the alcohol fermentation process	124	41	182	59
How does the colour tone evolve during the red wine aging process	247	81	59	19

Table 13. Frequency for objective wine knowledge

In order to test the reliability of the subjective knowledge construct the Cronbach's alpha was analysed (Table 14). The value was higher than 0.8, which is considered good according the rule of thumb of George and Mallery (2003). As objective knowledge consists of a single item score, the Cronbach's alpha score was not considered for this variable.

Cronbach's Alpha	Nº of Items
0.876	8

Table 14. Subjective knowledge Cronbach's alpha

Lastly, following the study of Ellis & Caruana (2018), the Pearson's correlation was assessed to explore the correlation between objective and subjective wine knowledge. The results (Appendix 8) show a statically significant correlation ($r = 0.374$, $p = .001$). However, even if the variables are significantly related, the correlation is weak, meaning they might not move in the same direction, which is aligned with Ellis & Caruana's (2018) research. According with the authors, consumer

knowledge can be a helpful variable for wine market segmentation due to the fact that objective and subjective knowledge demonstrated to be both independent variables.

Therefore, the median split of the objective (median=3) and subjective knowledge scores (median=29) were crossed, which allowed the distribution of the consumers into four groups (Table 15). Respondents who were below or at “3” were considered to have low objective knowledge, as opposed to those above “3”, that were considered to have high objective knowledge. As for subjective knowledge, respondents who were below “29” were considered to have low subjective knowledge, whereas those at or above “29” were considered to have high subjective knowledge.

Groups	N	%
Neophyte	103	33.7
Snob	63	20.6
Modest	52	17.0
Expert	88	28.8

Table 15. Consumer wine knowledge typology

The biggest group was the Neophyte (33.7%), which had low scores both in the subjective and the objective test, and the smallest group was formed by the Modest (17.0%), who had a higher score in objective knowledge even though they had low scores in subjective knowledge (Table 15). There were some similarities of those results with those of Ellis & Caruana’s research (2018): the largest and smallest group were the same, although, in their study there were more Snobs (28.3%) than Experts (20.3%).

Additionally, a Chi-Square Test of Independence was run to do a comparative analysis of the demographic characteristics of the wine knowledge groups (Appendix 9). There was a significantly higher proportion of women in the Neophyte group, and of men in the Expert group ($\chi^2(3) = 21.813$, $p = .001$). Also, there was a significantly higher proportion of Neophyte in the age group of 18-24 and 25-34 years old and Experts in the age group of older than 65 ($\chi^2(15) = 36.500$, $p=.001$). These is aligned with Ellis & Caruana’s research: “novices are likely to be younger consumers who are probably not serious wine drinkers but who may, with appropriate education, mature into experts in the future” (Ellis & Caruana, 2018, p.285).

4.3.2. Consumers’ wine knowledge and perceived importance of wine label informational elements

This section intends to answer the first research question: Do Experts, Snobs, Modest and Neophytes value wine label information differently? If so, which are the main elements on labels valued by each group?

The answer for the first part of the question is affirmative. Results from One-way ANOVA test show that the importance of wine label information is significantly higher for the Expert group when compared with Neophyte and Modest groups, ($F(3, 302) = 4.540, p = .004$) (Appendix 10).

Before the comparison of the responses among the four groups, below are the three top-ranked informational items on wine labels of each group (Table 16):

- Experts: “Grape variety”(mean of 6.27); “Vintage”(mean of 6.19); “Wine brand name”(mean of 5.60)
- Snobs: “Wine brand name” (mean of 5.65); “Wine company name” (mean of 5.60); “Vintage” (mean of 5.46)
- Modest: “Vintage”(mean of 5.12); “Grape variety”(mean of 5.04); “Alcohol level”(mean of 4.83)
- Neophytes: “Vintage” (mean of 4.98); “Wine brand name” (mean of 4.83); “Alcohol level” (mean of 4.79)

A MANOVA was conducted to compare the responses of the four groups regarding the informational elements on wine label. The results of the multivariate test (Pillai's Trace = .372, $F(33, 882) = 3.788, p = .001$) indicate that there are statistically significant differences in the importance that the four groups gave to the informational elements on wine label. The complete results can be seen in table 16 and Appendix 11 point a).

In general, Experts were the group that gave the highest scores to those elements. For instance, the most important elements on wine label for them were: “Grape variety”(mean of 6.27) and “Vintage”(mean of 6.19). Indeed, they were the group that attached greater importance to these items when compared with the other groups (Neophyte ($p < .05$); or Modest ($p < .05$) or Snob ($p < .05$)).

Additionally, the Expert group also attached greater importance than the Neophytes ($p < .05$) or Modest ($p < .05$) to the following items: “How wine was made”, “History of wine region”, and “Alcohol level”. There were no statistically significant differences with the Snob group. This research findings support Viot´ study (2012), which mentioned that experts give particular importance to attributes such as vintage and region of production in wine decision-making.

Another observation was that the Expert and Snob groups attached greater importance to elements that are most related with branding such as: “Wine company name”, “Wine brand name” and

“Winemaker name”, than Neophytes ($p < .05$) or Modest ($p < .05$). In fact, these results match Robertson, Ferreira, and Botha’s findings (2018) where Snobs gave more importance to wine brand; and also the Ellis & Caruana’s (2018) research that state that Snobs are loyal to the brand, mentions that they generally prefer wine with well-known brand names and wine labels displaying awards that increase their confidence on wine quality. Indeed, in the present research, Snobs and also Neophytes (both groups with low objective knowledge) gave more importance to “Awards and Medals” than Modest ($p < .05$). It was also noted that, the Neophyte group gave more importance to “Food and wine paring” than the Modest group ($p = .041$).

Finally, regarding “Type of person wine would appeal”, there were no statistically significant differences among the four groups, even though the Snob group had the highest mean (mean of 3.19).

Informational elements on wine label	Neophyte		Snob		Modest		Expert		F
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
Wine company name	4.55	1.80	5.60	1.24	4.60	1.96	5.49	1.42	9.134***
Wine brand name	4.83	1.83	5.65	1.36	4.54	1.99	5.60	1.27	7.981***
Awards and medals	4.72	1.54	4.73	1.44	3.92	1.77	4.50	1.74	3.233*
Winemaker name	3.30	1.58	4.22	1.74	3.19	1.74	4.88	1.48	19.590***
How wine was made	3.73	1.66	4.32	1.68	3.60	1.90	4.90	1.37	10.658***
History of wine region	3.99	1.62	4.46	1.59	3.67	1.93	4.67	1.57	5.153**
Food and wine paring	4.24	1.81	4.21	1.65	3.44	1.81	4.15	1.80	2.668*
Alcohol level	4.79	1.91	5.35	1.81	4.83	1.72	5.73	1.26	5.906***
Grape variety	4.58	1.81	5.44	1.57	5.04	1.73	6.27	1.01	19.496***
Vintage	4.98	1.78	5.46	1.52	5.12	1.85	6.19	1.09	10.399***
Type of person wine would appeal	3.06	1.84	3.19	1.93	2.48	1.85	2.84	1.74	1.699

Note: * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 16. Consumer wine knowledge and perceived importance of informational elements on label

4.3.3. Consumers’ wine knowledge and attitude towards visual elements on wine packaging

This section answers to the second research question: Do Experts, Snobs, Modest and Neophytes have the same perception and attitudes towards visual elements on wine packaging (design, shape and type of closure)?

By using the MANOVA, it was possible to verify that the answer for this question is affirmative since the results from the multivariate test (Pillai’s Trace = .149, $F(45, 870) = 1.010$, $p = 0.455$) indicate that there were no statistically significant differences in the attitudes towards labels design among the four groups (Appendix 11 b). Furthermore, the same test was conducted to evaluate attitudes towards shape and type of closure of the four groups; there were also no statistically significant differences (Pillai’s Trace = .254, $F(60, 855) = 1.315$, $p = 0.059$) (Appendix 11 c).

Hence, it can be concluded that the variable “knowledge” does not influence consumer attitudes towards visual elements on wine packaging.

4.3.4. Consumers' wine knowledge and acceptance of visual elements on wine packaging

Finally, regarding the last research question: Do Experts, Snobs, Modest and Neophytes have different levels of acceptance of visual elements on wine packaging? (design, shape and type of closure)?

To answer this question MANOVA was used once again. The results from the multivariate test (Pillai's Trace = .038, $F(9, 906) = 1.298$, $p = .234$) show that there were not statistically significant differences in the acceptance of wine labels design among the four groups (Appendix 11 d). Therefore, the Ellis & Caruana's suggestion (2018) that novices mostly rely on fun and catchy labels (novelty labels) was not observed in this research. The study's result shows that all groups scored traditional labels higher.

Likewise, for the acceptance of shape and type of closure, there were no statistically significant differences for the same groups (Pillai's Trace = .025, $F(12, 903) = 0.622$, $p = .825$) (Appendix 11 e). These results are not aligned with research that suggest that consumers with different levels of knowledge will choose different types of wine closures (Barber, Taylor, & Dodd, 2009).

5. CONCLUSION

This chapter presents the main conclusions of the study. In fact, by combining the study results and literature, this investigation provides useful insights for marketers and designers who work in the wine sector. The limitations and direction for future research are also discussed.

5.1. Main conclusions and implications of the research

What consumers know about a product affects many aspects of their perceptions and purchase behavior, and wine is not an exception. As consumer knowledge plays an important role on consumers' choices and behaviour, the present study aimed to understand consumers with different types of wine knowledge, and their perceptions regarding wine labels and packaging. In order to develop the different types of wine knowledge to be analysed, the typology from Ellis & Caruana (2018), which resulted from the relationship between objective and subjective wine knowledge, was used. Based on a survey of 306 responses by Portuguese wine consumers, four wine knowledge types were identified. The two biggest types were the Neophytes (33.7%), who have both low subjective and objective knowledge; and the Experts, who have high subjective and high objective knowledge (28,8%). These two groups are positioned in the extreme opposite sides regarding the wine knowledge typology. The other two groups were relatively smaller, the Snob group, with low objective knowledge and high subjective knowledge represented 20.6% of respondents; and the Modest group, which has high objective knowledge and low subjective knowledge, 17%.

After identifying the types of wine consumers, their perceptions on wine labels and packaging were analysed. Firstly, it was possible to conclude that the four groups value the informational elements on wine label significantly differently. Experts, in particular, is the segment that marketers should give more attention to when creating a wine label, given that, comparing with the other groups, they gave greater importance to most of the informational elements. This conclusion goes against Ellis & Caruana's (2018, p.81) assumption that: "wines targeting experts may not need to provide detailed information on the label because these consumers will actually know what they are acquiring and do not need to be told much more". Additionally, it is important to point out that the Expert group, composed mainly by men with 65 years old or older found the following elements extremely important: "Grape variety", "Vintage" and "Brand name".

In some aspects, the Snob group was similar to the Expert group - both value the overall information on wine label more than Modest and Novices. When targeting Snobs, marketers should consider elements related with branding such as "Wine company name", "Wine brand name" "Winemaker name". Furthermore, displaying "Awards and medals" on the label will be a good strategy when targeting Snobs and Neophytes because it may reinforce their confidence on the wine quality (Ellis &

Caruana, 2018). The Neophytes, that represented the biggest group of this study, with a significantly higher proportion of women in the age group of 18-24 and 25-34 years old, mentioned that “Vintage”, “Grape variety” and “Alcohol level” are the most important elements on wine label. Importantly, results showed that “Vintage” is an element that should never be overlooked in any label given that it was identified as one of the most important attributes across all groups.

Although the wine knowledge has proved to be a relevant variable when consumers evaluate informational elements on the label – the same cannot be concluded about the perceptions and acceptance of visual elements of wine packaging (label design, shape, size and bottle of closure). Therefore, it can be concluded that marketers do not benefit from applying the wine knowledge typology on the two aspects aforementioned.

Regardless consumers’ wine knowledge, this study reinforces the idea that the evolution of wine labels has not changed consumers’ perception on how label design should look like (Sherman & Tuten (2011); Lockshin & Corsi, 2012). Therefore, marketers and designers should keep wine labels with a traditional style instead of a contemporary and innovative style (that had cheap and common connotations, and, consequently, were less preferred). Likewise, in terms of shape, size and type of closure the findings from this research support previous research that mentioned that cork is perceived as an indicator of “High quality” and also more associated with “Good” and “Complex”, as opposed to screw caps, large bottles and bag-in-box, which were perceived to have lower quality (Atkin & Newton, 2012; Barber & Almanza, 2006; Barber, Almanza, & Donovan, 2006; Higgins et al., 2014). Additionally, in contrast with Elliot & Barth's study (2012), the younger consumers in the present study also preferred traditional labels.

Further, this study emphasizes that wine is consumed quite frequently in Portugal – 36.6% of respondents consume wine several times a week, and 25.2% consume it once per week. Overall, despite the increase of consumption and consequently the competition in the wine sector, this investigation shows that when it comes to wine packaging, wine consumers, and especially, Portuguese consumers, are very traditional and conservative. Indeed, adoption of more innovative wine packaging must be made with care.

5.2. Limitations and future research

As with all investigation work, this study has its own limitations. One limitation is related to the data collection, given that a convenience sample was used, which is a non-probabilistic samples technic and might not be representative. In addition, the majority of the participants were between 45-64 years old, which might also have biased the results, especially when it comes to the acceptance of innovative wine packaging.

Furthermore, the list of adjectives used to measure consumer attitudes on wine label design and packaging was shortened to ensure the survey was not too lengthy. This might have impacted the analysis of the results, making them less robust.

Moreover, the fact that this study was conducted with Portuguese wine consumers makes it less diversified. In other words, wine has always been an integral part of the Portuguese culture, and the wine consumption in Portugal is especially high. Thus, these results may be more applicable to those traditional wine-drinking countries where the wine consumer profile is similar to the Portuguese.

In the future, it would be interesting to use different methodologies that include qualitative data, such as in-depth interviews or focus groups, showing consumers real samples of different types of wine packaging. This would allow researchers to get deeper consumer insights on the subject. Also, it would be relevant to understand if consumer wine knowledge influences the acceptance of different types of wine packaging according to the different wine occasions.

Lastly, further research may apply the conceptual model designed in this study with a different information-intensive product.

6. BIBLIOGRAPHY

- Abdullah, M., Kalam, A., & Akterujjaman, S. M. (2013). Buying Decision. *International Journal of Humanities and Management Sciences (IJHMS)*, 1(5), 285-28.
- Agariya, A. K., Johari, A., Sharma, H. K., Chandraul, U. N. S., & Singh, D. (2012). The Role of Packaging in Brand Communication. *International Journal of Scientific and Engineering Research*, 3(2), 1-9.
- Alba, J. W., & Hutchinson, J. W. (1987). Dimensions of Consumer Expertise. *Journal of Consumer Research*, 13(4), 411-454. <https://doi.org/10.1086/209080>
- Alba, J. W., & Hutchinson, J. W. (2000). Knowledge Calibration: What Consumers Know and What They Think They Know. *Journal of Consumer Research*, 27(2), 123-156. <https://doi.org/10.1086/314317>
- Ampuero, O., & Vila, N. (2006). Consumer perceptions of product packaging. *Journal of Consumer Marketing*, 23(2), 100-112. <https://doi.org/10.1108/07363760610655032>
- Atkin, T., Garcia, R., & Lockshin, L. (2006). A Multinational Study of the Diffusion of a Discontinuous Innovation. *Australasian Marketing Journal*, 14(2), 17-33. [https://doi.org/10.1016/S1441-3582\(06\)70058-1](https://doi.org/10.1016/S1441-3582(06)70058-1)
- Atkin, T. S., & Newton, S. K. (2012). Consumer awareness and quality perceptions: A case for Sonoma County wines. *Journal of Wine Research*, 23(2), 155-171. <https://doi.org/10.1080/09571264.2012.676540>
- Aurier, P., & Ngobo, P.-V. (1999). Assessment of Consumer Knowledge and its Consequences: A Multi-Component Approach. *Advances in Consumer Research*, 26, 569-575.
- Barber, N. A., Taylor, D. C., & Dodd, T. H. (2009). Twisting tradition: Consumers' behavior toward alternative closures. *Journal of Food Products Marketing*, 15(1), 80-103. <https://doi.org/10.1080/10454440802470615>
- Barber, N., & Almanza, B. A. (2006). Influence of Wine Packaging on Consumers' Decision to Purchase. *Journal of Foodservice Business Research*, 9(4), 83-98. https://doi.org/10.1300/J369v09n04_06
- Barber, N., Almanza, B. A., & Donovan, J. R. (2006). Motivational factors of gender, income and age on selecting a bottle of wine. *International Journal of Wine Marketing*, 18(3), 218-232. <https://doi.org/10.1108/09547540610704774>

- Barber, N., Dodd, T., & Ghiselli, R. (2008). Capturing the younger wine consumer. *Journal of Wine Research*, 19(2), 123-141. <https://doi.org/10.1080/09571260802622225>
- Barber, N., Ismail, J., & Taylor, D. C. (2007). Label fluency and consumer self-confidence. *Journal of Wine Research*, 18(2), 73-85. <https://doi.org/10.1080/09571260701660847>
- Barber, N., Taylor, D. C., & Dodd, T. (2009). The importance of wine bottle closures in retail purchase decisions of consumers. *Journal of Hospitality and Leisure Marketing*, 18(6), 597-614. <https://doi.org/10.1080/19368620903025014>
- Bearden, W. O., Hardesty, D. M., & Rose, R. L. (2001). Consumer Self-Confidence: Refinements in Conceptualization and Measurement. *Journal of Consumer Research*, 28(1), 121-134. <https://doi.org/10.1086/321951>
- Bettman, J. R., & Park, C. W. (1980). Effects of Prior Knowledge and Experience and Phase of the Choice Process on Consumer Decision Processes: A Protocol Analysis. *Journal of Consumer Research*, 7(3), 234-248. <https://doi.org/10.1086/208812>
- Boncinelli, F., Dominici, A., Gerini, F., & Marone, E. (2019). Consumers wine preferences according to purchase occasion: Personal consumption and gift-giving. *Food Quality and Preference*, 71, 270-278. <https://doi.org/10.1016/j.foodqual.2018.07.013>
- Boudreaux, C. A., & Palmer, S. E. (2007). A charming little Cabernet: Effects of wine label design on purchase intent and brand personality. *International Journal of Wine Business Research*, 19(3), 170-186. <https://doi.org/10.1108/17511060710817212>
- Brucks, M. (1985). The Effects of Product Class Knowledge on Information Search Behavior. *Journal of Consumer Research*, 12(1), 1-16. <https://doi.org/10.1086/209031>
- Bruwer, J., & Buller, C. (2012). Country-of-origin (COO) brand preferences and associated knowledge levels of Japanese wine consumers. *Journal of Product & Brand Management*, 21(5), 307-316. <https://doi.org/10.1108/10610421211253605>
- Bruwer, J., Chrysochou, P., & Lesschaeve, I. (2017). Consumer involvement and knowledge influence on wine choice cue utilisation. *British Food Journal*, 119(4), 839-844. <https://doi.org/10.1108/BFJ-08-2016-0360>
- Campbell, M. C., & Goodstein, R. C. (2001). The Moderating Effect of Perceived Risk on Consumers' Evaluations of Product Incongruity: Preference for the Norm: Table 1. *Journal of Consumer Research*, 28(3), 438-49. <https://doi.org/10.1086/323731>

- Celhay, F., & Passebois, J. (2011). Wine labelling: Is it time to break with tradition? A study of the moderating role of perceived risk. *International Journal of Wine Business Research*, 23(4), 318-337. <https://doi.org/10.1108/17511061111186497>
- Chaney, D. I. M. (2000). External Search Effort for Wine. *International Journal of Wine Marketing*, 12(2), 5-12. <https://doi.org/10.1108/eb008711>
- Charters, S., Lockshin, L., & Unwin, T. (1999). Consumer responses to wine bottle back labels. *Journal of Wine Research*, 10(3), 183-195. <https://doi.org/10.1080/09571269908718177>
- Cooper, D. R., & Schindler, P. S. (2016). *Métodos de Pesquisa em Administração* (12th ed.). New York: Bookman.
- Dodd, T. H., Laverie, D. A., Wilcox, J. F., & Duhan, D. F. (2005). Differential Effects of Experience, Subjective Knowledge, and Objective Knowledge on Sources of Information used in Consumer Wine Purchasing. *Journal of Hospitality and Tourism Research*, 29(1), 3-19. <https://doi.org/10.1177/1096348004267518>
- Ehsan, M., & Lodhi, S. (2015). Brand Packaging and Consumer Buying Behavior : A Case of FMCG Products. *International Journal of Scientific and Research Publications*, 5(11), 590-602.
- Elliot, S., & Barth, J. E. (2012). Wine label design and personality preferences of millennials. *Journal of Product and Brand Management*, 21(3), 183-191. <https://doi.org/10.1108/10610421211228801>
- Ellis, D., & Caruana, A. (2018). Consumer Wine Knowledge: Components and Segments. *Internacional Journal of Wine Business Research*, 30(3), 277-291. <https://doi.org/10.1108/IJWBR-03-2017-0016>
- Ellis, D., & Mattison Thompson, F. (2018). The effect of wine knowledge type on variety seeking behavior in wine purchasing. *Journal of Wine Research*, 29(2), 71-86. <https://doi.org/10.1080/09571264.2018.1471393>
- Field, A. (2009). *Discovering Statistics using SPSS*, Third Edition.
- Flynn, L. R., & Goldsmith, R. E. (1999). A short, reliable measure of subjective knowledge. *Journal of Business Research*, 46(1), 57-66. [https://doi.org/10.1016/S0148-2963\(98\)00057-5](https://doi.org/10.1016/S0148-2963(98)00057-5)
- Forbes, S.L., Cohen, D., & Dean, D.L (2008). An assessment of wine knowledge amongst global consumers. Paper presented at the 4th International Conference of Academy of Wine Business Research, Siena.

George, D., & Mallery, P. (2003). *SPSS for Windows step by step: A simple guide and reference*. 11.0 update (4th ed.). Boston: Allyn & Bacon.

Gluckman, R. L. (1986). A Consumer Approach to Branded Wines. *European Journal of Marketing*, 20(6), 21-35. <https://doi.org/10.1108/EUM0000000004649>

Guo, L., & Meng, X. (2008). Consumer knowledge and its consequences: An international comparison. *International Journal of Consumer Studies*, 32(3), 260- 168. <https://doi.org/10.1111/j.1470-6431.2008.00677.x>

Henley, C. D., Fowler, D. C., Yuan, J. J., Stout, B. L., & Goh, B. K. (2011). Label design: Impact on millennials' perceptions of wine. *International Journal of Wine Business Research*, 23(1), 7-20. <https://doi.org/10.1108/17511061111121371>

Higgins, L. M., McGarry Wolf, M., & Wolf, M. J. (2014). Technological change in the wine market? the role of QR codes and wine apps in consumer wine purchases. *Wine Economics and Policy*, 3(1), 19-27. <https://doi.org/10.1016/j.wep.2014.01.002>

Jennings, D., & Wood, C. (2013). Wine: Achieving competitive advantage through design. *International Journal of Wine Marketing*, 6(1), 49-61. <https://doi.org/10.1108/eb008626>

Johnson, T. E., & Bastian, S. E. P. (2015). A fine wine instrument - An alternative for segmenting the australian wine market. *International Journal of Wine Business Research*, 27(3), 182-202. <https://doi.org/10.1108/IJWBR-04-2014-0020>

Kotler, P., and Keller, K. L. (2012). *Marketing Management* 14/e. Prentice Hall.

Lee, B. K., & Lee, W. N. (2011). The impact of product knowledge on consumer product memory and evaluation in the competitive ad context: The item-specific-relational perspective. *Psychology and Marketing*, 28(4), 360-387. <https://doi.org/10.1002/mar.20360>

Lockshin, L. (2003). Consumer Purchasing Behavior for Wine: What We Know and Where We Are Going. *Marches et Marketing du Vin* 57,1-30.

Lockshin, L., & Corsi, A. M. (2012). Consumer behaviour for wine 2.0: A review since 2003 and future directions. *Wine Economics and Policy*, 1(1), 2-23. <https://doi.org/10.1016/j.wep.2012.11.003>

Lockshin, L., Jarvis, W., d'Hauteville, F., & Perrouy, J. P. (2006). Using simulations from discrete choice experiments to measure consumer sensitivity to brand, region, price, and awards in wine

choice. *Food Quality and Preference*, 17(3-4), 166-178.

<https://doi.org/10.1016/j.foodqual.2005.03.009>

Marin, A. B., Jorgensen, E. M., Kennedy, J. A., & Ferrier, J. (2007). Effects of bottle closure type on consumer perceptions of wine quality. *American Journal of Enology and Viticulture*, 58(2), 192-201.

Marôco, J. (2007). Análise estatística com utilização do SPSS, *Edições Sílabo*, 3ª edição, Lisboa.

McClung, S. R., Freeman, K. A., & Malone, D. (2015). Consumer Self-Confidence in Wine Consumers: The Role of Knowledge-Based Factors. *Journal of Promotion Management*, 21(5), 601-613.

<https://doi.org/10.1080/10496491.2015.1055042>

Mueller, S., Lockshin, L., & Louviere, J. J. (2010). What you see may not be what you get: Asking consumers what matters may not reflect what they choose. *Marketing Letters*, 21(4), 335-350.

<https://doi.org/10.1007/s11002-009-9098-x>

Mueller, S., Lockshin, L., Saltman, Y., & Blanford, J. (2010). Message on a bottle: The relative influence of wine back label information on wine choice. *Food Quality and Preference*, 21(1), 22-32.

<https://doi.org/10.1016/j.foodqual.2009.07.004>

Nesselhauf, L., Deker, J. S., & Fleuchaus, R. (2017). Information and involvement: the influence on the acceptance of innovative wine packaging. *International Journal of Wine Business Research*, 29(3), 285-298.

<https://doi.org/10.1108/IJWBR-08-2016-0026>

Orth, U. R., & Krška, P. (2001). Quality signals in wine marketing: The role of exhibition awards.

International Food and Agribusiness Management Review, 4(4), 385-397.

[https://doi.org/10.1016/S1096-7508\(02\)00066-6](https://doi.org/10.1016/S1096-7508(02)00066-6)

Orth, U. R., & Malkewitz, K. (2008). Holistic Package Design and Consumer Brand Impressions. *Journal of Marketing*, 72, 64-81. <https://doi.org/10.1509/jmkg.72.3.64>

Pomarici, E., Lerro, M., Chrysochou, P., Vecchio, R., & Krystallis, A. (2017). One size does (obviously not) fit all: Using product attributes for wine market segmentation. *Wine Economics and Policy*, 6(2), 98-106.

<https://doi.org/10.1016/j.wep.2017.09.001>

Puyares, V., Ares, G., & Carrau, F. (2010). Searching a specific bottle for Tannat wine using a check-all-that apply question and conjoint analysis. *Food Quality and Preference*, 21(7), 684-691.

<https://doi.org/10.1016/j.foodqual.2010.05.008>

- Quester, D. P. G., & Smart, M. J. (1996). Product Involvement in Consumer Wine Purchases: Its Demographic Determinants and Influence on Choice Attributes. *International Journal of Wine Marketing*, 8(3), 37-56. <https://doi.org/10.1108/eb008661>
- Rao, A. R., & Monroe, K. B. (1988). The Moderating Effect of Prior Knowledge on Cue Utilization in Product Evaluations. *Journal of Consumer Research*, 15(2), 253-264. <https://doi.org/10.1086/209162>
- Rao, A. R., & Sieben, W. a. (1992). The Effect of Prior Knowledge on Price Acceptability and the Type of Information Examined. *Journal of Consumer Research*, 19(2), 256-270. <https://doi.org/10.1086/209300>
- Rasmussen, M., & Lockshin, L (1999). Wine Choice Behaviour: The Effect of Regional Branding. *International Journal of Wine Marketing*, 11(1), 36-46. <https://doi.org/10.1108/eb008689>
- Robertson J., Ferreira C., Botha E., (2018). The influence of product knowledge on the relative importance of extrinsic product attributes of wine. *Journal of Wine Research*, 29(3), 159-176. <https://doi.org/10.1080/09571264.2018.1505605>
- Rocchi, B. and Stefani G. (2006). Consumer's perception of wine packaging: a case study. *International Journal of Wine Marketing*, 18(1), 33-44. <https://doi.org/10.1108/09547540610657669>
- Rundh, B. (2005). The multi-faceted dimension of packaging: Marketing logistic or marketing tool? *British Food Journal*, 107(9), 670- 684. <https://doi.org/10.1108/00070700510615053>
- Selnes, F., & Grønhaug, K. (1986). Subjective and Objective Measures of Product Knowledge Contrasted. *Advances in Consumer Research*, 13, 67-71.
- Sherman, S., & Tuten, T. (2011). Message on a bottle: the wine label's influence. *International Journal of Wine Business Research*, 23(3), 221–234. <https://doi.org/10.1108/17511061111163050>
- Silayoi, P., & Speece, M. (2007). The importance of packaging attributes: A conjoint analysis approach. *European Journal of Marketing*, 41(11-12), 1495-1517. <https://doi.org/10.1108/03090560710821279>
- Sujan, M. (1985). Consumer Knowledge: Effects on Evaluation Strategies Mediating Consumer Judgments. *Journal of Consumer Research*, 12(1), 31-46. <https://doi.org/10.1086/209033>
- Tang, V. C. M., Tchetchik, A., & Cohen, E. (2015). Perception of wine labels by Hong Kong Chinese consumers. *Wine Economics and Policy*, 4(1), 12-21. <https://doi.org/10.1016/j.wep.2015.02.002>

- Thomas, A. (2000). Elements influencing wine purchasing: A New Zealand view. *International Journal of Wine Marketing*, 12(2), 47-62. <https://doi.org/10.1108/eb008709>
- Thomas, A., & Pickering, G. (2003). The Importance of Wine Label Information. *International Journal of Wine Marketing*, 15(2), 58-74. <https://doi.org/10.1108/eb008757>
- Tootelian, D. H., & Ross, K. (2000). Product Labels. *Journal of Food Products Marketing*, 6(1), 25-38. https://doi.org/10.1300/j038v06n01_03
- Underwood, R. L. (2003). The Communicative Power of Product Packaging: Creating Brand Identity via Lived and Mediated Experience. *Journal of Marketing Theory and Practice*, 11(1), 62-76. <https://doi.org/10.1080/10696679.2003.11501933>
- Velikova, N., Howell, R. D., & Dodd, T. (2015). The development of an objective wine knowledge scale: The item response theory approach. *International Journal of Wine Business Research*, 27(2), 103-124. <https://doi.org/10.1108/IJWBR-11-2014-0052>
- Vigar-Ellis, D., Pitt, L., & Berthon, P. (2015). Knowing what they know: A managerial perspective on consumer knowledge. *Business Horizons*, 58(6), 679-685. <https://doi.org/10.1016/j.bushor.2015.07.005>
- Vigar-Ellis, D., Pitt, L., & Caruana, A. (2015). Does objective knowledge vary between opinion leaders and opinion seekers? Implication for wine marketing. *Journal of Wine Research*, 26(4), 304-318. <https://doi.org/10.1080/09571264.2015.1092120>
- Vigar-Ellis, D., Pitt, L., & Caruana, A. (2015). Knowledge effects on the exploratory acquisition of wine. *International Journal of Wine Business Research*, 27(2), 84-102. <https://doi.org/10.1108/IJWBR-09-2014-0038>
- Viot, C. (2012). Subjective knowledge, product attributes and consideration set: A wine application. *International Journal of Wine Business Research*, 24(3), 219-248. <https://doi.org/10.1108/17511061211259206>
- Wenben Lai, A. (1991). Consumption Situation and Product Knowledge in the Adoption of a New Product. *European Journal of Marketing*, 25(10), 55-67. <https://doi.org/10.1108/03090569110000718>

7. APPENDICES

Appendix 1: Online Survey

Conhecimento dos consumidores de vinho e percepções sobre embalagens e rótulos de vinho

Gostaríamos de convidá-lo a participar neste questionário, parte de uma investigação de mestrado da Nova IMS.

O questionário destina-se a consumidores de vinho e pretende recolher as suas opiniões sobre as embalagens e rótulos do vinho.

As respostas a este questionário são confidenciais e serão utilizadas unicamente para o estudo em questão.

O questionário demora cerca de 7 minutos a responder.

É importante sublinhar que não existem respostas certas ou erradas às perguntas deste questionário.

No final do questionário poderá ganhar um voucher no valor de 25€, que irá ser sorteado, para utilizar numa compra na Loja online da Garrafeira Nacional.

Em caso de dúvidas relativas às questões formuladas no questionário ou curiosidade no estudo em causa, pode contactar-me através do meu email: catarina.pitta@gmail.com.

Muito obrigada pela sua colaboração!

Questões de Caracterização

As perguntas seguintes são sobre si e o consumo e compra de vinho.

Em cada pergunta por favor selecione apenas a opção que melhor se lhe aplica.

Para continuar o questionário deverá responder a todas as questões.

Q1. Por favor, indique a sua idade: *

- <18 (a) (1)
- 18-24 (2)
- 25-34 (3)
- 35-44 (4)
- 45-54 (5)
- 55-64 (6)
- >65 (7)

Q2. É consumidor de vinho? *

- Sim (1)
- Não (a) (2)

(a) O seu questionário terminou. Este questionário destina-se apenas a maiores de 18 anos (consumidores de vinho).

Questões sobre o consumo e compra de vinho

Q3. Com que frequência consome vinho? *

- Todos os dias (1)
- Várias vezes por semana (2)
- Uma vez por semana (3)
- 2-3 vezes por mês (4)
- Um vez por mês ou menos (5)

Q4. É o responsável pela compra do vinho que consome? *

- Sim (1)
- Sim, mas nem sempre (2)
- Não (b) (3)

(b) vai diretamente para a questão 6

Q5. Com que frequência compra vinho? *

- Mais que uma vez por semana (1)
- Uma vez por semana (2)
- 2-3 vezes por mês (3)
- Uma vez por mês ou menos (4)
- Nunca (5)

Questões sobre conhecimento de vinho

Q6. Tendo em consideração o seu conhecimento sobre vinho, por favor indique em que medida concorda com as seguintes afirmações. Para responder use uma escala de 1 a 7, em que 1 significa "discordo totalmente" e 7 significa "concordo totalmente". *

	Discordo Totalmente						Concordo Totalmente
	1	2	3	4	5	6	7
Eu sei muito sobre vinho [1]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eu sei como avaliar a qualidade de uma garrafa de vinho [2]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eu penso que sei o suficiente sobre vinho para me sentir confiante quando compro uma garrafa de vinho [3]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eu sinto que não sei muito sobre vinhos [4]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dentro do meu círculo de amigos, considero-me um dos experts em vinhos [5]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eu já ouvi falar da maioria dos vinhos que existem [6]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eu consigo dizer se uma garrafa de vinho vale o seu preço [7]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Comparando com a maioria das pessoas, eu tenho pouco conhecimento sobre vinhos [8]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q7. Por favor escolha apenas a opção que pensa ser a certa para cada uma das seguintes perguntas:

Qual das seguintes castas de uva é tinta? * (1)

- Viosinho
- Arinto
- Touriga Nacional
- Antão Vaz
- Não sei

Qual das seguintes castas é portuguesa? *(2)

- Cabernet Sauvignon
- Malbec
- Touriga Franca
- Chardonnay
- Não sei

Onde fica a Região Demarcada dos Vinhos Verdes? * (3)

- Minho
- Trás-os-Montes
- Beira interior
- Alentejo
- Não sei

Quais os açúcares presentes na uva, que se transformam em álcool durante a fermentação alcoólica? * (4)

- Sacarose e Maltose
- Glucose e Frutose
- Lactose e Galactose
- Trealose e Frutose
- Não sei

Como evolui a tonalidade da cor, durante o envelhecimento de um vinho tinto? * (5)

- De violeta para esverdeado
- De violeta para acastanhado
- De vermelho para azulado
- De vermelho para acastanhado
- Não sei

Preferências, Percepções e Aceitação de inovação - Embalagens e Rótulos de vinhos

Q8. Por favor indique o quão importante é para si a informação no rótulo do vinho? *

- Muito importante (1)
- Importante (2)
- Incerto (3)
- Não muito importante (4)
- Nada importante (5)

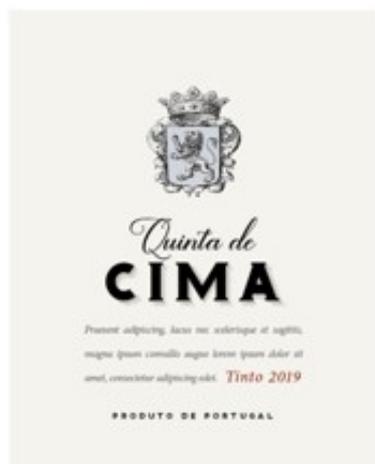
Q9. A seguinte lista contém elementos informativos que se encontram muitas vezes presentes nos rótulos dos vinhos. Por favor indique a importância que dá a cada um, em que 1 significa “Nada importante” e 7 significa “Extremamente importante”. *

	Nada Importante						Extremamente Importante
	1	2	3	4	5	6	7
Nome da empresa vinícola [1]	0	0	0	0	0	0	0
Nome da marca [2]	0	0	0	0	0	0	0
Medalhas ou prémios [3]	0	0	0	0	0	0	0
Nome do enólogo [4]	0	0	0	0	0	0	0
Informação sobre o método de produção do vinho [5]	0	0	0	0	0	0	0
História da região de origem do vinho [6]	0	0	0	0	0	0	0
Sugestões de comida que combinam com o vinho [7]	0	0	0	0	0	0	0
Porcentagem de álcool [8]	0	0	0	0	0	0	0
Castas [9]	0	0	0	0	0	0	0
Vintage (ano de produção) [10]	0	0	0	0	0	0	0
Informação sobre o tipo de pessoa que gostaria do vinho [11]	0	0	0	0	0	0	0

Q10. Por favor, avalie o design dos seguintes rótulos tendo como base um conjunto de adjetivos. Faça a sua avaliação numa escala de 1 a 5, em que 1 significa que "o adjetivo não se aplica ao vinho em questão" e 5 "aplica-se totalmente".

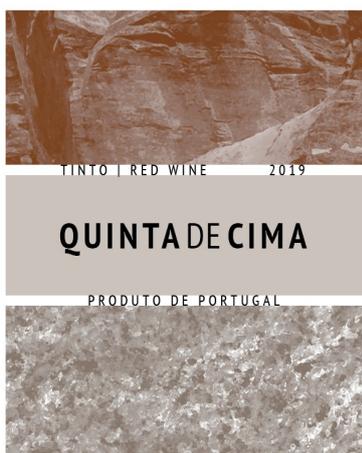
Nesta questão em particular, pedimos que se concentre unicamente no design do rótulo ignorando todos os outros elementos/ informação apresentados.

Este rótulo sugere que o vinho é: * (1)



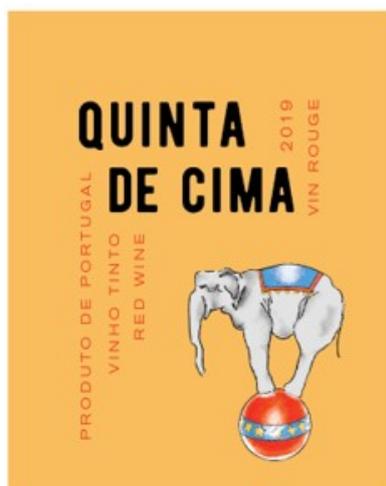
	1	2	3	4	5
Bom [1]	0	0	0	0	0
Complexo [2]	0	0	0	0	0
Barato [3]	0	0	0	0	0
Boa Qualidade [4]	0	0	0	0	0
Comum [5]	0	0	0	0	0

Este rótulo sugere que o vinho é: * (2)



	1	2	3	4	5
Bom [1]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Complexo [2]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Barato [3]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Boa Qualidade [4]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Comum [5]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

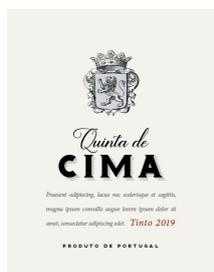
Este rótulo sugere que o vinho é: * (3)



	1	2	3	4	5
Bom [1]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Complexo [2]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Barato [3]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Boa Qualidade [4]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Comum [5]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q11. Por favor, indique para cada um dos rótulos seguintes, em que medida concorda com a seguinte afirmação: "Eu compraria uma garrafa de vinho com este rótulo". Para responder, por

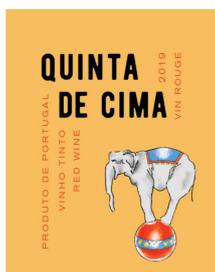
favor use uma escala de 1 a 7, em que 1 significa "Discordo totalmente" e 7 significa "Concordo totalmente".



Rótulo a)



Rótulo b)



Rótulo c)

	Discordo Totalmente						Concordo Totalmente
	1	2	3	4	5	6	7
Rótulo a) [1]	0	0	0	0	0	0	0
Rótulo b) [2]	0	0	0	0	0	0	0
Rótulo c) [3]	0	0	0	0	0	0	0

Q12. Por favor, avalie, a forma e o fecho de cada embalagem tendo como base um conjunto de adjetivos. Faça por favor a sua avaliação numa escala de 1 a 5. Em que 1 significa que "o adjetivo não se aplica ao vinho em questão" e 5 "aplica-se totalmente"

Rolha de cortiça sugere que o vinho é: * (1)



Tampa de cortiça (0,75L)

	1	2	3	4	5
Bom [1]	0	0	0	0	0
Complexo [2]	0	0	0	0	0
Barato [3]	0	0	0	0	0
Boa Qualidade [4]	0	0	0	0	0
Comum [5]	0	0	0	0	0

Tampa rosca sugere que o vinho é: * (2)



Garrafa com tampa rosca (0,75L)

	1	2	3	4	5
Bom [1]	0	0	0	0	0
Complexo [2]	0	0	0	0	0
Barato [3]	0	0	0	0	0
Boa Qualidade [4]	0	0	0	0	0
Comum [5]	0	0	0	0	0

Bag-in-box sugere que o vinho é: *(3)



Bag-in-box (3L)

	1	2	3	4	5
Bom [1]	0	0	0	0	0
Complexo [2]	0	0	0	0	0
Barato [3]	0	0	0	0	0
Boa Qualidade [4]	0	0	0	0	0
Comum [5]	0	0	0	0	0

Copos de plástico empilháveis sugerem que o vinho é: ***(4)**



4 Copos de plástico empilháveis (total 0,75L)

	1	2	3	4	5
Bom [1]	0	0	0	0	0
Complexo [2]	0	0	0	0	0
Barato [3]	0	0	0	0	0
Boa Qualidade [4]	0	0	0	0	0
Comum [5]	0	0	0	0	0

Q13. Por favor, indique para cada uma das embalagens abaixo, em que medida concorda com a seguinte afirmação: "Eu compraria vinho nesta embalagem". *



a) Garrafa com rolha de cortiça (0,75L)



b) Garrafa com tampa rosca (0,75L)



c) Bag-in-Box (3L)



d) 4 copos de plástico empilháveis (total 0,75L)

	Discordo Totalmente					Concordo Totalmente	
	1	2	3	4	5	6	7
Rolha de cortiça [1]	0	0	0	0	0	0	0
Tampa Rosca [2]	0	0	0	0	0	0	0
Bag-in-box [3]	0	0	0	0	0	0	0
Copos de plástico [4]	0	0	0	0	0	0	0

Dados Pessoais

Nesta secção seleccione apenas uma opção. As suas respostas são confidenciais e serão utilizadas apenas nesta investigação.

Q14. Qual a sua nacionalidade? *

- Portuguesa
- Outra: _____

Q15. Qual o seu género? *

- Feminino

- Masculino

Q16. Quais as suas habilitações literárias? *

- Ensino primário
- Ensino Secundário
- Licenciatura
- Pós-graduação / Mestrado
- Doutoramento

Q17. Qual a sua situação profissional atual? *

- Estudante
- Desempregado
- Empregador por conta própria
- Empregador por conta de outrem

Caso pretenda participar no sorteio (opcional) e habilitar-se a ganhar um voucher de 25€ para utilizar numa compra na Garrafeira Nacional, por favor insira o seu email. Nota: O seu email só será usado com esta finalidade. Caso seja o vencedor será contactado por email. Boa sorte 😊

Submeter

Appendix 2: Repeated Measures ANOVA for attitude towards wine label design

- Adjective “Good”

Mauchly's Test of Sphericity^a

Measure: MEASURE_1						Epsilon ^b		
Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Huynh-Feldt	Lower-bound	
factor1	,989	3,451	2	,178	,989	,995	,500	

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. Design: Intercept

Within Subjects Design: factor1

b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

Tests of Within-Subjects Effects

Measure: MEASURE_1						
Source		Type III Sum of Squares	df	Mean Square	F	Sig.
factor1	Sphericity Assumed	159,885	2	79,942	108,178	,000
	Greenhouse-Geisser	159,885	1,978	80,845	108,178	,000
	Huynh-Feldt	159,885	1,991	80,323	108,178	,000
	Lower-bound	159,885	1,000	159,885	108,178	,000
Error(factor1)	Sphericity Assumed	450,782	610	,739		
	Greenhouse-Geisser	450,782	603,191	,747		
	Huynh-Feldt	450,782	607,105	,743		
	Lower-bound	450,782	305,000	1,478		

Pairwise Comparisons

Measure: MEASURE_1						
(I) factor1	(J) factor1	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
1	2	,856 [*]	,066	,000	,726	,987
	3	,912 [*]	,073	,000	,769	1,055
2	1	-,856 [*]	,066	,000	-,987	-,726
	3	,056	,069	,424	-,081	,192
3	1	-,912 [*]	,073	,000	-1,055	-,769
	2	-,056	,069	,424	-,192	,081

Based on estimated marginal means

*. The mean difference is significant at the ,05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

- Adjective “Complex”

Mauchly's Test of Sphericity^a

Measure: MEASURE_1						Epsilon ^b		
Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Huynh-Feldt	Lower-bound	
factor1	,949	15,851	2	,000	,952	,957	,500	

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. Design: Intercept

Within Subjects Design: factor1

b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

Tests of Within-Subjects Effects

Measure: MEASURE_1						
Source		Type III Sum of Squares	df	Mean Square	F	Sig.
factor1	Sphericity Assumed	85,438	2	42,719	54,680	,000
	Greenhouse-Geisser	85,438	1,903	44,889	54,680	,000
	Huynh-Feldt	85,438	1,915	44,617	54,680	,000
	Lower-bound	85,438	1,000	85,438	54,680	,000
Error(factor1)	Sphericity Assumed	476,562	610	,781		
	Greenhouse-Geisser	476,562	580,508	,821		
	Huynh-Feldt	476,562	584,056	,816		
	Lower-bound	476,562	305,000	1,562		

Pairwise Comparisons

Measure: MEASURE_1		Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
(I) factor1	(J) factor1				Lower Bound	Upper Bound
1	2	,536 [*]	,075	,000	,389	,683
	3	,719 [*]	,076	,000	,569	,869
2	1	-,536 [*]	,075	,000	-,683	-,389
	3	,183 [*]	,063	,004	,059	,307
3	1	-,719 [*]	,076	,000	-,869	-,569
	2	-,183 [*]	,063	,004	-,307	-,059

Based on estimated marginal means

*. The mean difference is significant at the ,05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

- Adjective “Cheap”

Mauchly's Test of Sphericity^a

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon ^b		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
factor1	,957	13,274	2	,001	,959	,965	,500

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. Design: Intercept

Within Subjects Design: factor1

b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

Tests of Within-Subjects Effects

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
factor1	Sphericity Assumed	74,359	2	37,180	30,362	,000
	Greenhouse-Geisser	74,359	1,918	38,768	30,362	,000
	Huynh-Feldt	74,359	1,930	38,530	30,362	,000
	Lower-bound	74,359	1,000	74,359	30,362	,000
Error(factor1)	Sphericity Assumed	746,974	610	1,225		
	Greenhouse-Geisser	746,974	585,005	1,277		
	Huynh-Feldt	746,974	588,625	1,269		
	Lower-bound	746,974	305,000	2,449		

Pairwise Comparisons

Measure: MEASURE_1		Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
(I) factor1	(J) factor1				Lower Bound	Upper Bound
1	2	-,585 [*]	,090	,000	-,761	-,409
	3	-,621 [*]	,097	,000	-,812	-,430
2	1	,585 [*]	,090	,000	,409	,761
	3	-,036	,081	,658	-,195	,123
3	1	,621 [*]	,097	,000	,430	,812
	2	,036	,081	,658	-,123	,195

Based on estimated marginal means

*. The mean difference is significant at the ,05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

- Adjective “High Quality”

Mauchly's Test of Sphericity^a

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon ^b		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
factor1	,996	1,153	2	,562	,996	1,000	,500

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. Design: Intercept

Within Subjects Design: factor1

b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

Tests of Within-Subjects Effects

Measure: MEASURE_1						
Source		Type III Sum of Squares	df	Mean Square	F	Sig.
factor1	Sphericity Assumed	157,270	2	78,635	118,713	,000
	Greenhouse-Geisser	157,270	1,992	78,933	118,713	,000
	Huynh-Feldt	157,270	2,000	78,635	118,713	,000
	Lower-bound	157,270	1,000	157,270	118,713	,000
Error(factor1)	Sphericity Assumed	404,063	610	,662		
	Greenhouse-Geisser	404,063	607,700	,665		
	Huynh-Feldt	404,063	610,000	,662		
	Lower-bound	404,063	305,000	1,325		

Pairwise Comparisons

Measure: MEASURE_1						
(I) factor1	(J) factor1	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
1	2	,840 [*]	,065	,000	,712	,968
	3	,912 [*]	,068	,000	,778	1,045
2	1	-,840 [*]	,065	,000	-,968	-,712
	3	,072	,065	,266	-,055	,199
3	1	-,912 [*]	,068	,000	-1,045	-,778
	2	-,072	,065	,266	-,199	,055

Based on estimated marginal means

*. The mean difference is significant at the ,05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

• Adjective “Common”

Mauchly's Test of Sphericity^a

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon ^b		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
factor1	,934	20,886	2	,000	,938	,943	,500

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. Design: Intercept
Within Subjects Design: factor1

b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

Tests of Within-Subjects Effects

Measure: MEASURE_1						
Source		Type III Sum of Squares	df	Mean Square	F	Sig.
factor1	Sphericity Assumed	30,800	2	15,400	12,118	,000
	Greenhouse-Geisser	30,800	1,875	16,422	12,118	,000
	Huynh-Feldt	30,800	1,887	16,325	12,118	,000
	Lower-bound	30,800	1,000	30,800	12,118	,001
Error(factor1)	Sphericity Assumed	775,200	610	1,271		
	Greenhouse-Geisser	775,200	572,019	1,355		
	Huynh-Feldt	775,200	575,433	1,347		
	Lower-bound	775,200	305,000	2,542		

Pairwise Comparisons

Measure: MEASURE_1						
(I) factor1	(J) factor1	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
1	2	-,435 [*]	,090	,000	-,613	-,257
	3	-,314 [*]	,101	,002	-,513	-,115
2	1	,435 [*]	,090	,000	,257	,613
	3	,121	,081	,135	-,038	,280
3	1	,314 [*]	,101	,002	,115	,513
	2	-,121	,081	,135	-,280	,038

Based on estimated marginal means

*. The mean difference is significant at the ,05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Appendix 3: Repeated Measures ANOVA for attitude towards shape, size and type of closure

- Adjective: “Good”

Mauchly's Test of Sphericity^a

Measure: MEASURE_1					Epsilon ^b		
Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Huynh-Feldt	Lower-bound
factor1	,788	72,464	5	,000	,868	,876	,333

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. Design: Intercept
Within Subjects Design: factor1

Tests of Within-Subjects Effects

Measure: MEASURE_1						
Source		Type III Sum of Squares	df	Mean Square	F	Sig.
factor1	Sphericity Assumed	1083,065	3	361,022	475,347	,000
	Greenhouse-Geisser	1083,065	2,603	416,134	475,347	,000
	Huynh-Feldt	1083,065	2,627	412,270	475,347	,000
	Lower-bound	1083,065	1,000	1083,065	475,347	,000
Error(factor1)	Sphericity Assumed	694,935	915	,759		
	Greenhouse-Geisser	694,935	793,819	,875		
	Huynh-Feldt	694,935	801,259	,867		
	Lower-bound	694,935	305,000	2,278		

Pairwise Comparisons

Measure: MEASURE_1						
(i) factor1	(j) factor1	Mean Difference (i-j)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
1	2	2,105 [*]	,081	,000	1,944	2,265
	3	1,951 [*]	,077	,000	1,800	2,102
	4	2,376 [*]	,078	,000	2,222	2,530
2	1	-2,105 [*]	,081	,000	-2,265	-1,944
	3	-,154 [*]	,068	,025	-,288	-,019
	4	,271 [*]	,058	,000	,157	,385
3	1	-1,951 [*]	,077	,000	-2,102	-1,800
	2	,154 [*]	,068	,025	,019	,288
	4	,425 [*]	,056	,000	,314	,536
4	1	-2,376 [*]	,078	,000	-2,530	-2,222
	2	-,271 [*]	,058	,000	-,385	-,157
	3	-,425 [*]	,056	,000	-,536	-,314

Based on estimated marginal means

*. The mean difference is significant at the ,05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

- Adjective: “Complex”

Mauchly's Test of Sphericity^a

Measure: MEASURE_1					Epsilon ^b		
Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Huynh-Feldt	Lower-bound
factor1	,657	127,629	5	,000	,768	,775	,333

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

Tests of Within-Subjects Effects

Measure: MEASURE_1						
Source		Type III Sum of Squares	df	Mean Square	F	Sig.
factor1	Sphericity Assumed	654,715	3	218,238	271,118	,000
	Greenhouse-Geisser	654,715	2,305	284,017	271,118	,000
	Huynh-Feldt	654,715	2,324	281,748	271,118	,000
	Lower-bound	654,715	1,000	654,715	271,118	,000
Error(factor1)	Sphericity Assumed	736,535	915	,805		
	Greenhouse-Geisser	736,535	703,086	1,048		
	Huynh-Feldt	736,535	708,748	1,039		
	Lower-bound	736,535	305,000	2,415		

Pairwise Comparisons

Measure: MEASURE_1		Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
(I) factor1	(J) factor1				Lower Bound	Upper Bound
1	2	1,680 [*]	,085	,000	1,513	1,847
	3	1,549 [*]	,085	,000	1,381	1,717
	4	1,801 [*]	,086	,000	1,632	1,969
2	1	-1,680 [*]	,085	,000	-1,847	-1,513
	3	-,131 [*]	,061	,032	-,250	-,011
	4	,121 [*]	,055	,029	,013	,229
3	1	-1,549 [*]	,085	,000	-1,717	-1,381
	2	,131 [*]	,061	,032	,011	,250
	4	,252 [*]	,055	,000	,144	,360
4	1	-1,801 [*]	,086	,000	-1,969	-1,632
	2	-,121 [*]	,055	,029	-,229	-,013
	3	-,252 [*]	,055	,000	-,360	-,144

Based on estimated marginal means

*. The mean difference is significant at the ,05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no

- Adjective: “High Quality”

Mauchly's Test of Sphericity^a

Measure: MEASURE_1		Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon ^b		
Within Subjects Effect	Greenhouse-Geisser					Huynh-Feldt	Lower-bound	
factor1		,868	43,153	5	,000	,916	,925	,333

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. Design: Intercept
Within Subjects Design: factor1

Tests of Within-Subjects Effects

Measure: MEASURE_1		Type III Sum of Squares	df	Mean Square	F	Sig.
Source						
factor1	Sphericity Assumed	795,389	3	265,130	323,842	,000
	Greenhouse-Geisser	795,389	2,747	289,580	323,842	,000
	Huynh-Feldt	795,389	2,774	286,716	323,842	,000
	Lower-bound	795,389	1,000	795,389	323,842	,000
Error(factor1)	Sphericity Assumed	749,111	915	,819		
	Greenhouse-Geisser	749,111	837,744	,894		
	Huynh-Feldt	749,111	846,110	,885		
	Lower-bound	749,111	305,000	2,456		

Pairwise Comparisons

Measure: MEASURE_1		Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
(I) factor1	(J) factor1				Lower Bound	Upper Bound
1	2	1,771 [*]	,083	,000	1,609	1,934
	3	1,605 [*]	,078	,000	1,452	1,757
	4	2,082 [*]	,079	,000	1,926	2,237
2	1	-1,771 [*]	,083	,000	-1,934	-1,609
	3	-,167 [*]	,071	,020	-,306	-,027
	4	,310 [*]	,066	,000	,181	,440
3	1	-1,605 [*]	,078	,000	-1,757	-1,452
	2	,167 [*]	,071	,020	,027	,306
	4	,477 [*]	,060	,000	,359	,595
4	1	-2,082 [*]	,079	,000	-2,237	-1,926
	2	-,310 [*]	,066	,000	-,440	-,181
	3	-,477 [*]	,060	,000	-,595	-,359

Based on estimated marginal means

*. The mean difference is significant at the ,05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

- Adjective: “Common”

Mauchly's Test of Sphericity^a

Measure: MEASURE_1					Epsilon ^b		
Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Huynh-Feldt	Lower-bound
factor1	,680	116,985	5	,000	,784	,790	,333

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. Design: Intercept

Within Subjects Design: factor1

b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

Tests of Within-Subjects Effects

Measure: MEASURE_1							
Source		Type III Sum of Squares	df	Mean Square	F	Sig.	
factor1	Sphericity Assumed	81,663	3	27,221	19,755	,000	
	Greenhouse-Geisser	81,663	2,352	34,727	19,755	,000	
	Huynh-Feldt	81,663	2,371	34,442	19,755	,000	
	Lower-bound	81,663	1,000	81,663	19,755	,000	
Error(factor1)	Sphericity Assumed	1260,837	915	1,378			
	Greenhouse-Geisser	1260,837	717,232	1,758			
	Huynh-Feldt	1260,837	723,159	1,744			
	Lower-bound	1260,837	305,000	4,134			

Pairwise Comparisons

Measure: MEASURE_1						
(I) factor1	(J) factor1	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
1	2	-,526 ^a	,108	,000	-,739	-,313
	3	-,699 ^a	,104	,000	-,905	-,494
	4	-,454 ^a	,118	,000	-,686	-,222
2	1	,526 ^a	,108	,000	,313	,739
	3	-,173 ^a	,075	,021	-,321	-,026
	4	,072	,081	,378	-,088	,232
3	1	,699 ^a	,104	,000	,494	,905
	2	,173 ^a	,075	,021	,026	,321
	4	,245 ^a	,073	,001	,102	,389
4	1	,454 ^a	,118	,000	,222	,686
	2	-,072	,081	,378	-,232	,088
	3	-,245 ^a	,073	,001	-,389	-,102

Based on estimated marginal means

*. The mean difference is significant at the ,05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Appendix 4: Repeated Measures ANOVA for acceptance of wine label

Mauchly's Test of Sphericity^a

Measure: MEASURE_1						
Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon ^b Huynh-Feldt Lower-bound
factor1	,956	13,763	2	,001	,958	,964 ,500

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. Design: Intercept

Within Subjects Design: factor1

b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

Tests of Within-Subjects Effects

Measure: MEASURE_1						
Source		Type III Sum of Squares	df	Mean Square	F	Sig.
factor1	Sphericity Assumed	695,497	2	347,748	155,233	,000
	Greenhouse-Geisser	695,497	1,915	363,141	155,233	,000
	Huynh-Feldt	695,497	1,927	360,913	155,233	,000
	Lower-bound	695,497	1,000	695,497	155,233	,000
Error(factor1)	Sphericity Assumed	1366,503	610	2,240		
	Greenhouse-Geisser	1366,503	584,144	2,339		
	Huynh-Feldt	1366,503	587,750	2,325		
	Lower-bound	1366,503	305,000	4,480		

Pairwise Comparisons

Measure: MEASURE_1						
(I) factor1	(J) factor1	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
1	2	1,595 [*]	,108	,000	1,383	1,807
	3	2,023 [*]	,125	,000	1,777	2,269
2	1	-1,595 [*]	,108	,000	-1,807	-1,383
	3	,428 [*]	,129	,001	,174	,682
3	1	-2,023 [*]	,125	,000	-2,269	-1,777
	2	-,428 [*]	,129	,001	-,682	-,174

Based on estimated marginal means

*. The mean difference is significant at the ,05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Appendix 5: One Sample T-test for acceptance of wine label design

T-Test

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Q11_01	306	4,88	1,839	,105
Q11_02	306	3,28	1,683	,096
Q11_03	306	2,85	1,789	,102

One-Sample Test

Test Value = 4						
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Q11_01	8,332	305	,000	,876	,67	1,08
Q11_02	-7,473	305	,000	-,719	-,91	-,53
Q11_03	-11,215	305	,000	-1,147	-1,35	-,95

DESCRIPTIVES VARIABLES=Q13_01 Q13_02 Q13_03 Q13_04
 /STATISTICS=MEAN STDDEV MIN MAX.

Appendix 6: Repeated Measures ANOVA for acceptance of shape, size and type of closure

Mauchly's Test of Sphericity^a

Measure: MEASURE_1		Epsilon ^b				
Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Lower-bound
factor1	,913	27,562	5	,000	,946	,333

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. Design: Intercept

Within Subjects Design: factor1

b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

Tests of Within-Subjects Effects

Measure: MEASURE_1		Type III Sum of Squares	df	Mean Square	F	Sig.
factor1	Sphericity Assumed	3191,748	3	1063,916	564,419	,000
	Greenhouse-Geisser	3191,748	2,839	1124,088	564,419	,000
	Huynh-Feldt	3191,748	2,869	1112,545	564,419	,000
	Lower-bound	3191,748	1,000	3191,748	564,419	,000
Error(factor1)	Sphericity Assumed	1724,752	915	1,885		
	Greenhouse-Geisser	1724,752	866,021	1,992		
	Huynh-Feldt	1724,752	875,006	1,971		
	Lower-bound	1724,752	305,000	5,655		

Pairwise Comparisons

Measure: MEASURE_1		Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
(I) factor1	(J) factor1				Lower Bound	Upper Bound
1	2	3,052 [*]	,120	,000	2,816	3,289
	3	3,059 [*]	,112	,000	2,839	3,278
	4	4,405 [*]	,104	,000	4,201	4,610
2	1	-3,052 [*]	,120	,000	-3,289	-2,816
	3	,007	,124	,958	-,237	,250
	4	1,353 [*]	,107	,000	1,142	1,564
3	1	-3,059 [*]	,112	,000	-3,278	-2,839
	2	-,007	,124	,958	-,250	,237
	4	1,346 [*]	,097	,000	1,155	1,538
4	1	-4,405 [*]	,104	,000	-4,610	-4,201
	2	-1,353 [*]	,107	,000	-1,564	-1,142
	3	-1,346 [*]	,097	,000	-1,538	-1,155

Based on estimated marginal means

*. The mean difference is significant at the ,05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Appendix 7: One Sample T-test for acceptance of shape, size and type of closure

T-Test

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Q13_01	306	6,01	1,496	,086
Q13_02	306	2,96	1,912	,109
Q13_03	306	2,95	1,707	,098
Q13_04	306	1,60	1,118	,064

One-Sample Test

Test Value = 4						
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Q13_01	23,494	305	,000	2,010	1,84	2,18
Q13_02	-9,540	305	,000	-1,042	-1,26	-,83
Q13_03	-10,753	305	,000	-1,049	-1,24	-,86
Q13_04	-37,484	305	,000	-2,395	-2,52	-2,27

Appendix 8: Pearson's correlation (Objective knowledge and subjective knowledge)

Correlations

Correlations

		Conhec_Obj ectivo
Conhec_Objectivo	Pearson Correlation	1
	Sig. (2-tailed)	
	N	306
Conhec_Subjectivo	Pearson Correlation	.374**

Appendix 9: Chi-Square Test of Independence (Wine Typology Demographics Characteristics)

- Age * Wine consumer knowledge

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Monte Carlo Sig. (2-sided)		
				Significance	99% Confidence Interval	
					Lower Bound	Upper Bound
Pearson Chi-Square	36,500 ^a	15	,001	,001 ^b	,000	,002
Likelihood Ratio	36,056	15	,002	,002 ^b	,001	,003
Fisher's Exact Test	34,284			,002 ^b	,001	,002
N of Valid Cases	306					

a. 4 cells (16.7%) have expected count less than 5. The minimum expected count is 1.87.

b. Based on 10000 sampled tables with starting seed 1535910591.

- Gender * Wine consumer knowledge

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Monte Carlo Sig. (2-sided)		
				Significance	99% Confidence Interval	
					Lower Bound	Upper Bound
Pearson Chi-Square	21,818 ^a	3	,000	,000 ^b	,000	,000
Likelihood Ratio	22,297	3	,000	,000 ^b	,000	,000
Fisher's Exact Test	22,064			,000 ^b	,000	,000
N of Valid Cases	306					

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 23.96.

b. Based on 10000 sampled tables with starting seed 1535910591.

- Education * Wine consumer knowledge

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Monte Carlo Sig. (2-sided)		
				Significance	99% Confidence Interval	
					Lower Bound	Upper Bound
Pearson Chi-Square	10,642 ^a	9	,301	,296 ^b	,284	,308
Likelihood Ratio	10,634	9	,302	,366 ^b	,353	,378
Fisher's Exact Test	9,145			,394 ^b	,381	,406
N of Valid Cases	306					

a. 4 cells (25.0%) have expected count less than 5. The minimum expected count is 1.36.

b. Based on 10000 sampled tables with starting seed 1535910591.

- Professional Situation * Wine consumer knowledge

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Monte Carlo Sig. (2-sided)		
				Significance	99% Confidence Interval	
					Lower Bound	Upper Bound
Pearson Chi-Square	13,893 ^a	9	,126	,124 ^b	,116	,133
Likelihood Ratio	14,210	9	,115	,143 ^b	,134	,152
Fisher's Exact Test	14,124			,106 ^b	,098	,114
N of Valid Cases	306					

a. 4 cells (25.0%) have expected count less than 5. The minimum expected count is 3.23.

b. Based on 10000 sampled tables with starting seed 1535910591.

	Neophyte	Snob	Modest	Expert	Significance
<i>Gender</i>					.001
Female	62.1%	46.0%	44.2%	28.4%	
Male	37.9%	54.0%	55.8%	71.6%	
<i>Age</i>					.001
18-24	20.4%	7.9%	5.8%	8.0%	
25-34	29.1%	19.0%	11.5%	11.4%	
35-44	8.7%	15.9%	17.3%	19.3%	
45-54	19.4%	30.2%	23.1%	27.3%	
55-64	21.4%	22.2%	40.4%	27.3%	
> 65	1.0%	4.8%	1.9%	6.8%	
<i>Education</i>					.296
High School	7.8%	15.9%	11.5%	13.6%	
Bachelor's Degree	45.6%	46.0%	46.2%	43.2%	
Post-Graduate/ Master's Degree	44.7%	38.1%	34.6%	40.9%	
PhD	1.9%	0.0%	7.7%	2.3%	
<i>Professional Situation</i>					.124
Unemployed	5.8%	6.3%	11.5%	3.4%	
Work for other	68.0%	55.6%	50.0%	59.1%	
Self Employed	17.5%	31.7%	32.7%	34.1%	
Student	8.7%	6.3%	5.8%	3.4%	

Appendix 10: One-way ANOVA

Oneway

Descriptives

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
					Neophite	103		
Snob	63	4,29	,750	,094	4,10	4,47	1	5
Modest	52	4,08	,967	,134	3,81	4,35	1	5
Expert	88	4,44	,658	,070	4,30	4,58	2	5
Total	306	4,23	,755	,043	4,14	4,31	1	5

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Q8	Based on Mean	1,369	3	302	,252
	Based on Median	1,125	3	302	,339
	Based on Median and with adjusted df	1,125	3	282,860	,339
	Based on trimmed mean	1,647	3	302	,179

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Q8	Between Groups	7,508	3	2,503	4,540	,004
	Within Groups	166,479	302	,551		
	Total	173,987	305			

Multiple Comparisons

Dependent Variable: Q8

Tukey HSD

(I) Tipo	(J) Tipo	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Neophite	Snob	-,198	,119	,341	-,51	,11
	Modest	,010	,126	1,000	-,32	,34
	Expert	-,356 [*]	,108	,006	-,63	-,08
Snob	Neophite	,198	,119	,341	-,11	,51
	Modest	,209	,139	,438	-,15	,57
	Expert	-,157	,123	,573	-,47	,16
Modest	Neophite	-,010	,126	1,000	-,34	,32
	Snob	-,209	,139	,438	-,57	,15
	Expert	-,366 [*]	,130	,026	-,70	-,03
Expert	Neophite	,356 [*]	,108	,006	,08	,63
	Snob	,157	,123	,573	-,16	,47
	Modest	,366 [*]	,130	,026	,03	,70

*. The mean difference is significant at the 0.05 level.

Appendix 11: MANOVA

a) Consumers' wine knowledge and perceived importance of wine label

Pairwise Comparisons								
Dependent Variable	(I) Tipo	(J) Tipo	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b		
						Lower Bound	Upper Bound	
Q9_01	Neophite	Snob	-1,050 ^a	,260	,000	-1,740	-,360	
		Modest	-,043	,276	1,000	-,777	,691	
		Expert	-,935 ^a	,236	,001	-1,562	-,309	
	Snob	Neophite	1,050 ^a	,260	,000	,360	1,740	
		Modest	1,007 ^a	,304	,006	,199	1,815	
		Expert	,115	,268	1,000	-,597	,827	
	Modest	Neophite	,043	,276	1,000	-,691	,777	
		Snob	-1,007 ^a	,304	,006	-1,815	-,199	
		Expert	-,892 ^a	,284	,011	-1,647	-,138	
	Expert	Neophite	,935 ^a	,236	,001	,309	1,562	
		Snob	-,115	,268	1,000	-,827	,597	
		Modest	,892 ^a	,284	,011	,138	1,647	
	Q9_02	Neophite	Snob	-,816 ^a	,260	,011	-1,507	-,125
			Modest	,296	,277	1,000	-,438	1,031
			Expert	-,767 ^a	,236	,008	-1,394	-,140
Snob		Neophite	,816 ^a	,260	,011	,125	1,507	
		Modest	1,112 ^a	,305	,002	,303	1,921	
		Expert	,049	,268	1,000	-,664	,761	
Modest		Neophite	-,296	,277	1,000	-1,031	,438	
		Snob	-1,112 ^a	,305	,002	-1,921	-,303	
		Expert	-1,064 ^a	,284	,001	-1,819	-,308	
Expert		Neophite	,767 ^a	,236	,008	,140	1,394	
		Snob	-,049	,268	1,000	-,761	,664	
		Modest	1,064 ^a	,284	,001	,308	1,819	
Q9_03		Neophite	Snob	-,012	,259	1,000	-,699	,676
			Modest	,795 ^a	,275	,025	,064	1,527
			Expert	,218	,235	1,000	-,405	,842
	Snob	Neophite	,012	,259	1,000	-,676	,699	
		Modest	,807 ^a	,303	,049	,002	1,612	
		Expert	,230	,267	1,000	-,479	,939	
	Modest	Neophite	-,795 ^a	,275	,025	-1,527	-,064	
		Snob	-,807 ^a	,303	,049	-1,612	-,002	
		Expert	-,577	,283	,254	-1,329	,175	
	Expert	Neophite	-,218	,235	1,000	-,842	,405	
		Snob	-,230	,267	1,000	-,939	,479	
		Modest	,577	,283	,254	-,175	1,329	
	Q9_04	Neophite	Snob	-,921 ^a	,258	,002	-1,607	-,236
			Modest	,109	,274	1,000	-,620	,838
			Expert	-1,574 ^a	,234	,000	-2,196	-,952
Snob		Neophite	,921 ^a	,258	,002	,236	1,607	
		Modest	1,030 ^a	,302	,004	,227	1,833	
		Expert	-,653	,266	,089	-1,360	,054	
Modest		Neophite	-,109	,274	1,000	-,838	,620	
		Snob	-1,030 ^a	,302	,004	-1,833	-,227	
		Expert	-1,683 ^a	,282	,000	-2,432	-,933	
Expert		Neophite	1,574 ^a	,234	,000	,952	2,196	
		Snob	,653	,266	,089	-,054	1,360	
		Modest	1,683 ^a	,282	,000	,933	2,432	
Q9_05		Neophite	Snob	-,589	,261	,148	-1,283	,104
			Modest	,132	,278	1,000	-,605	,869
			Expert	-1,170 ^a	,237	,000	-1,799	-,540
	Snob	Neophite	,589	,261	,148	-,104	1,283	
		Modest	,721	,306	,114	-,091	1,534	
		Expert	-,580	,269	,192	-1,296	,135	
	Modest	Neophite	-,132	,278	1,000	-,869	,605	
		Snob	-,721	,306	,114	-1,534	,091	
		Expert	-1,302 ^a	,286	,000	-2,060	-,543	
	Expert	Neophite	1,170 ^a	,237	,000	,540	1,799	
		Snob	,580	,269	,192	-,135	1,296	
		Modest	1,302 ^a	,286	,000	,543	2,060	
	Q9_06	Neophite	Snob	-,470	,265	,463	-1,174	,234
			Modest	,317	,282	1,000	-,432	1,066
			Expert	-,680 ^a	,241	,030	-1,319	-,041
Snob		Neophite	,470	,265	,463	-,234	1,174	
		Modest	,787	,311	,070	-,037	1,612	
		Expert	-,210	,274	1,000	-,937	,516	
Modest		Neophite	-,317	,282	1,000	-1,066	,432	
		Snob	-,787	,311	,070	-1,612	,037	
		Expert	-,997 ^a	,290	,004	-1,767	-,228	
Expert		Neophite	,680 ^a	,241	,030	,041	1,319	
		Snob	,210	,274	1,000	-,516	,937	
		Modest	,997 ^a	,290	,004	,228	1,767	

Q9_07	Neophyte	Snob	,036	,284	1,000	-,718	,791
		Modest	,800	,302	,041	-,002	1,603
		Expert	,095	,258	1,000	-,590	,780
	Snob	Neophyte	-,036	,284	1,000	-,791	,718
		Modest	,764	,333	,134	-,120	1,648
		Expert	,059	,293	1,000	-,720	,837
	Modest	Neophyte	-,800	,302	,041	-1,603	,002
		Snob	-,764	,333	,134	-1,648	,120
		Expert	-,705	,311	,143	-1,531	,120
	Expert	Neophyte	-,095	,258	1,000	-,780	,590
		Snob	-,059	,293	1,000	-,837	,720
		Modest	,705	,311	,143	-,120	1,531
Q9_08	Neophyte	Snob	-,563	,270	,229	-1,281	,155
		Modest	-,041	,287	1,000	-,804	,723
		Expert	-,941 ^b	,245	,001	-1,592	-,289
	Snob	Neophyte	,563	,270	,229	-,155	1,281
		Modest	,522	,317	,601	-,319	1,363
		Expert	-,378	,279	1,000	-1,119	,363
	Modest	Neophyte	,041	,287	1,000	-,723	,804
		Snob	-,522	,317	,601	-1,363	,319
		Expert	-,900 ^a	,296	,015	-1,685	-,115
	Expert	Neophyte	,941 ^b	,245	,001	,289	1,592
		Snob	,378	,279	1,000	-,363	1,119
		Modest	,900 ^a	,296	,015	,115	1,685

Q9_09	Neophyte	Snob	-,862 ^a	,248	,004	-1,521	-,202
		Modest	-,456	,264	,512	-1,157	,246
		Expert	-1,690 ^b	,225	,000	-2,289	-1,092
	Snob	Neophyte	,862 ^a	,248	,004	,202	1,521
		Modest	,406	,291	,983	-,367	1,179
		Expert	-,828 ^a	,256	,008	-1,509	-,148
	Modest	Neophyte	,456	,264	,512	-,246	1,157
		Snob	-,406	,291	,983	-1,179	,367
		Expert	-1,234 ^a	,272	,000	-1,955	-,513
	Expert	Neophyte	1,690 ^b	,225	,000	1,092	2,289
		Snob	,828 ^a	,256	,008	,148	1,509
		Modest	1,234 ^a	,272	,000	,513	1,955

Q9_10	Neophyte	Snob	-,480	,251	,344	-1,148	,188
		Modest	-,135	,267	1,000	-,845	,576
		Expert	-1,213 ^b	,228	,000	-1,819	-,606
	Snob	Neophyte	,480	,251	,344	-,188	1,148
		Modest	,345	,295	1,000	-,437	1,127
		Expert	-,733 ^a	,259	,030	-1,422	-,044
	Modest	Neophyte	,135	,267	1,000	-,576	,845
		Snob	-,345	,295	1,000	-1,127	,437
		Expert	-1,078 ^a	,275	,001	-1,808	-,347
	Expert	Neophyte	1,213 ^b	,228	,000	,606	1,819
		Snob	,733 ^a	,259	,030	,044	1,422
		Modest	1,078 ^a	,275	,001	,347	1,808

Q9_11	Neophyte	Snob	-,132	,293	1,000	-,911	,647
		Modest	,577	,312	,391	-,251	1,406
		Expert	,217	,266	1,000	-,490	,924
	Snob	Neophyte	,132	,293	1,000	-,647	,911
		Modest	,710	,344	,239	-,203	1,622
		Expert	,350	,303	1,000	-,454	1,154
	Modest	Neophyte	-,577	,312	,391	-1,406	,251
		Snob	-,710	,344	,239	-1,622	,203
		Expert	-,360	,321	1,000	-1,212	,492
	Expert	Neophyte	-,217	,266	1,000	-,924	,490
		Snob	-,350	,303	1,000	-1,154	,454
		Modest	,360	,321	1,000	-,492	1,212

Based on estimated marginal means

a. The mean difference is significant at the ,05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Multivariate Tests

	Value	F	Hypothesis df	Error df	Sig.
Pillai's trace	,372	3,788	33,000	882,000	,000
Wilks' lambda	,657	4,002	33,000	860,990	,000
Hotelling's trace	,479	4,219	33,000	872,000	,000
Roy's largest root	,371	9,903 ^a	11,000	294,000	,000

Each F tests the multivariate effect of Tipo. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

Univariate Tests

Dependent Variable		Sum of Squares	df	Mean Square	F	Sig.
Q9_01	Contrast	72,316	3	24,105	9,134	,000
	Error	797,044	302	2,639		
Q9_02	Contrast	63,306	3	21,102	7,981	,000
	Error	798,514	302	2,644		
Q9_03	Contrast	25,400	3	8,467	3,233	,023
	Error	790,940	302	2,619		
Q9_04	Contrast	153,011	3	51,004	19,590	,000
	Error	786,261	302	2,604		
Q9_05	Contrast	85,192	3	28,397	10,658	,000
	Error	804,638	302	2,664		
Q9_06	Contrast	42,460	3	14,153	5,153	,002
	Error	829,527	302	2,747		
Q9_07	Contrast	25,262	3	8,421	2,668	,048
	Error	953,156	302	3,156		
Q9_08	Contrast	50,599	3	16,866	5,906	,001
	Error	862,515	302	2,856		
Q9_09	Contrast	140,989	3	46,996	19,496	,000
	Error	727,982	302	2,411		
Q9_10	Contrast	77,129	3	25,710	10,399	,000
	Error	746,636	302	2,472		
Q9_11	Contrast	17,153	3	5,718	1,699	,167
	Error	1016,118	302	3,365		

The F tests the effect of Tipo. This test is based on the linearly independent pairwise comparisons among the estimated marginal means.

b) Consumers' wine knowledge and attitude towards labels design

Multivariate Tests

	Value	F	Hypothesis df	Error df	Sig.
Pillai's trace	,149	1,010	45,000	870,000	,455
Wilks' lambda	,858	1,008	45,000	856,355	,460
Hotelling's trace	,158	1,005	45,000	860,000	,465
Roy's largest root	,077	1,482 ^a	15,000	290,000	,110

Each F tests the multivariate effect of Tipo. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. The statistic is an upper bound on F that yields a lower bound on the significance level.

	Neophyte		Snob		Modest		Expert		F
	M	DP	M	DP	M	DP	DP	DP	
Tradicional									
Good	3.20	1.11	3.25	1.10	3.12	1.00	3.08	1.12	.488
Complex	2.68	1.1	2.83	1.21	2.74	1.11	2.65	1.12	.452
Cheap	3.83	1.1	3.88	1.02	3.98	0.99	3.69	1.10	1.118
High Quality	3.19	1.04	3.35	0.96	3.14	1.04	3.13	1.06	0.700
Common	3.53	1.17	3.91	1.04	3.86	1.13	3.51	1.20	2.320
Contemporary									
Good	2.35	1.01	2.26	1.05	2.42	1.07	2.24	0.90	1,028
Complex	2.18	1.02	2.14	1.07	2.14	1.04	2.22	0.90	.078
Cheap	3.14	1.2	3.17	1.31	3.47	1.16	3.27	1.22	.639
High Quality	2.48	0.92	2.38	0.91	2.28	0.91	2.26	0.88	1.315
Common	3.05	1.18	3.17	1.33	3.44	1.08	3.32	1.29	1.230
Novelty									
Good	2.18	1.04	2.29	1.06	2.21	1.06	2.31	1.05	.527
Complex	2.03	1.02	1.97	1.05	1.88	0.96	2.02	1.04	.343
Cheap	3.11	1.39	2.94	1.40	3.30	1.28	3.41	1.32	1.742
High Quality	2.27	0.99	2.34	1.00	2.30	1.10	2.27	1.02	.045
Common	3.22	1.33	2.92	1.37	3.51	1.28	3.66	1.26	4.548

c) Consumers' wine knowledge and attitude towards shape, size and type of closure

Multivariate Tests

	Value	F	Hypothesis		Sig.
			df	Error df	
Pillai's trace	,254	1,315	60,000	855,000	,059
Wilks' lambda	,766	1,315	60,000	845,152	,059
Hotelling's trace	,280	1,315	60,000	845,000	,059
Roy's largest root	,139	1,984 ^a	20,000	285,000	,008

Each F tests the multivariate effect of Tipo. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. The statistic is an upper bound on F that yields a lower bound on the significance level.

	Neophyte		Snob		Modest		Expert		F
	M	DP	M	DP	M	DP	DP	DP	
Cork									
Good	4.03	1.08	4.06	1.17	3.91	1.23	3.84	1.14	1.104
Complex	3.48	1.26	3.25	1.31	3.16	1.29	3.34	1.22	,867
Cheap	3.65	1.23	3.86	1.07	4.02	1.08	3.95	0.98	2.032
High Quality	3.78	1.10	3.71	1.11	3.65	1.11	3.68	1.12	,769
Common	3.29	1.17	3.52	1.16	3.70	1.08	3.54	1.13	1.786
Screw Caps									
Good	1.86	1.05	2.00	1.08	1.77	0.90	1.78	0.83	1.270
Complex	1.65	0.84	1.80	1.03	1.65	0.87	1.58	0.79	1.009
Cheap	2.56	1.50	2.55	1.44	2.84	1.68	2.99	1.58	1.594
High Quality	1.96	1.01	2.02	0.99	1.81	1.07	1.94	0.97	1.110
Common	2.86	1.46	2.65	1.50	3.07	1.58	3.19	1.4	2.046
Bag-in-box									
Good	1.92	0.96	1.98	0.93	2.23	0.92	2.01	0.82	1.543
Complex	1.78	0.91	1.82	0.88	1.95	0.87	1.71	0.83	,902
Cheap	2.31	1.40	2.32	1.48	2.65	1.29	2.63	1.52	1.423
High Quality	2.05	1.04	2.08	0.94	2.35	0.75	2.09	0.87	2.136
Common	2.77	1.41	2.58	1.48	2.74	1.33	2.92	1.43	,772
StackTek									
Good	1.67	0.88	1.77	1.01	1.47	0.74	1.41	0.66	3.100
Complex	1.75	0.97	1.57	0.88	1.49	0.96	1.32	0.59	4.247
Cheap	2.59	1.48	2.57	1.60	2.60	1.51	2.73	1.7	,190
High Quality	1.73	0.92	1.63	0.89	1.67	0.94	1.52	0.82	1.349
Common	3.01	1.40	2.75	1.64	3.09	1.57	3.18	1.68	1.549

d) Consumers' wine knowledge and acceptance of labels design

Multivariate Tests

	Value	F	Hypothesis		Sig.
			df	Error df	
Pillai's trace	,038	1,298	9,000	906,000	,234
Wilks' lambda	,962	1,301	9,000	730,272	,233
Hotelling's trace	,039	1,302	9,000	896,000	,232
Roy's largest root	,032	3,216 ^a	3,000	302,000	,023

Each F tests the multivariate effect of Tipo. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. The statistic is an upper bound on F that yields a lower bound on the significance level.

	Neophyte		Snob		Modest		Expert		F
	M	DP	M	DP	M	DP	DP	DP	
Traditional Label	4.98	1.78	4.98	1.88	4.85	1.83	4.69	1.90	,476
Contemporary Label	3.41	1.66	3.11	1.74	3.46	1.75	3.15	1.63	,791
Novelty Label	2.71	1.71	2.86	1.68	2.54	1.80	3.20	1.92	1.908

e) Consumers' wine knowledge and acceptance of shape, size and type of closure

Multivariate Tests

	Value	F	Hypothesis		Sig.
			df	Error df	
Pillai's trace	,025	,622	12,000	903,000	,825
Wilks' lambda	,976	,620	12,000	791,371	,826
Hotelling's trace	,025	,618	12,000	893,000	,828
Roy's largest root	,018	1,336 ^a	4,000	301,000	,256

Each F tests the multivariate effect of Tipo. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. The statistic is an upper bound on F that yields a lower bound on the significance level.

	Neophyte		Snob		Modest		Expert		F
	M	DP	M	DP	M	DP	DP	DP	
Cork	6.09	1.50	5.94	1.48	5.75	1.67	6.13	1.40	.838
Screw Caps	3.00	1.84	3.14	2.06	2.69	1.79	2.93	1.96	.551
Bag-in-box	2.87	1.68	3.00	1.83	2.98	1.60	2.99	1.73	.106
StackTek	1.69	1.15	1.70	1.24	1.42	1.04	1.55	1.03	.883

