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*The Impact of Different
Packaging Elements on the
Purchase Intent for Olive Oil*

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ABSTRACT

Title: The Impact of Different Packaging Elements on the Purchase Intent for Olive Oil

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To strive and survive in today's competitive, fast-paced and increasingly challenging environment, manufacturers are being forced to find new ways to attract consumers to buy their own products - instead of competing ones. This is especially true in the fast-moving consumer goods industry.

This dissertation aims at exploring the impact of several packaging elements, both on consumers' purchase intent, as well as on the perceived quality they consider the products to have. Moreover, it looks at the possible relationship between perceived quality and purchase intent and how the first influences the latter.

This was tested for olive oil, a product category with a singular importance in the Portuguese market. Quantitative data was collected among Portuguese consumers through an online questionnaire.

Results have shown that all the elements studied have an impact on both purchase intent and perceived quality. In some situations, the impact was in accordance with what was suggested in the literature and, in other situations, the opposite impact was verified. Furthermore, the findings suggest that there is a positive linear regression between perceived quality and purchase intent; as the first increases, the latter also increases for that same product.

Keywords: Packaging, Label, Olive Oil, Purchase Intent, Perceived Quality

SUMÁRIO

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Para sobreviver e prosperar num ambiente cada vez mais competitivo e de constante mudança, os fabricantes procuram novas formas de atrair consumidores para comprar os seus produtos, em detrimento dos produtos concorrentes.

Esta dissertação procura perceber qual o impacto de diversos elementos das embalagens dos produtos na intenção de compra dos consumidores, bem como na sua perceção de qualidade relativamente a esses produtos. Para além disto, explora uma possível relação entre a perceção de qualidade e a intenção de compra, tentando perceber como é que a primeira influencia a segunda.

Este estudo foi aplicado à categoria alimentar do azeite, um produto com uma importância singular no mercado português. Os dados quantitativos foram recolhidos junto de consumidores portugueses, através de um inquérito online.

Os resultados mostram que os elementos estudados têm um impacto tanto na intenção de compra como na perceção de qualidade dos consumidores. Em certas situações, este impacto correspondeu às conclusões de estudos anteriores e, noutras situações, verificou-se um impacto inverso ao sugerido. Adicionalmente, as conclusões sugerem que há uma relação linear positiva entre a perceção de qualidade e a intenção de compra; à medida que a primeira aumenta, o mesmo acontece com a segunda.

Palavras-Chave: Embalagem, Rótulo, Azeite, Intenção de Compra, Perceção de Qualidade

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GLOSSARY

Purchase Intent (PI)

Perceived Quality (PQ)

Extra Virgin Olive Oil (EVOO)

Transgenic: Containing genetic material artificially transferred from another species

Vegetable Fats: Category of food products that includes olive oil, cooking/vegetable oils and margarine

CHAPTER 1: INTRODUCTION

1.1 Background

Globalization, along with so many other developments and events, has impacted and keeps impacting the world in a monumental way, altering people's way of living, relating, thinking and consequently, their consumption patterns. Consumers' preferences and the way they make decisions has suffered dramatic changes, creating a new challenge for retailers. Consumers search for high quality products but at lower prices. On the one hand, there are more product alternatives than ever before, however consumers seem to be constantly searching for more alternatives. On the other hand, from a retailers' standpoint, they are repeatedly struggling to differentiate from the competition despite constant investment in their product portfolio (Prahalad and Ramaswamy 2004). Understanding how consumers perceive the subjective entity of products, as presented through communication elements in the package, is fundamental to influence choice, which is the key to success for many food products marketing strategies (Silayoi and Speece 2007).

Previous studies have demonstrated that attributes related to product package, label information and other extrinsic factors, such as price, play an important role in the choice process for food products and can influence purchase and consumption (Delgado, Gómez-Rico, and Guinard 2013; Guerrero et al. 2000; Plessis and Rand 2012; Silayoi and Speece 2007).

Packaging represents one of the first contacts between consumers and the product, becoming a critical factor in the consumer decision-making process, as it communicates to consumers at the moment of purchase (Carneiro et al. 2005; Kobayashi and Benassi 2015). Consumers are constantly confronted with a wide variety of product information, supplied through packaging, branding, advertising and other channels (Kobayashi and Benassi 2015). Each of these elements would require an in-depth study to fully understand them, but, for the purpose of this dissertation, only elements related to label claims and design, as well as container design will be considered. This assessment was conducted on the olive oil product category, one deeply connected with Portugal and the Portuguese roots. It is also a mass consumption product among Portuguese consumers with a large variety of alternatives being offered in the market. Previous studies in the same field have been conducted on coffee and olive oil packages, supporting the decision of choosing olive oil as the focus product for this study.

From ancient times, olive oil has been used not only for cooking, but also as a medicine, perfume, balsam, gas and for lighting. It represents one of the biggest identity symbols of the

Mediterranean countries, including Portugal. Moreover, the olive tree has a very strong symbolism, representing peace, wisdom and glory (Sobral 2016).

It was disregarded for several years, both due to the emergence of different oils, and because of a cultural shift in which there was a rejection of everything that was traditional, including the previously mentioned multitude of uses for olive oil in the household; recently, however, Portuguese consumers have recovered the pleasure given by olive oil (Sobral 2016).

This is a market that has been growing significantly (17% increase in value in 2015 when compared to the previous year, accounting for over 145 million €) (Nielsen 2015) and its importance has been undergoing some critical changes as well. During the last few years, more and higher quality olive oil has been produced and consumers' taste has become more exquisite regarding this product (Sobral 2016). It has gone from a commodity product to a gourmet one, with new varieties within the product category appearing in the market at a voracious rhythm, making this a category worth studying.

People are spending more money than before but buying even less olive oil than they did in the previous years (Nielsen 2015). Is this only because it has become more expensive or are people really shifting their choices towards better quality and less quantity?

1.2 Problem Statement

The goal of this research is to understand how different packaging elements and characteristics related to the label and the container of olive oil products affect the purchase intent of Portuguese consumers for this product. Understanding what is the direct impact of these elements on purchase intent and, besides this, what is their effect on perceived quality and, consequently, on purchase intent as well, define the main objectives of this study. Essentially, the problem statement of this research can be summarized as:

Understanding the impact of different packaging elements on the purchase intentions of Portuguese consumers for olive oil products.

The following research questions substantiate this problem statement.

RQ₁: What packaging elements influence the purchase intent for olive oil?

The primary goal of this research is to answer this question, understanding if and what packaging elements affect the purchase intent for olive oil. However, as previously mentioned, it is not possible to study every element that could possibly have an impact on purchase intent.

Only some categories of elements will be taken into consideration and, as such, this research question can be divided into the following sub-questions:

RQ_{1a}: What label claims influence the purchase intent for olive oil?

RQ_{1b}: What label design elements influence the purchase intent for olive oil?

RQ_{1c}: What container design elements influence the purchase intent for olive oil?

Besides understanding the impact of the packaging elements in the purchase intent for olive oil, this research also aims to understand if those elements have an effect on the perceived quality of the products and, consequently, if this perceived quality affects the purchase intent for these products.

RQ₂: Do these packaging elements influence the perceived quality of olive oil?

Just as in the previous research question, this one can be divided into the following set of sub-questions:

RQ_{2a}: What label claims influence the perceived quality for olive oil?

RQ_{2b}: What label design elements influence the perceived quality for olive oil?

RQ_{2c}: What container design elements influence the perceived quality for olive oil?

1.3 Relevance

Even though some similar studies have already been conducted in the past, there is no study for the impact of packaging elements on the purchase intents of consumers for the category of olive oil in the Portuguese market.

It is estimated that 73% of the purchase decisions are made at the point of sale (Connolly and Davison 1996), which makes package a critical factor in the consumer decision-making process, as it communicates to the consumers at the moment of purchase (Carneiro et al. 2005). Thus, the fundamental purpose of this research is to understand which packaging elements the retailers and manufacturers should focus on when designing a package for an olive oil product. From the conclusions of this study, it will be possible to understand what are some of the most influential dimensions and elements that consumers pay attention to in a product's package, thus better understanding what matters the most to them and what affects the most their decision-making process.

The fact that these elements can easily be controlled by the retailers and manufacturers, makes this a valuable study, providing the necessary tools and information on how to influence consumers' purchase decisions.

1.4 Research methods

The research methods used for the present study are based on two different kinds of data: secondary data and primary data. Regarding the secondary data, several previous studies, articles and papers from different fields of study such as marketing, consumer behavior and brand management were taken into account when designing this study, both regarding their methodology and the results and conclusions obtained. Secondary data has the advantages of being easily accessible and relatively inexpensive, helping in the development of an approach to the problem and in the formulation of an appropriate research design by identifying the key variables to measure. It helps to interpret primary data with more insight and to validate qualitative research findings. On the other hand, sometimes secondary data has a limited relevance or accuracy regarding the problem at hand, making it not completely dependable. As for primary data – specific data originated by the researcher to solve the research problem (Malhotra 2010) – it was collected among Portuguese consumers of olive oil through an online survey and then statistically analyzed using IBM SPSS according to the objectives of the study. Using an online survey to collect primary data has the advantages of being a fast and cost efficient way, guaranteeing the respondents' anonymity and making it easier to reach certain target groups. However, this method of data collection has the disadvantages of lacking control over the data collection environment as well a possibility of occurrence of technical problems.

1.5 Dissertation outline

The next chapter of this dissertation presents a literature review, outlining what has already been done in the past by other authors regarding this topic and outlining the hypothesis that will guide this study. This is followed by a methodology chapter, explaining all the research techniques used to obtain the necessary data as well as the data analysis techniques used to answer the hypotheses. All the relevant information regarding the questionnaire and its constructs will also be presented in this chapter. Following this, there is a chapter where all the results of the questionnaire will be presented and analyzed (both generally and in-depth) and, to conclude, there is a final chapter dedicated to the general conclusions and implications of the present study and its results, as well as some limitations and further research opportunities in this field of study.

CHAPTER 2: LITERATURE REVIEW

This chapter will present the theoretical framework and existing empirical evidence for the key topics of this dissertation, based in numerous studies, from several academic journals and publications. The hypotheses behind this dissertation were extrapolated from these studies and will also be presented in this chapter. The first part of this review focuses on packaging, exploring its different elements, as well as its impact on consumers' purchase intent. This is followed by a perceived quality topic. Lastly, this chapter ends with a section dedicated to the olive oil category in the Portuguese market.

2.1. Packaging and Purchase Intention

Packaging plays a crucial role in the consumers' decision-making process regarding the purchase of food products - such as olive oil - and several of its elements can be studied. Previous research shows that, while the selection and initial purchase of olive oil is expected to be influenced mostly by non-sensory factors, such as convenience, price, branding or demographics (Jaeger 2006); the sensory factors tend to play a more significant role after the product has been purchased at least once, affecting mostly the repeated purchase (Delgado and Guinard 2011; Santosa and Guinard 2011). Companies should try to understand consumers' preferences, as well as their perceptions of sensory and non-sensory characteristics of food, to ensure product success (Moskowitz and Hartmann 2008; Torres-Moreno et al. 2012; Tuorila and Monteleone 2009). In this work, the focus will be put on elements related to the label's design and its claims, as well as some container design elements, such as transparency and the existence of a secondary packaging.

Purchase intention has been defined by Wu, Yeh, and Hsiao (2011) as the possibility that a consumer will plan to or will be willing to purchase a certain product or service in the future. It is a crucial measurement, both academically and managerially, as it represents a step that precedes a concrete buying behavior (de Magistris and Gracia 2008). Consumers' intention to purchase depends greatly on the degree to which they expect the product to satisfy their expectations about its use (Kupiec and Revell 2001), besides also depending on price, concept, positioning, promotions, advertising, package information, consumer awareness, nutritional characteristics among other factors (Garber, Hyatt, and Starr 2003; Lawless and Heymann 2010).

2.1.1. Label Claims

Consumers' food purchase behavior and their perceptions of the products appear to be greatly influenced by the product's label, which, in turn, is strongly influenced by the consumers' label knowledge and understanding, namely in terms of the information displayed and of the information obtained through label claims, as well as previous experiences with the product (Rozin, Pelchat, and Fallon 1986). Consequently, these perceptions affect consumers' purchase intentions and are advantageous to encourage repurchasing intention, as suggested by Cranage, Conklin, and Lambert (2004). It has also been found that the influence of label claims on consumers' acceptability and purchase intention is product-dependent (Baixauli et al. 2008; Fillion and Arazi 2002; Di Monaco, Ollila, and Tuorila 2005).

The study conducted by Samant and Seo (2016) provides empirical evidence that a higher visual attention paid to labels may translate into a positive purchase behavior (higher purchase intent, higher overall liking and higher trust in the product). A theoretical framework developed by Grunert and Wills (2007) demonstrates that individual interest and background knowledge of label claims motivate consumers to look out for these claims while buying food products. The more consumers are exposed to label claims, the higher the chances of the information actually being "perceived" by them. The perception leads not only to "understanding", indicating that consumers attach meaning to the information being perceived, but also "liking" the label claims, meaning that they find them useful and easy to comprehend. Subsequently, the understanding and liking of the label claims may be "used" in making choices with respect to product evaluation and purchase behavior. Hence, based on previous findings, there seems to be a possibility of increasing both consumer acceptability and purchase intentions by increasing the understanding of product labels by, for instance, introducing label claims that consumers are more familiarized with (Carneiro et al. 2005; Gifford and Bernard 2011; Grunert and Wills 2007; Lenhart et al. 2008; Van Wezemael et al. 2012).

Labels may include information about brand, descriptive food name, health benefits, origin, production method, nutritional qualities and ethics. These elements are part of the constructs that will be further analyzed in the present study.

There is a specific class of product properties, the "credence attributes", that include information regarding ethics, trust, health, organic, production method and nutritional value among others (Darby and Karni 1973; Fernqvist and Ekelund 2014). It was found that providing label information in the form of these claims enhanced consumers' product knowledge, resulting in higher product acceptability and purchase intentions in contrast to situations when no such information was provided (Bower, Saadat, and Whitten 2003; Cranage et al. 2004;

Gifford and Bernard 2011; Grunert 1997). For olive oil, nutritional properties depend mainly on the anti-oxidant content (phenolic compounds and tocopherols) and fatty acid composition (Bendini et al. 2007; Harwood and Aparicio 2000; Servili and Montedoro 2002). In this regard, labeling is important because it may show nutritional content or may suggest a particular benefit to attract consumers (Ares and Deliza 2010; Bialkova and van Trijp 2010). Thus, an hypothesis can be formulated for the effect of credence attributes:

H_{1a}: Consumers have a higher purchase intent for a product with a credence claim than for one without it.

In Portugal, the inclusion of a nutritional values table in the food products label is required by law and, as such, its influence towards purchase intent does not need to be tested.

Ethical information has been found to vary with personal interests, demographics, and, most importantly, environmental concerns (Cannoosamy, Pugo-Gunsam, and Jeewon 2014; Davies, Titterington, and Cochrane 1995). Consumers who show preference for food products associated with ethic-related claims are those genuinely concerned with environmental sustainability. However, studies have also shown that there is a gap between consumers' environmental concerns and their actual purchases of sustainable products (Grunert, Hieke, and Wills 2014), meaning that consumers may have environmental concerns, but that may not directly affect their purchase decisions. According to Wandel and Bugge (1997) who evaluated purchase priorities of Norwegian consumers for meat products, price might be a major reason why only a small segment of consumers consider environmental aspects when making purchase decisions. Consumers inability to completely understand the significance or meaning of environment-related label claims might be another reason for this attitude. From all this information, it has been decided that ethic-related claims will not be integrated in this study, as empirical evidence from previous studies shows that there is a gap between consumers' concerns regarding these issues and their actual purchase behavior.

Lenhart et al. (2008) found that label information regarding production method or technology is not always well accepted by consumers, who see such information as "too technical". Their somewhat limited understanding resulted in low purchase intentions for products with such claims. In another study by Carneiro et al. (2005), purchase intentions were found to be lessened for soybean oil labeled with a "transgenic" claim compared to soybean oil without such a claim, mainly because consumers did not completely understand the significance of the claim. As such, production method information will not be included in the label claims that will be studied in this work.

Regarding the information about product's origin, consumers have shown a greater preference for locally-manufactured food products rather than for imported food products (Hoffmann 2000), which shows that information regarding the region of origin of a product affects consumers' acceptability of it (Caporale et al. 2006). In a study conducted among Northern California consumers, region of origin has been identified as a critical factor influencing consumers' purchase of olive oil (Delgado and Guinard 2011; Santosa and Guinard 2011). In the present study, Italy will be used as the comparison country, as it is another Mediterranean country with a large consumption and production of olive oil. Thus, the following hypothesis can be formulated:

H_{1b}: Consumers have a higher purchase intent for a Portuguese product than for an Italian product.

Delgado et al. (2013) also included a blind tasting in their study, in which a particular segment of consumers showed a preference for 5 specific oils that shared a similar sensory profile, had a similar level of acidity, and were not very bitter or pungent. The preferences of this segment allowed the researchers to conclude that these were probably relatively 'new' consumers of EVOO who had not previously been exposed to these attributes in EVOO and as a consequence, did not like the other oils in the set (which they found too bitter or pungent).

2.1.2. Design

Several studies have sought to determine the relationships among design perceived typicality, aesthetic appreciation, and purchase intent.

The degree of perceived beauty of a product is based on the visual aspects inducing an hedonic response on the consumer (Charters 2006; Crilly, Moultrie, and Clarkson 2004; Holbrook 1980, 1986; Holbrook and Hirschman 1982; Veryzer 1993, 1995). In 1995, Bloch proposed a theoretical model of consumer response to product design and hypothesized that the aesthetic appreciation of a product positively impacts purchase intent. A considerable body of research also suggests that aesthetic appreciation is an important determinant of consumer preference, demonstrating the positive impact on product perceived value, and therefore on purchase intent, satisfaction, and loyalty (Bloch, Brunel, and Arnold 2003; Chitturi, Raghunathan, and Mahajan 2007, 2008; Creusen and Schoormans 2005; Creusen, Veryzer, and Schoormans 2010; Page and Herr 2002; Reimann et al. 2010; Rindova and Petkova 2007).

“Category-based visual codes” are the formal and graphic characteristics most frequently seen in a given category. They work as “category cues” for consumers and define a “dominant

graphic design” for the category in matters of package design (Celhay and Trinquécoste 2014; Dell’Era and Verganti 2007; Goode, Dahl, and Moreau 2013). When launching a new product into the market, companies have two choices for package designs: they can opt for keeping the existing codes for their product category and designing something similar to what is already in the market, or disrupting it and creating something new that breaks with these existing codes. Conforming has the advantage of reassuring consumers by giving them what they are familiar with (Erdem 1998; Heilman, Bowman, and Wright 2000; Milberg, Sinn, and Goodstein 2010; Miyazaki, Grewal, and Goodstein 2005), while breaking with the codes has distinct advantages as well: the brand becomes visually distinguishable from all others in the category, thus communicating - through its package graphic design - a distinct positioning of the product (Karjalainen 2001, 2007; Karjalainen and Snelders 2010; Krippendorff and Butter 1984; McCormack and Cagan 2004; Monö 1997; Orth and Malkewitz 2008; Pantin-Sohier 2009; Person et al. 2008). This stimulates consumer interest and curiosity, and ultimately the product gains in retail visibility (Garber, Hyatt, and Boya 2008; Schoormans and Robben 1997).

Consumer expertise in the product category also has a moderating effect in the relationships between perceived typicality, aesthetic appreciation and purchase intent. The higher the consumer expertise, the weaker the positive impact of perceived typicality on aesthetic appreciation and purchase intent.

Previous literature on consumer behavior indicates that category-based visual codes are linked to concepts of family resemblance, perceived typicality, and cognitive category. Consumers with a need for reassurance tend to look for familiarity; while novelty seeking suggests a need for stimulation (Celhay and Trinquécoste 2014). Previous studies also state that some consumers’ tendency to prefer atypical designs can be explained by the importance they give to the appearance of products (Hekkert, Snelders, and van Wieringen 2003). For these authors, the more important product appearance is for the consumer, the more this consumer will have the tendency to place value on the originality of the design. Conversely, when the appearance of the product is not important, the consumer will tend to prefer a packaging that is familiar. Moreover, the level of perceived risk at the time of purchase also plays an essential role. Consumers are more apt to accept atypical packaging when the perceived risk for that product category is low (Celhay and Trinquécoste 2014).

Delgado et al. (2013), developed a study in Northern California to understand consumer liking, purchase intent and sensory and nutritional expectations for EVOO based on the products’ packaging and labeling. Elements such as the shape and material of the bottle, as well as the label design, including its colors and the pictures on it were found to be correlated to the overall

liking of the product. All of these elements are of high relevance in the study of olive oil packaging and their impact must be analyzed and correlated to further understand what consumers value in olive oil packages.

Label Design

Delgado et al. (2013) in their study about evaluation of olive oil bottles and labels concluded that liking the label design was significantly correlated to liking the pictures and the color of the label.

The study about coffee packages conducted by Kobayashi and Benassi (2015) revealed that, in general, the inclusion of photos depicting coffee cups foam, steam and coffee beans on the front panel were desirable characteristics of instant coffee packaging. This can be translated into the following hypothesis for olive oil:

H₂: Consumers have a higher purchase intent for a product with a background picture on the label than for a product without it.

Container Design

Besides the marketing perspective, the packaging of olive oil also influences the retention of product properties and quality and it is also a way to expand markets. The study from Kobayashi and Benassi (2015) regarding the impact of packaging characteristics on purchase intent for coffee packages showed that consumers' criteria for purchase depended, among other factors, on the material of the package. For glass packaging, purchase intention depended more on price and increased with the use of what was determined in the study to be 'modern shapes', the ones allowing for better visualization, emphasizing the fact that transparency is an important criteria, as consumers want to be able to see the product inside the package (Kobayashi and Benassi 2015). As such, focusing on the transparency characteristic rather than on the material one, the following can be hypothesized for olive oil containers:

H_{3a}: Consumers have a higher purchase intent for a product with a transparent container than for one with an opaque container.

The material of the container and the conditions and length of storage are critical factors determining the shelf life of packaged olive oil (Kanavouras, Hernandez-Munoz, and Coutelieris 2006). In the study conducted by Delgado et al. (2013) about evaluation of bottles and labels of EVOO, the researchers concluded that liking the shape of the bottle was significantly correlated to liking the material of the bottle.

In the same study, Delgado et al. (2013) also found that liking the size of the bottle was not correlated to the overall liking of the bottle, which may be associated with the fact that consumers are using different types of olive oil for different purposes, such as cooking and seasoning, and are selecting the sizes accordingly (Santosa and Guinard 2011). Since it was found not to be correlated to the overall liking of the product, this aspect will not be tested in this analysis.

In the same study, when consumers were exposed to the olive oil by itself – without any packaging - they were only willing to pay less than \$10¹ a bottle, but once they were exposed to the whole product in its package, they were willing to pay more. Previous research shows that packaging attractiveness is a critical factor when selecting olive oil (Krystallis and Ness 2003). Besides the container packaging, there is a possibility of incorporating a secondary packaging, producing a more sophisticated look. There are already products in the Portuguese market with a secondary package but the evidence does not immediately suggest if consumers have a higher purchase intention for these products and, therefore, are willing to pay a premium for them, or if they see the secondary packaging as something unnecessary. Thus, another question rises as an hypothesis:

H_{3b}: Consumers have a higher purchase intent for a product with a secondary packaging than for a product without it.

2.1.3. Brand

Previous research by Chaniotakis, Lymperopoulos, and Soureli (2010) shows that brand is considered a determining factor for olive oil preference. However, it is important to observe that brand itself does not define purchase intention. Conclusions from the study conducted by Kobayashi and Benassi (2015) about coffee packages showed that even a well-known brand was not appreciated by the focus group participants if they did not like the product's shape, color, illustration, price and label information. Thus, it can be concluded that brand loyalty exists as long as the product package does not contain a set of undesired characteristics. Furthermore, the same study showed that, even though being a well-known brand was highlighted by the participants on the qualitative research, it was not considered a factor of greatest importance on purchase intention for most consumers.

¹ Please note that this study was conducted in Northern California; this price is not applicable in the Portuguese market.

The study conducted by Delgado et al. (2013) also suggested that the relatively ‘new’ consumers of EVOO would most frequently choose among products based on the familiarity that they had with the brands.

In addition, it has been showed that consumers tend to give higher liking scores when the brand is shown and they are familiar with it than in blind conditions for the same product (Caporale et al. 2006; Guinard et al. 2000).

In this regard, and taking into consideration the conclusions mentioned above, the effect of branding on purchase intent and perceived quality will not be analyzed in this study.

2.2. Perceived Quality

Perceived quality is one of the key criteria for a product’s evaluation and it can be defined as a global assessment of the consumer’s judgement about a product’s overall excellence or superiority (Aaker and Jacobson 1994; Zeithaml 1988). The way consumers perceive brands and products is a key determinant of long-term business-consumer relationships (Fournier 1998). Thus, building strong perceptions is a top priority for many firms today.

Product packaging represents an important factor contributing to product differentiation and competitive advantage (Rundh 2009). It is presented at the crucial moment when consumers are making the buying decision (Ampuero and Vila 2006), calling attention to the product and influencing the consumer purchase process (Löfgren, Witell, and Gustafsson 2008; Vazquez, Bruce, and Studd 2003). As such, if we take into account the previous assumptions, the following can be hypothesized for perceived quality:

H₄: Packaging elements will have an impact on consumers’ perceived quality regarding the product.

H_{4a}: Perceived quality is higher for a product with a credence claim on the label than for a product without it.

H_{4b}: Perceived quality is higher for a Portuguese product than for an Italian product.

H_{4c}: Perceived quality is higher for a product with a background picture on the label than for a product without it.

H_{4d}: Perceived quality is higher for a product with a transparent container than for one with an opaque container.

H_{4e}: Perceived quality is higher for a product with a secondary packaging than for a product without it.

The perceived quality of products and services is central to the theory that strong brands add value to consumers' purchase evaluation (Low and Lamb 2000), increasing the company's power to capture consumer preference and loyalty. Previous research shows that quality endorses many of the product's features and attributes that are responsible for satisfying the user's needs (Méndez, Oubiña, and Rubio 2008). Quality has such a strong effect on consumers that it influences their buying decisions and behavior and, consequently, their purchase intentions (Cronin, Brady, and Hult 2000). Monroe and Krishnan (1985), using Monroe's (1979) conceptualization of perceived value, provided a model relating price, perceived quality, perceived sacrifice, perceived value and willingness to buy. In this model, they suggested that higher prices lead to a higher perceived quality and consequently to a greater willingness to buy. Sethuraman and Cole (1997) also found out that perceived quality explains a considerable portion of the variance in the price premium consumers are willing to pay.

Prior literature has examined product quality as an antecedent of customer behavioral intention (Tsiotsou 2006) and product quality strongly influences consumer decision-making (Klein, Ettenson, and Morris 1998; Knight 1999). Research also shows that consumers make purchase decisions based on the quality signals that they experience (Iyer and Kuksov 2010), and consumer-perceived product quality influences attitude and purchase intent (Lin, Marshall, and Dawson 2009). Thus, it can be hypothesized that:

H₅: The higher (lower) the perceived quality of the product, the higher (lower) the purchase intent for that same product.

If a product meets or exceeds the consumer's quality expectations, it will strongly motivate repurchase behavior and inhibit switching behavior (Deng et al. 2010).

2.3. Olive Oil in Portugal

According to the results presented by Nielsen for the year 2015, Portuguese consumers went grocery shopping more times than in 2014 (+1,7%) and spent more money in these shopping sprees (3% increase, with a total average of 2.519€ per household).

Among all food product categories, vegetable fats increased 4% in 2015 when compared to the previous year, with a total value of 293 million €. However, olive oil was the only product with a positive growth in value, cooking oils and margarine both registered negative variations.

The olive oil product category was the 11th biggest one in value in the Portuguese market in 2015 (145 million €), representing a growth of 17% compared to the previous year. This growth was the 3rd biggest one across all food categories.

However, in volume, this market registered a decrease of 3%, selling a total of 37 million kilograms in 2015. These values suggest that consumers are buying less olive oil in terms of quantity but the value of these products is increasing, making them spend more money buying less quantity than before.

For the olive oil products, specifically, the virgin olive oil segment is growing while the extra virgin olive oil and the other olive oil categories are decreasing in importance.

The top 3 brands, both in value and volume, are Oliveira da Serra, Gallo and Serrata, representing 46% in value and 42% in volume, all together. Private labels, the ones owned by the retailers, competing directly with national brands, account for 32% in value and 35% in volume, representing an important category of products to be considered both in the development of this study and when analyzing the olive oil category in the Portuguese market. These private labels have impacted the retail environment in a crucial way, specially concerning the competition between the suppliers of national brands, who saw the entrance of new players in the market, offering a cheaper alternative to their products.

CHAPTER 3: METHODOLOGY

This chapter summarizes the methodology used in this study. It showcases the research strategy, the techniques used to collect the necessary data and the statistical tests that will be employed to test the hypotheses.

3.1 Research Approach

In order to achieve the goal of this study and answer the research questions formulated in chapter 1, different research design approaches were implemented throughout the entire process. Firstly, an exploratory design was conducted as it is a flexible and versatile approach, enabling the discovery of ideas and insights. This approach was used to determine the research topic and all the research questions and hypotheses associated with it, through the support and guidance of different sources of information such as academic publications and journals.

After that, the research followed a descriptive design approach, commonly used to describe market characteristics and functions, after the formulation of specific hypotheses; here, this was done through a survey, as a way to better understand and describe the characteristics of the relevant consumers as well as determining their perceptions and assessments of the different product characteristics and attributes being tested.

3.2 Secondary Data

Numerous literature sources were considered while designing the present study to support it and guide the necessary data collection. This allowed for the formulation of several hypotheses (see chapter 2) which are summarized in the following table, for a more convenient reading. Their impact on either purchase intent or perceived quality is also presented in a simplified way for a better comprehension.

Hypotheses		Impact on PI	Impact on PQ
<i>Hypotheses 1 to 3: Purchase Intent</i>			
<i>Hypothesis 1a:</i> Having a Credence Claim		Positive	-
<i>Hypothesis 1b:</i> Being a Portuguese Product		Positive	-
<i>Hypothesis 2:</i> Having a Background Picture		Positive	-
<i>Hypothesis 3a:</i> Having a Transparent Container		Positive	-
<i>Hypothesis 3b:</i> Having a Secondary Packaging		Positive	-
<i>Hypothesis 4: Perceived Quality</i>			
<i>Hypothesis 4a:</i> Having a Credence Claim		-	Positive
<i>Hypothesis 4b:</i> Being a Portuguese Product		-	Positive
<i>Hypothesis 4c:</i> Having a Background Picture		-	Positive
<i>Hypothesis 4d:</i> Having a Transparent Container		-	Positive
<i>Hypothesis 4e:</i> Having a Secondary Packaging		-	Positive
<i>Hypothesis 5: Relation</i>	Higher Perceived Quality	Positive	-
	Lower Perceived Quality	Negative	

Table 1: Hypotheses and their Impact on Purchase Intent and Perceived Quality

3.3 Primary Data

3.3.1 Data Collection

An online questionnaire (appendices 1 and 2) was developed using *Qualtrics* and administered by email and social media to reach a large sample and to assure that randomization worked as effectively and efficiently as possible. The data collection through an online survey allows an efficient distribution to a large audience with small costs and in a short period of time. It gives the respondents higher convenience and flexibility, as there are no special or temporal restrictions to answer the survey. Additionally, *Qualtrics* tools have extensive features to customize the survey to the needs and objectives of the research, alongside with simple data entry and analysis (Evans and Mathur 2005). The questionnaire was available for 9 days, from the 22nd to the 30th of May, 2017. The screening questions ensured that the questionnaire was distributed exclusively to Portuguese consumers of olive oil, currently living in Portugal.

A convenience sampling technique was used, as it is the most inexpensive and fastest method of sampling, efficiently reaching a large number of respondents, with a diverse demographic profile, who are relatively easy to find on the internet but are not only people known to the researcher (Malhotra 2010; Taylor 2017) The survey was conducted in Portuguese, the native language of the population being studied, in order to increase the respondents' familiarity with

the terms as well as the authenticity of their answers, while decreasing the risk of biases in the answers due to lack of English knowledge.

Participants answered the survey anonymously and were informed that they participating in a marketing study for an academic purpose only.

The questionnaire had the following structure: a first block of screening questions, followed by four blocks where participants were asked questions regarding purchase intent and perceived quality for labels and containers with different elements and a final block composed by demographic questions. In the four core blocks, the flow of the questionnaire was as follows: blocks 1 and 2 were focused on hypotheses H_{1a} , H_{1b} and H_2 , regarding the label elements being analyzed; all the participants were presented the image of the label with a background picture (A1) and, after that, respondents were randomly presented with two out of the four remaining label imagens (with credence claim (A2), Italian product (A3), Portuguese product (A4) and without background picture (A5)); as for blocks 3 and 4, these were related to hypotheses H_{3a} and H_{3b} , the ones about the container; all consumers were presented the transparent container (B1) and then, in the last block, the remaining two containers (opaque (B2) and with secondary packaging (B3)) were presented to respondents at a random order.



Figure 1: Survey Images for Label Elements; A1 to A5 (left to right)



Figure 2: Survey Images for Container Elements; B1 to B3 (left to right)

All the images were created specifically for this study, taking into consideration the products available in the Portuguese market. To add credibility, the images of the labels were placed onto a transparent bottle of olive oil so that participants could have a more realistic image when answering the survey questions. As mentioned in the previous chapter, no brands were presented in the packages to exclude the brand effect. Furthermore, the randomization of the order in which the elements were presented to the respondents, assured the control for decisions made without attention being paid to the product image presented. In the end, in the situations where respondents were presented only a partial part of the total options, none of the scenarios appeared significantly more than the others ($N_{\text{Claim}}=483$; $N_{\text{Italy}}=509$; $N_{\text{Portugal}}=480$; $N_{\text{NoPicture}}=452$), which gives the study the necessary reliability.

3.3.2 Indicators

The constructs used to design the questionnaire were taken from previous literature, a factor that strengthens their academic foundation and justifies their choice over other possible constructs. The following table shows the sources of the purchase intent and perceived quality constructs, as well as the sources of the definitions used for the packaging elements being studied.

Variable	Questions	Authors
Purchase Intent	1	Dodds, Monroe, and Grewal (1991)
Perceived Quality	4	Dodds, Monroe, and Grewal (1991)
<i>Packaging Elements</i>		
Credence Claim	1	Gifford and Bernard (2011) Fernqvist and Ekelund (2014)
Product's Origin	1	Hoffmann (2000)
Background Picture	1	Kobayashi and Benassi (2015)
Bottle Transparency	1	Delgado, Gómez-Rico, and Guinard (2013)
Secondary Packaging	1	Delgado, Gómez-Rico, and Guinard (2013)

Table 2: Survey Constructs

All constructs were measured through a seven-point Likert scale, to maintain the consistency across the study and to make the interpretation and analysis of the results comparable among all dimensions.

3.3.3 Data Analysis

The data collected through the *Qualtrics* survey was then exported to SPSS to be analyzed. The items were relabeled consistently and, when necessary, some variables were aggregated and new variables were created.

In order to statistically analyze the findings on this study, a set of statistical techniques were used.

Frequencies and descriptives were used to characterize the sample demographically and to contextualize the main variables of the study. The Cronbach's Alpha measurement was used for the reliability analysis of the perceived quality construct.

For hypotheses 1 through to 4, a set of paired-samples t-tests was conducted. As the objective was to study if there was a significant difference in the purchase intent and perceived quality for different pairs of packaging elements, this test was the appropriate one as it compares the means between two related groups on the same dependent variable.

The number of observations varied from hypothesis to hypothesis, as this test only takes into account the common observations between the two elements being compared. However, the total sample was big enough for this split to be done without compromising the reliability of the study and its conclusions.

For hypothesis 5, a linear regression was conducted to study the relation between perceived quality and purchase intent; this test is commonly used to try to predict the value of one

dependent variable (purchase intent) based on the value of another variable(s) (perceived quality). In other words, the objective was to assess whether perceived quality explained or not (part of) the purchase intent behavior.

For all the tests conducted, a confidence interval of 95% was adopted. Therefore, a p-value of 0,05 represented the decision-making point whether to accept or reject hypotheses.

CHAPTER 4: RESULTS AND DISCUSSION

4.1 Sample Characterization

A total of 1617 participants opened the survey and, out of this group, a total of 1094 complete responses were recorded, corresponding to a response rate of 67,66%. From these responses, 132 were eliminated through the screening questions, leaving a total of 962 responses that were considered valid for the analysis, representing a valid response rate of 59,49%.

The exclusion of respondents in the screening questions stage was based on the criteria that if they were either not Portuguese, not living in Portugal or stated that they are not consumers of olive oil, their insights would not be relevant for the present study.

The majority of the respondents were women (73,1%), below the age of 55 (94,2%), with a predominance of young respondents between the ages of 18 and 25 years old (56,3%) and mostly single (67,6%). Most respondents were either students (55,5%) or currently employed (40,1%), having completed or currently completing either a bachelor (49,8%) or a master degree (33%). Most respondents stated that they have a monthly income (after tax) below 2000€ (62,2%) and 20,8% of the respondents preferred not to share their income level information. Households were mostly composed by 3 (28,5%) or 4 people (34,4%) and 69,8% of the respondents are currently living in the big metropolitan areas of Lisbon and Oporto (for the complete results see appendix 3).

Despite the large number of respondents, the sample cannot be considered representative of the Portuguese population, as the quotas for several demographic categories are not balanced; mainly due to the employment of a convenience sampling technique.

4.2 Reliability Analysis

As the perceived quality construct had four items, its level of reliability needed to be checked. The Cronbach's Alpha measurement was used to assess the internal validity and consistency of the construct. This measurement is commonly used when there are multiple Likert scale questions, as a way to determine if the scale is reliable.

The following table presents the values for the Cronbach's Alpha and for the corrected item-total correlation for the perceived quality construct per packaging element being tested. As respondents only answered questions regarding some of the elements, it was impossible to determine a unique Cronbach's Alpha value for the perceived quality construct as a whole.

	Background Picture	Credence Claim	Italian Product	Portuguese Product	Empty Label	Transparent Container	Opaque Container	Secondary Packaging
Cronbach's Alpha	0,894	0,930	0,939	0,931	0,943	0,899	0,938	0,946
Corrected Item-Total Correlation	0,678– 0,839	0,782– 0,874	0,823– 0,893	0,753– 0,892	0,816– 0,908	0,698– 0,845	0,795– 0,904	0,814– 0,912

Table 3: Reliability Measurements of Perceived Quality per Packaging Element

According to George and Mallery (2003), values for the Cronbach's Alpha below 0,5 are unacceptable, between 0,5 and 0,6 are poor, between 0,6 and 0,7 are questionable, between 0,7 and 0,8 acceptable, between 0,8 and 0,9 good, and above 0,9 they are excellent. The values obtained in this study are all above 0,890 which attests to a good, if not excellent, reliability of the scale used in the questionnaire for all the elements presented to the respondents, guaranteeing accuracy when analyzing the data. Such a result was expected, given that this scale had already been used in previous studies and, as such, its reliability had already been studied.

Furthermore, the values of the corrected item-total correlation appear to be acceptable for all elements since they are largely above 0,2 (Field 2009; Nunnally and Bernstein 1999).

For some of the packaging elements, the Cronbach's Alpha value would increase by removing item 4 from the perceived quality construct. However, as this was a very small increase, all the items were kept as originally presented in the questionnaire.

4.3 Descriptive Statistics

As mentioned in the previous chapters, the constructs of purchase intent and perceived quality have been tested for different packaging elements. The following table shows the mean score for these constructs for each of the packaging elements.

	N	Mean		Std. Deviation	
		Purchase Intent	Perceived Quality	Purchase Intent	Perceived Quality
Background Picture (A1)	962	4,54	4,67	1,657	1,158
Credence Claim (A2)	483	4,69	4,94	1,612	1,154
Italian Origin (A3)	809	3,80	4,66	1,741	1,161
Portuguese Origin (A4)	480	5,30	5,32	1,475	1,117
Empty Label (A5)	452	3,76	4,05	1,719	1,384
Transparent Container (B1)	962	2,20	3,04	1,497	1,326
Opaque Container (B2)	962	2,38	3,20	1,630	1,544
Secondary Packaging (B3)	962	2,89	3,71	1,548	1,441

Table 4: Descriptive Statistics for Purchase Intent and Perceived Quality

As the perceived quality construct had several items in it, a new variable was created for each element, composed by the mean results of the four items.

Purchase intent values are lower than perceived quality one for all elements which can be explained by the fact that people tend not to give their most truthful answer when asked about purchase intent or willingness to pay (Jaeger, Lusk, and McLaughlin 2007).

The packaging with the Portuguese origin label registered the highest value for both the purchase intent and the perceived quality, which can indicate that this really is a relevant element for consumers when carrying out a decision-making process regarding olive oil.

Values for the container elements are lower than for label elements, which may be related to the images presented in the questionnaire, as these ones did not present any label, leading the respondents to trust them less than the other pictures which seemed more reliable, being closer to real products.

4.4 In-Depth Analysis

4.4.1 The Impact of Packaging Elements on Purchase Intent

H_{1a} : Consumers have a higher purchase intent for a product with a credence claim than for one without it.

	Mean	N	Std. Deviation	Std. Error Mean
A1	4,55	483	1,681	0,076
A2	4,69	483	1,612	0,073

Table 5: Paired Samples Statistics for A1 and A2 (purchase intent)

	Paired Differences			t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean			
A1 - A2	-0,145	1,506	0,069	-2,114	482	0,035

Table 6: Paired Samples Test for A1 and A2 (purchase intent)

A paired-samples t-test was conducted to compare the purchase intent of the respondents for a label with a credence claim on it (A2) and a label without it (A1). The test showed that there was a significant difference in the scores for the label without a claim (mean=4,55; SD=1,681) and for the label with a credence claim (mean=4,69; SD=1,612); $t(482)=-2,114$, $p=0,035$.

These results suggest that having a credence claim really does have a positive effect on the consumers' purchase intent for olive oil, thus validating the hypothesis.

H_{1b}: Consumers have a higher purchase intent for a Portuguese product than for an Italian product.

	Mean	N	Std. Deviation	Std. Error Mean
A3	3,85	172	1,723	0,131
A4	5,35	172	1,429	0,109

Table 7: Paired Samples Statistics for A3 and A4 (purchase intent)

	Paired Differences			t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean			
A3 - A4	-1,500	1,862	0,142	-10,564	171	0,000

Table 8: Paired Samples Test for A3 and A4 (purchase intent)

To compare the purchase intent of the respondents for an Italian product (A3) and a Portuguese one (A4), another paired-samples t-test was conducted. The test showed that there was a significant difference in the mean scores for the Italian product (mean=3,85; SD=1,723) and the Portuguese product (mean=5,35; SD=1,429); $t(171)=-10,564$, $p=0,000$.

It must be noted that the sample in this test was smaller than in the other ones, due to the design of the questionnaire, which made the sample of respondents who saw both A3 and A4 smaller than in the other cases.

These results suggest that being a Portuguese product really does have a positive effect on the consumers' purchase intent for olive oil, when compared to an Italian product. However, it is not possible to conclude if this is applicable only for an Italian product specifically or if this conclusion can be extrapolated to products from other origins.

H₂: Consumers have a higher purchase intent for a product with a background picture on the label than for a product without it.

	Mean	N	Std. Deviation	Std. Error Mean
A1	4,54	452	1,620	0,076
A5	3,76	452	1,719	0,081

Table 9: Paired Samples Statistics for A1 and A5 (purchase intent)

	Paired Differences			t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean			
A1 - A5	0,785	1,507	0,071	11,080	451	0,000

Table 10: Paired Samples Test for A1 and A5 (purchase intent)

In this hypothesis, the comparison is made for the purchase intent of a product with a background picture on the label (A1) and one without any picture (A5). For this, another paired-samples t-test was conducted. The test showed that there was a significant difference in the scores for the label with the background picture (mean=4,54; SD=1,620) and the one without (mean=3,76; SD=1,719); $t(451)=11,080$, $p=0,000$.

These results suggest that having a background picture on the label of the product really has a positive effect on the consumers' purchase intent for olive oil, validating the proposed hypothesis.

H_{3a}: Consumers have a higher purchase intent for a product with a transparent container than for one with an opaque container.

	Mean	N	Std. Deviation	Std. Error Mean
B1	2,20	962	1,497	0,048
B2	2,38	962	1,630	0,053

Table 11: Paired Samples Statistics for B1 and B2 (purchase intent)

	Paired Differences			t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean			
B1 - B2	-0,177	1,612	0,052	-3,400	961	0,001

Table 12: Paired Samples Test for B1 and B2 (purchase intent)

In this hypothesis, the objective was to understand the impact of the container's transparency on purchase intent. A paired-samples t-test was conducted to compare the purchase intent for a

transparent container (B1) and for an opaque one (B2). The test showed that there was a significant difference in the scores for the transparent container (B1) (mean=2,20; SD=1,497) and for the opaque container (B2) (mean=2,38; SD=1,630); $t(961)=-3,400$, $p=0,001$.

Even though the results of the test show that there is a significant difference, the hypothesis formulated here is not validated, as the results suggest that the effect on purchase intent appears to be the opposite of what was proposed based on the literature; it is higher for an opaque container and not for a transparent one. As so, it is possible to conclude that the results suggest that having an opaque container has a positive effect on the consumers' purchase intent for olive oil, when compared to having a transparent container.

H_{3b}: Consumers have a higher purchase intent for a product with a secondary packaging than for a product without it.

	Mean	N	Std. Deviation	Std. Error Mean
B1	2,20	962	1,497	0,048
B3	2,89	962	1,548	0,050

Table 13: Paired Samples Statistics for B1 and B3 (purchase intent)

	Paired Differences			t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean			
B1 - B3	-0,691	1,595	0,051	-13,441	961	0,000

Table 14: Paired Samples Test for B1 and B3 (purchase intent)

Lastly, another paired-samples t-test was conducted to compare the purchase intent of the respondents for a single container (B1) and for one with a secondary packaging (B3). The test showed that there was a significant difference in the scores for the single container (mean=2,20; SD=1,497) and for the one with a secondary packaging (mean=2,89; SD=1,548); $t(961)=-13,441$, $p=0,000$.

These results suggest that having a secondary packaging has a positive effect on the consumers' purchase intent for olive oil, validating the hypothesis formulated.

4.4.2 The Impact of Packaging Elements on Perceived Quality

To test for the hypotheses within H4, a set of paired-samples t-tests were conducted for each relevant pair of elements being analyzed.

H_{4a}: Perceived quality is higher for a product with a credence claim on the label than for a product without it.

	Mean	N	Std. Deviation	Std. Error Mean
A1	4,6522	483	1,12087	0,05100
A2	4,9410	483	1,15360	0,05249

Table 15: Paired Samples Statistics for A1 and A2 (perceived quality)

	Paired Differences			t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean			
A1 - A2	-0,28882	0,91561	0,04166	-6,932	482	0,000

Table 16: Paired Samples Test for A1 and A2 (perceived quality)

Hypothesis 4a intended to compare the perceived quality for a label with a credence claim (A2) and one without it (A1). The test showed that there was a significant difference in the scores for the label without a credence claim (mean=4,6522; SD=1,12087) and for the label with that claim (mean=4,9410; SD=1,15360); $t(482)=-6,932$, $p=0,000$.

These results suggest that having a credence claim really has a positive impact on consumers' perceived quality of olive oil, thus validating the hypothesis.

H_{4b}: Perceived quality is higher for a Portuguese product than for an Italian product.

	Mean	N	Std. Deviation	Std. Error Mean
A3	4,5814	172	1,16976	0,08919
A4	5,3430	172	1,04227	0,07947

Table 17: Paired Samples Statistics for A3 and A4 (perceived quality)

	Paired Differences			t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean			
A3 - A4	-0,76163	1,12968	0,08614	-8,842	171	0,000

Table 18: Paired Samples Test for A3 and A4 (perceived quality)

Here the comparison was made between the perceived quality for an Italian product (A3) and a Portuguese one (A4). The test showed that there was a significant difference in the scores both products: Italian product (mean=4,5814; SD=1,16976); Portuguese product (mean=5,3430; SD=1,04227); $t(171)=-8,842$, $p=0,000$.

These results suggest that being a Portuguese product really has a positive impact on consumers' perceived quality of olive oil. As it happened in the purchase intent hypothesis, this is the pair of elements where the difference in the means registered the highest value.

This validates the hypothesis formulated but, as for purchase intent, it is not possible to extrapolate this conclusion to other product origins based solely on this test.

H_{4c}: Perceived quality is higher for a product with a background picture on the label than for a product without it.

	Mean	N	Std. Deviation	Std. Error Mean
A1	4,7118	452	1,16135	0,05463
A5	4,0487	452	1,38435	0,06511

Table 19: Paired Samples Statistics for A1 and A5 (perceived quality)

	Paired Differences			t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean			
A1 - A5	0,66316	0,99948	0,04701	14,106	451	0,000

Table 20: Paired Samples Test for A1 and A5 (perceived quality)

In this hypothesis, a paired-samples t-test was conducted to compare the perceived quality for a label with a background picture (A1) and one without (A5). The test showed that there was a significant difference in the scores for the label with the background picture (mean=4,7118; SD=1,16135) and the label without it (mean=4,0487; SD=1,38435); $t(451)=14,106$, $p=0,000$.

These results suggest that the perceived quality for olive oil is positively influenced by the presence of a background picture in the product's label, validating the hypothesis formulated based on the literature.

H_{4d}: Perceived quality is higher for a product with a transparent container than for one with an opaque container.

	Mean	N	Std. Deviation	Std. Error Mean
B1	3,0429	962	1,32594	0,04275
B2	3,2048	962	1,54449	0,04980

Table 21: Paired Samples Statistics for B1 and B2 (perceived quality)

	Paired Differences			t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean			
B1 - B2	-0,16190	1,43021	0,04611	-3,511	961	0,000

Table 22: Paired Samples Test for B1 and B2 (perceived quality)

This hypothesis intended to compare the perceived quality for a product with a transparent container (B1) and one with an opaque container (B2). The test showed that there was a significant difference in the scores for the transparent container (mean=3,0429; SD=1,32594) and the opaque container (mean=3,2048; SD=1,54449); $t(961)=-3,511$, $p=0,000$.

Similarly to what happened in the purchase intent hypothesis for this element, these results suggest that the transparency of the container really does have an effect on the perceived quality of olive oil however, this effect is the opposite of what was predicted. Perceived quality is higher for the opaque container than for the transparent one. As so, the hypothesis was not validated.

H_{4e}: Perceived quality is higher for a product with a secondary packaging than for a product without it.

	Mean	N	Std. Deviation	Std. Error Mean
B1	3,0429	962	1,32594	0,04275
B3	3,7082	962	1,44091	0,04646

Table 23: Paired Samples Statistics for B1 and B3 (perceived quality)

	Paired Differences			t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean			
B1 - B3	-0,66528	1,42652	0,04599	-14,465	961	0,000

Table 24: Paired Samples Test for B1 and B3 (perceived quality)

The test conducted here compares the perceived quality for a product with a secondary packaging (B3) and one without it (B1). The test showed that there was a significant difference in the scores for the single packaging (mean=3,0429; SD=1,32594) and the one with a secondary packaging (mean=3,7082; SD=1,44091); $t(961)=-14,465$, $p=0,000$.

These results suggest that having a secondary packaging really has an impact on consumers' perceived quality of olive oil, thus validating the hypothesis.

4.4.3 The Relation between Purchase Intent and Perceived Quality

H₅: The higher (lower) the perceived quality of the product, the higher (lower) the purchase intent for that same product.

To test for this hypothesis, a linear regression was conducted with purchase intent as the dependent variable and the perceived quality for each element as independent variables.

Given that the perceived quality construct was analyzed through four items, it could not be used in the regression directly. As so, a new set of variables was created; for each element, a new variable was created, resulting from the mean of the results of the four items in perceived quality. As for elements A2 to A5 there were some missing values, because respondents only answered to two of these four elements. So, in order to be able to conduct a linear regression, a new set of variables needed to be created where the missing values were replaced by the series mean, in an attempt to affect the results of the study as little as possible.

To have a single value for purchase intent for each respondent, a new variable was also created, with its value being the mean of the purchase intent results for all elements in the study.

With all these new variables, a linear regression could be used to predict purchase intent based on the perceived quality for all the elements being tested in this study.

First it was necessary to verify that all the assumptions of the linear regression were met: error being normally distributed, mean of error term being zero, variance of error term being constant, error terms being independent of each other and variables of the independent variable being fixed. With all these assumptions validated, the linear regression could be used for this test (see appendix 4 for the complete output).

	Unstandardized coefficients		Sig.
	B	Std. Error	
(constant)	-1,353	0,247	0,000
A1	0,166	0,032	0,000
A2	0,154	0,033	0,000
A3	0,125	0,031	0,000
A4	0,171	0,035	0,000
A5	0,117	0,029	0,000
B1	0,139	0,022	0,000
B2	0,138	0,020	0,000
B3	0,121	0,021	0,000

Table 25: Coefficients for Linear Regression (H5)

A significant regression was found ($F(8,953)=128,237$; $p=0.000$), with an R^2 of 0,518.

All of the predictors have a positive impact on purchase intent, since they are all statistically significant ($p=0,000$). The most relevant predictor is A4, the product with a Portuguese origin claim on the label. ($B=0,171$), while the least relevant one is A5, the empty label ($B=0,117$).

The following table presents a summary of all the hypotheses and the test results for each of them.

Hypotheses	Test Results
Hypothesis 1a	Validated by Paired Samples T-test
Hypothesis 1b	Validated by Paired Samples T-test
Hypothesis 2	Validated by Paired Samples T-test
Hypothesis 3a	Not Validated
Hypothesis 3b	Validated by Paired Samples T-test
Hypothesis 4a	Validated by Paired Samples T-test
Hypothesis 4b	Validated by Paired Samples T-test
Hypothesis 4c	Validated by Paired Samples T-test
Hypothesis 4d	Not Validated
Hypothesis 4e	Validated by Paired Samples T-test
Hypothesis 5	Validated by Linear Regression

Table 26: Summary of Hypotheses and Test Results

CHAPTER 5: CONCLUSIONS AND LIMITATIONS

In the competitive industry of fast-moving consumer goods, it is increasingly important for manufactures, as well as retailers, to be aware of the impact that different packaging elements have on consumers' purchase intent and perceived quality of the product and, moreover, it is essential that manufacturers learn how to maximize that impact in a way that is favorable for themselves. The objective of this research was to provide valuable insights on these matters for this industry, especially regarding the Portuguese market.

5.1 Main Findings & Conclusions

Even though the results were not always consensual with what was found in the literature, the findings of this study suggest that there is, in fact, a relationship between several packaging elements and the purchase intent and perceived quality that people acknowledge the product to have. The direction and strength of this relationship varies according to the element being analyzed but, nevertheless, there is always some impact.

Regarding purchase intent, previous literature suggests several elements in the packaging that would have an impact, be it either a positive or a negative impact. From all those elements, the ones that were chosen for this study were proven to be relevant, according to the findings.

The inclusion of a credence claim was found to positively influence the purchase intent for the product, as suggested by Gifford and Bernard (2011). This influence on the purchase intent also comes as a result of the enhanced product knowledge consumers may have and consequent acceptability of such product (Cranage et al. 2004). Baixauli et al. (2008) suggested that this influence of label claims on the consumers' acceptability and purchase intent is product-dependent, making the impact not visible for all products. The finding of this study indicates that olive oil is one of the products where this influence is recognizable: including a credence claim positively impacts purchase intent.

Similarly, being a Portuguese product was another characteristic that positively impacted purchase intent, when compared to being an Italian product. This was expected, according to the previous findings of the study conducted by Caporale et al. (2006), which suggested that information regarding the origin of the product affects the consumers' acceptability of that product. Hoffmann (2000) suggested that consumers have a greater preference for national products compared to imported ones. He stated that this was valid for food products and, as suggested by the findings of the present study, that preference exists for olive oil, at least for a

Portuguese product that was compared to an Italian one. However, this conclusion cannot be extrapolated to other origins based solely on this study, as previously mentioned.

In what concerns the design of the label and of the package itself, there are different approaches to the topic and different expectations on the consumers' reaction to those design elements. The findings of this study suggest that the design elements analyzed have an impact on the consumers' purchase intent for the product. These findings are in accordance with what had been hypothesized by Bloch in 1995 – the aesthetic appreciation of a product positively impacts purchase intent. The real challenge for manufacturers is understanding what makes a product aesthetically appreciated by its target consumers. Having a picture in the background of the label is suggested to positively influence purchase intent in this study but, in a study about coffee packages conducted by Kobayashi and Benassi (2015), it was found that the image itself is not so relevant; all the focus group participants showed preference for a package with an image but that one picture was considered displeasing, showing that it is an important element in the overall look of the product but there are other elements that consumers consider more relevant and to which their attention is firstly directed.

Even though previous literature suggested that consumers have a preference for transparent containers for a better visualization of the product (Kobayashi and Benassi 2015), the findings of this study suggest otherwise. Between a transparent container and an opaque one, consumers show a higher purchase intent for the opaque one. This might be due to the fact that currently there is a sense of exclusivity and a gourmet and premium perception associated with dark packages in certain product categories, such as olive oil. This association is being remarked by the appearance of some products in the market that are publicized as being of higher quality and their packaging normally shows darker colors and a lack of transparency (e.g. Colheita ao Luar, Gallo).

The existence of a secondary packaging was found to positively influence the purchase intent for olive oil, as suggested by the previous literature. There is an idea that this extra packaging gives the product a more sophisticated appearance, something highly appreciated by the consumers. Literature shows that, despite having a higher purchase intent for a product with a secondary packaging, consumers do not have the same higher values when it comes to their willingness to pay, as they associate this extra packaging with an extra cost that is not seen as necessary for an everyday product. As so, this feature is seen as an extra that is only considered for special occasions.

The findings of the study regarding perceived quality are very similar to the findings described for purchase intent. Products showing either a credence claim, a Portuguese origin label, a

background picture, a secondary packaging or an opaque container were found to have higher perceived quality than the products they were directly analyzed against. If, as determined by Zeithaml (1988), perceived quality is one of the key criteria for a product's evaluation, it is possible to understand that, by positively impacting the perceived quality of a product through its packaging elements, manufacturers also influence positively the product's evaluation and, consequently, the probability that this product will be considered in the buying decision process of the consumers.

5.2 Managerial / Academic Implications

Academically, this study contributed with noteworthy conclusions to previous literature, confirming that several packaging elements have an impact on purchase intent and showing that there is a relationship between perceived quality and purchase intent. This study shows that, for this sample of Portuguese individuals, there is a significantly lower purchase intent for products whose packaging is missing some crucial elements. This is a strong contribution to research, which should be further investigated to find out other crucial elements and to reach more generic and solid conclusions.

There are few references made in the existing academic studies to the impact of packaging elements in a product that belongs to one of the strongest categories of a certain country, as it is the case of olive oil for Portugal. In situations like this, both purchase intent and perceived quality are influenced by several factors, including the cultural relation developed between the individuals and the product. Most of the existing studies are focused on products that have no cultural connection with the country, besides consumption of that product, as it is the case of olive oil or coffee in the United States of America. As so, this study enriches the existing literature on the topic.

From a managerial perspective, this research produced valuable insights on how to increase purchase intent and perceived quality through the manipulation of several packaging elements. These are crucial insights for manufacturers acting in the Portuguese market, who can now find support in this dissertation.

Manufacturers should strive to continuously improve the quality of their products. More than improving it, they must ensure that this improvement is perceived by the consumers. This means that the improvements do not necessarily need to translate into changes in the manufacturing components of the product itself, but may translate into changes in the packaging of the product. As suggested in this research, the inclusion of the correct elements in the packaging positively impacts the perceived quality that consumers have of that product. Retailers must understand

which elements affect consumers' quality judgements for their product category in particular and make use of them in their products.

5.3 Limitations and Further Research

Although this study provided valuable insights, as well as conclusions aligned with previous research, it also presented some limitations that should be considered.

First, self-administered surveys are indeed less intrusive and more suitable for sensitive topics such as purchase intent (Evans and Mathur 2005), but it is generally assumed that intentions rather than actual behaviors are reported (Carrington, Neville, and Whitwell 2010). In general, self-reported behaviors are vulnerable to the social desirability bias (Samant and Seo 2016), which occurs when respondents "feel social pressure to respond with answers in research they believe to be socially acceptable" (Carrington et al. 2010). Even though the questionnaire was designed to reduce this bias, it is still present, and, as such, is a limitation of the methodology used and might partially explain the results obtained.

Additionally, even though there were a large enough number of respondents to the questionnaire to constitute a valid representation of the Portuguese population, due to the randomization scenarios, the sample became too small in some situations. Besides this, and mostly due to the fact that the data collection was based on a convenience sample, the demographic quotas were not met, meaning that the findings of this study can be applied to the sample but should not be extrapolated to the entire Portuguese population. It would be interesting to repeat the study with a representative and random sample, producing more accurate and reliable results, to see if the conclusions would be similar.

An interesting opportunity for further research would be to improve the understanding of the possible relation between the constructs used in this study. This could be done by, for example, using the perceived quality construct as an independent variable and introducing new product categories as moderators or mediators, analyzing if the relations between the constructs vary according to the product categories. This would use the present study as a background but could generate a new perspective on the topic. There are several opportunities for further research to be conducted on this topic, using the constructs as well as the results and conclusions obtained in this study.

Portugal seems to be a very price-sensitive market, mainly due to the adverse economic context and the economic crisis from which the country suffered great repercussions. It would be interesting for further research to be conducted in other countries, to understand to what extent the economic power of a country can shape the results.

Perceived quality can be considered a long-term construct, as it is generally built over time, depending on the consumers' interaction with the product. For further research, it would be interesting for experiments to be conducted over a large period of time, to understand if the long-term exposure to the products would produce different results.

Another interesting change would be to study the effect of the packaging elements on other constructs such as brand equity, either as a dependent variable or as a mediator for purchase intent.

Further research could also evaluate the impact of other packaging elements and, regarding methodology, an in-store experiment could be conducted with product replicas, to observe the alignment of behavior of the consumers in this environment versus their answers in the questionnaire.

REFERENCE LIST

- Aaker, David A. and Robert Jacobson (1994), "The Financial Information Content of Perceived Quality," *Journal of Marketing Research*, 191–201.
- Ampuero, Olga and Natalia Vila (2006), "Consumer Perceptions of Product Packaging," *Journal of Consumer Marketing*, 23(2), 100–112
- Ares, Gastón and Rosires Deliza (2010), "Studying the Influence of Package Shape and Colour on Consumer Expectations of Milk Desserts Using Word Association and Conjoint Analysis," *Food Quality and Preference*, 21(8), 930–37.
- Baixauli, R., A. Salvador, Guillermo Hough, and S. M. Fiszman (2008), "How Information about Fibre (Traditional and Resistant Starch) Influences Consumer Acceptance of Muffins," *Food Quality and Preference*, 19(7), 628–35.
- Bendini, Alessandra, Lorenzo Cerretani, Alegria Carrasco-Pancorbo, Ana Maria Gómez-Caravaca, Antonio Segura-Carretero, Alberto Fernández-Gutiérrez, and Giovanni Lercker (2007), "Phenolic Molecules in Virgin Olive Oils: A Survey of Their Sensory Properties, Health Effects, Antioxidant Activity and Analytical Methods. An Overview of the Last Decade," *Molecules*, 12(8), 1679–1719.
- Bialkova, Svetlana and Hans van Trijp (2010), "What Determines Consumer Attention to Nutrition Labels?," *Food Quality and Preference*, 21(8), 1042–51.
- Bloch, Peter H., Frédéric F. Brunel, and Todd J. Arnold (2003), "Individual Differences in the Centrality of Visual Product Aesthetics: Concept and Measurement," *Journal of Consumer Research*, 29(4), 551–65.
- Bloch, Peter H. (1995), "Seeking the Ideal Form : Product Design and Consumer Response," *Journal of Marketing*, 59(3), 16–29.
- Bower, John A., Mohammad A. Saadat, and Catherine Whitten (2003), "Effect of Liking, Information and Consumer Characteristics on Purchase Intention and Willingness to Pay More for a Fat Spread with a Proven Health Benefit," *Food Quality and Preference*, 14(1), 65–74.
- Cannoosamy, Komeela, Prity Pugo-Gunsam, and Rajesh Jeewon (2014), "Consumer Knowledge and Attitudes toward Nutritional Labels," *Journal of Nutrition Education and Behavior*, 46(5), 334–40.
- Caporale, Gabriella, Sonia Policastro, Angela Carlucci, and Erminio Monteleone (2006), "Consumer Expectations for Sensory Properties in Virgin Olive Oils," *Food Quality and*

- Preference*, 17(1), 116–25.
- Carneiro, João de D. S., Valéria P. R. Minim, Rosires Deliza, Carlos H. O. Silva, Joel C. S. Carneiro, and Fabiana P. Leão (2005), “Labelling Effects on Consumer Intention to Purchase for Soybean Oil,” *Food Quality and Preference*, 16(3), 275–82.
- Carrington, Michal J, Benjamin A Neville, and Gregory J Whitwell (2010), “Why Ethical Consumers Don’t Walk Their Talk: Towards a Framework for Understanding the Gap Between the Ethical Purchase Intentions and Actual Buying Behaviour of Ethically Minded Consumers,” *Journal of Business Ethics*, 97, 139–58.
- Celhay, Franck and Jean François Trinquecoste (2014), “Package Graphic Design: Investigating the Variables That Moderate Consumer Response to Atypical Designs,” *Journal of Product Innovation Management*, 32(6), 1014–32.
- Chaniotakis, Ioannis E., Constantine Lympelopoulous, and Magdalini Soureli (2010), “Consumers’ Intentions of Buying Own-Label Premium Food Products,” *Journal of Product & Brand Management*, 19(5), 327–34.
- Charters, Steve (2006), “Aesthetic Products and Aesthetic Consumption: A Review,” *Consumption Markets & Culture*, 9(3), 235–55
- Chitturi, Ravindra, Rajagopal Raghunathan, and Vijay Mahajan (2008), “Delight by Design: The Role of Hedonic Versus Utilitarian Benefits,” *Journal of Marketing*, 72(3), 48–63.
- Chitturi, Ravindra, Rajagopal Raghunathan, and Vijay Mahajan (2007), “Form Versus Function: How the Intensities of Specific Emotions Evoked in Functional Versus Hedonic Trade-Offs Mediate Product Preferences,” *Journal of Marketing Research*, XLIV(November), 702–14.
- Connolly, Amanda and Lucy Davison (1996), “How Does Design Affect Decisions at Point of Sale?,” *The Journal of Brand Management*, 4(2), 100–107.
- Cranage, David A., Martha T. Conklin, and Carolyn U. Lambert (2004), “Effect of Nutrition Information in Perceptions of Food Quality, Consumption Behavior and Purchase Intentions,” *Journal of Foodservice Business Research*, 7(1), 43–61.
- Creusen, Marielle E.H. and Jan P.L. Schoormans (2005), “The Different Roles of Product Appearance in Consumer Choice,” *Journal of Product Innovation Management*, 22(1), 63–81.
- Creusen, Mariëlle E.H., Robert W. Veryzer, and Jan P.L. Schoormans (2010), “Product Value Importance and Consumer Preference for Visual Complexity and Symmetry,” *European Journal of Marketing*, 44(9/10), 1437–52.
- Crilly, Nathan, James Moultrie, and P John Clarkson (2004), “The Visual Domain in Product

- Design,” *Design*, 25, 547–77.
- Cronin, J. Joseph, Michael K. Brady, and G. Tomas M Hult (2000), “Assessing the Effects of Quality, Value, and Customer Satisfaction on Consumer Behavioral Intentions in Service Environments,” *Journal of Retailing*, 76(2), 193–218.
- Darby, Michael R. and Edi Karni (1973), “Free Competition and the Optimal Amount of Fraud,” *The Journal of Law and Economics*, 16(1), 67–88.
- Davies, A., A. J. Titterington, and C. Cochrane (1995), “Who Buys Organic Food?: A Profile of the Purchasers of Organic Food in Northern Ireland,” *British Food Journal*, 17–23.
- Delgado, Claudia, Aurora Gómez-Rico, and Jean Xavier Guinard (2013), “Evaluating Bottles and Labels versus Tasting the Oils Blind: Effects of Packaging and Labeling on Consumer Preferences, Purchase Intentions and Expectations for Extra Virgin Olive Oil,” *Food Research International*, 54(2), 2112–21.
- Delgado, Claudia and Jean Xavier Guinard (2011), “How Do Consumer Hedonic Ratings for Extra Virgin Olive Oil Relate to Quality Ratings by Experts and Descriptive Analysis Ratings?,” *Food Quality and Preference*, 22(2), 213–25.
- Dell’Era, Claudio and Roberto Verganti (2007), “Strategies of Innovation and Limitation of Product Languages,” *Journal of Product Innovation Management*, 24(6), 580–99.
- Deng, Zhaohua, Yaobin Lu, Kwok Kee Wei, and Jinlong Zhang (2010), “Understanding Customer Satisfaction and Loyalty: An Empirical Study of Mobile Instant Messages in China,” *International Journal of Information Management*, 30(4), 289–300.
- Dodds, William B, Kent B Monroe, and Dhruv Grewal (1991), “Effects of Price, Brand, and Store Information on Buyers’ Product Evaluations,” *Journal of Marketing Research*, 28(August), 307–19.
- Erdem, Tülin (1998), “An Empirical Analysis of Umbrella Branding,” *Journal of Marketing Research*, 35(3), 339–51.
- Evans, Joel R and Anil Mathur (2005), “The Value of Online Surveys,” *Internet Research*, 15(2), 195–219.
- Fernqvist, Fredrik and Lena Ekelund (2014), “Credence and the Effect on Consumer Liking of Food - A Review,” *Food Quality and Preference*, 32(PC), 340–53.
- Field, Andy (2009), *Discovering Statistics Using SPSS*, Third, ed. SAGE.
- Fillion, Laurence and Stacey Arazi (2002), “Does Organic Food Taste Better? A Claim Substantiation Approach,” *Nutrition & Food Science*, 32(4), 153–57.
- Fournier, Susan (1998), “Consumers and Their Brands: Developing Relationship Theory in Consumer Research,” *Journal of Consumer Research*, 24(4), 343–53.

- Garber, Lawrence L., Eva M. Hyatt, and Ü. Ö. Boya (2008), "The Mediating Effects of the Appearance of Nondurable Consumer Goods and Their Packaging on Consumer Behavior," in *Product Experience*, ed. H. N. J. Schifferstein and P. Hekkert, Oxford, 581–602.
- Garber, Lawrence L., Eva M. Hyatt, and Richard G. Starr (2003), "Measuring Consumer Response to Food Products," *Food Quality and Preference*, 14(1), 3–15.
- George, Darren and Paul Mallery (2003), "SPSS for Windows Step by Step."
- Gifford, Katie and John C. Bernard (2011), "The Effect of Information on Consumers' Willingness to Pay for Natural and Organic Chicken," *International Journal of Consumer Studies*, 35(3), 282–89.
- Goode, Miranda R., Darren W. Dahl, and C. Page Moreau (2013), "Innovation Aesthetics: The Relationship between Category Cues, Categorization Certainty, and Newness Perceptions," *Journal of Product Innovation Management*, 30(2), 192–208.
- Grunert, Klaus G (1997), "What's in a Steak? A Cross-Cultural Study on the Quality Perception of Beef," *Food Quality and Preference*, 8(3), 157–74.
- Grunert, Klaus G., Sophie Hieke, and Josephine Wills (2014), "Sustainability Labels on Food Products: Consumer Motivation, Understanding and Use," *Food Policy*, 44, 177–89.
- Grunert, Klaus G. and Josephine M. Wills (2007), "A Review of European Research on Consumer Response to Nutrition Information on Food Labels," *Journal of Public Health*, 15(5), 385–99.
- Guerrero, L, Y Colomer, M.D Guàrdia, J Xicola, and R Clotet (2000), "Consumer Attitude towards Store Brands," *Food Quality and Preference*, 11(5), 387–95.
- Guinard, Jean Xavier, B. Uotani, R. Mazzucchelli, A. Taguchi, S. Masuoka, and S. Fujino (2000), "Consumer Testing of Commercial Lager Beers in Blind Versus Informed Conditions: Relation With Descriptive Analysis and Expert Quality Ratings," *Journal of the Institute of Brewing*, 106(1), 11–19.
- Harwood, J. and R. Aparicio (2000), *Handbook on Olive Oil. Analysis and Properties.*, Gaithersburg, Maryland: Aspen Publishers, Inc.
- Heilman, Carrie M, Douglas Bowman, and Gordon R Wright (2000), "The Evolution of Brand Preferences and Choice Behaviors of Consumers New to a Market," *Journal of Marketing Research*, XXXVII, 139–55.
- Hekkert, Paul, Dirk Snelders, and Piet C W van Wieringen (2003), "'Most Advanced, yet Acceptable': Typicality and Novelty as Joint Predictors of Aesthetic Preference in Industrial Design," *British Journal of Psychology*, 94(Pt 1), 111–24.

- Hoffmann, R. (2000), "Country of Origin – A Consumer Perception Perspective of Fresh Meat," *British Food Journal*, 102, 211–229.
- Holbrook, Morris B (1986), "Aims, Concepts, and Methods for the Representation of Individual Differences in Esthetic Responses to Design Features," *Journal of Consumer Research*, 13, 337–47.
- Holbrook, Morris B. (1980), "Some Preliminary Notes on Research in Consumer Esthetics," in *Advances in Consumer Research*, ed. Jerry C. Olson, Association for Consumer Research, 104–108.
- Holbrook, Morris B. and Elizabeth C. Hirschman (1982), "The Experiential Aspects of Consumption: Consumer Fantasies, Feelings, and Fun," *Journal of Consumer Research*, 9(2), 132–40.
- Iyer, Ganesh and Dmitri Kuksov (2010), "Consumer Feelings and Equilibrium Product Quality," *Journal of Economics and Management Strategy*, 19(1), 137–68.
- Jaeger, Sara R (2006), "Non-Sensory Factors in Sensory Science Research," 17, 132–44.
- Jaeger, Sara R, Jayson L Lusk, and Leatta McLaughlin (2007), "Strategy and Response to Purchase Intention Questions," (February).
- Kanavouras, Antonis, Pilar Hernandez-Munoz, and Frank a. Coutelieris (2006), "Packaging of Olive Oil: Quality Issues and Shelf Life Predictions," *Food Reviews International*, 22(4), 381–404.
- Karjalainen, Toni-Matti (2007), "It Looks Like a Toyota: Educational Approaches to Designing for Visual Brand Recognition," *International Journal of Design*, 1(1), 67–81.
- Karjalainen, Toni Matti (2001), "When Is a Car like a Drink? Metaphor as a Means to Distilling Brand and Product Identity," *Design Management Journal*, 66–71.
- Karjalainen, Toni Matti and Dirk Snelders (2010), "Designing Visual Recognition for the Brand," *Journal of Product Innovation Management*, 27(1), 6–22.
- Klein, Jill Gabrielle, Richard Ettenson, and Marlene D Morris (1998), "The Animosity Model of Foreign Product Purchase: An Empirical Test in the People ' S Republic of China," *Journal of Marketing*, 62(January), 89–100.
- Knight, Gary A. (1999), "Consumer Preferences for Foreign and Domestic Products," *Journal of Consumer Marketing*, 16(2), 151–62.
- Kobayashi, Marcela Lika and Marta de Toledo Benassi (2015), "Impact of Packaging Characteristics on Consumer Purchase Intention: Instant Coffee in Refill Packs and Glass Jars," *Journal of Sensory Studies*, 30(3), 169–80.
- Krippendorff, Klaus and Reinhart Butter (1984), "Product Semantics: Exploring the Symbolic

- Qualities of Form,” *Innovation*, 3(2), 4.
- Krystallis, Athanasios and Mitchell Ness (2003), “Motivational and Cognitive Structures of Greek Consumers in the Purchase of Quality Food Products,” *Journal of International Consumer Marketing*, 16(2)(June), 8–33.
- Kupiec, B. and B. Revell (2001), “Measuring Consumer Quality Judgements,” *British Food Journal*, 103(1), 7–22.
- Lawless, H. T. and H. Heymann (2010), *Sensory Evaluation of Food*, 2nd ed., New York: Springer.
- Lenhart, J, P Kendall, L Medeiros, J Doorn, M Schroeder, and J Sofos (2008), “Consumer Assessment of Safety and Date Labeling Statements on Ready-to-Eat Meat and Poultry Products Designed to Minimize Risk of Listeriosis,” *Journal of Food Protection*, 71(1), 70–76.
- Lin, Chen-Yu, David Marshall, and John Dawson (2009), “Consumer Attitudes towards a European Retailer’s Private Brand Food Products: An Integrated Model of Taiwanese Consumers,” *Journal of Marketing Management*, 25(9–10), 875–91.
- Löfgren, Martin, Lars Witell, and Anders Gustafsson (2008), “Customer Satisfaction in the First and Second Moments of Truth,” *Journal of Product & Brand Management*, 17(7), 463–74.
- Low, George S. and Charles W. Lamb (2000), *The Measurement and Dimensionality of Brand Associations*, 9 *Journal of Product & Brand Management*.
- de Magistris, Tiziana and Azucena Gracia (2008), “The Decision to Buy Organic Food Products in Southern Italy,” *British Food Journal*, 110(9), 929–47.
- Malhotra, Naresh (2010), *Marketing Research - An Applied Orientation*, 6th ed., ed. Pearson Education, Pearson Education.
- McCormack, Jay P. and Jonathan Cagan (2004), “Speaking the Buick Language: Capturing, Understanding, and Exploring Brand Identity with Shape Grammars,” *Design Studies*, 25(1), 1–29.
- Méndez, José Luis, Javier Oubiña, and Natalia Rubio (2008), “Expert Quality Evaluation and Price of Store vs. Manufacturer Brands: An Analysis of the Spanish Mass Market,” *Journal of Retailing and Consumer Services*, 15(3), 144–55.
- Milberg, Sandra J. J., Francisca Sinn, and Ronald C. C. Goodstein (2010), “Consumer Reactions to Brand Extensions in a Competitive Context: Does Fit Still Matter?,” *Journal of Consumer Research*, 37(3), 543–53.
- Miyazaki, Anthony D., Dhruv Grewal, and Ronald C. Goodstein (2005), “The Effect of

- Multiple Extrinsic Cues on Quality Perceptions: A Matter of Consistency,” *Journal of Consumer Research*, 32(1), 146–53.
- Di Monaco, R., S. Ollila, and H. Tuorila (2005), “Effect of Price on Pleasantness Ratings and Use Intentions for a Chocolate Bar in the Presence and Absence of a Health Claim,” *Journal of Sensory Studies*, 20(1), 1–16.
- Monö, R. (1997), *Design for Product Understanding: The Aesthetics of Design from a Semiotic Approach*, Stockholm: Liber.
- Monroe, Kent B. (1979), *Pricing: Making Profitable Decisions*, New York: McGraw-Hill Book Company.
- Monroe, Kent B. and R. Krishnan (1985), “The Effect of Price on Subjective Product Evaluations,” in *Perceived Quality: How Consumers View Stores and Merchandise*, ed. J. Jacoby and J. C. Olson, Lexington: D. C. Heath.
- Moskowitz, Howard and Johannes Hartmann (2008), “Consumer Research: Creating a Solid Base for Innovative Strategies,” *Trends in Food Science and Technology*, 19(11), 581–89.
- Nielsen (2015), “Anuário Nielsen 2015 Portugal,” 2, 399.
- Nunnally, J. C. and I. H. Bernstein (1999), “Psychometric Theory,” *Journal of Psychoeducational Assessment*, 17, 275–80.
- Orth, Ulrich R and Keven Malkewitz (2008), “Holistic Package Design and Consumer Brand Impressions,” *Journal of Marketing*, 72(3), 64–81.
- Page, Christine and Paul M. Herr (2002), “An Investigation of the Processes by Which Product Design and Brand Strength Interact to Determine Initial Affect and Quality Judgments,” *Journal of Consumer Psychology*, 12(2), 133–47.
- Pantin-Sohier, Gaëlle (2009), “The Influence of the Product Package on Functional and Symbolic Associations of Brand Image,” *Recherche et Applications en Marketing (English Edition)*, 24(2), 53–71.
- Person, Oscar, Jan Schoormans, Dirk Snelders, and Toni Matti Karjalainen (2008), “Should New Products Look Similar or Different? The Influence of the Market Environment on Strategic Product Styling,” *Design Studies*, 29(1), 30–48.
- Plessis, Henriëtta J and Gerrie E Rand (2012), “The Signi Fi Cance of Traceability in Consumer Decision Making towards Karoo Lamb,” *Frin*, 47, 210–17.
- Prahalad, C. K. and Venkat Ramaswamy (2004), “Co-Creation Experiences: The Next Practice in Value Creation,” *Journal of Interactive Marketing*, 18(3), 5–14.
- Reimann, Martin, Judith Zaichkowsky, Carolin Neuhaus, T. Bender, and Bernd Weber

- (2010), “Aesthetic Package Design: A Behavioral, Neural, and Psychological Investigation,” *Journal of Consumer Psychology*, 20(4), 431–41.
- Rindova, Violina P. and Antoaneta P. Petkova (2007), “When Is a New Thing a Good Thing? Technological Change, Product Form Design, and Perceptions of Value for Product Innovations,” *Organization Science*, 18(2), 217–32.
- Rozin, P., M. L. Pelchat, and A. E. Fallon (1986), “Psychological Factors Influencing Food Choice,” in *The Food Consumer*, ed. C. Ritson, L. Gofton, and J. McKenzie, New York: John Wiley & Sons Ltd, 85–106, 241–256.
- Rundh, Bo (2009), “Packaging Design: Creating Competitive Advantage with Product Packaging,” *British Food Journal*, 111(9), 988–1002.
- Samant, Shilpa S. and Han Seok Seo (2016), “Effects of Label Understanding Level on Consumers’ Visual Attention toward Sustainability and Process-Related Label Claims Found on Chicken Meat Products,” *Food Quality and Preference*, 50, 48–56.
- Santosa, Metta and Jean Xavier Guinard (2011), “Means-End Chains Analysis of Extra Virgin Olive Oil Purchase and Consumption Behavior,” *Food Quality and Preference*, 22(3), 304–16.
- Schoormans, Jan P. L. and Henry S. J. Robben (1997), “The Effect of New Package Design on Product Attention, Categorization and Evaluation,” *Journal of Economic Psychology*, 18(2–3), 271–87.
- Servili, Maurizio and Gianfrancesco Montedoro (2002), “Contribution of Phenolic Compounds to Virgin Olive Oil Quality,” *European Journal of Lipid Science and Technology*, 104(9–10), 602–13.
- Sethuraman, R. and C. Cole (1997), “Why Do Consumers Pay More for National Brands than for Store Brands?,” *MSI Working Paper No. 97-126*.
- Silayoi, Pinya and Mark Speece (2007), *The Importance of Packaging Attributes: A Conjoint Analysis Approach*, 41 *European Journal of Marketing*.
- Sobral, Fernando (2016), “Azeite: Símbolo de Portugal,” *Jornal de Negócios*.
- Taylor, Courtney (2017), “Convenience Sample Definition and Examples in Statistics,” *ToughtCo.com*.
- Torres-Moreno, M., A. Tarrega, E. Torrecasana, and C. Blanch (2012), “Influence of Label Information on Dark Chocolate Acceptability,” *Appetite*, 58(2), 665–71.
- Tsiotsou, Rodoula (2006), “The Role of Perceived Product Quality and Overall Satisfaction on Purchase Intentions,” *International Journal of Consumer Studies*, 30(2), 207–17.
- Tuorila, Hely and Erminio Monteleone (2009), “Sensory Food Science in the Changing

- Society: Opportunities, Needs, and Challenges,” *Trends in Food Science and Technology*, 20(2), 54–62.
- Vazquez, Delia, Margaret Bruce, and Rachel Studd (2003), “A Case Study Exploring the Packaging Design Management Process within a UK Food Retailer,” *British Food Journal*, 105(9), 602–17.
- Veryzer, Robert W (1995), “The Place of Product Design and Aesthetics in Consumer Research,” *Advances in Consumer Research*, 22, 641–45.
- Veryzer, Robert W. (1993), “Aesthetic Response and the Influence of Design Principles on Product Preferences,” *Advances in Consumer Research*, 20(1), 224–29.
- Wandel, Margareta and Annechen Bugge (1997), “Environmental Concern in Consumer Evaluation of Food Quality,” *Food Quality and Preference*, 8(1), 19–26.
- Van Wezemael, Lynn, Øydis Ueland, Rune Rødbotten, Stefaan De Smet, Joachim Scholderer, and Wim Verbeke (2012), “The Effect of Technology Information on Consumer Expectations and Liking of Beef,” *Meat Science*, 90(2), 444–50.
- Wu, P. C S, G. Y Y Yeh, and Chieh R. Hsiao (2011), “The Effect of Store Image and Service Quality on Brand Image and Purchase Intention for Private Label Brands,” *Australasian Marketing Journal*, 19(1), 30–39.
- Zeithaml, Valarie A. (1988), “Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Synthesis on Evidence,” *Journal of Marketing*, 52(July), 2–22.

APPENDICES

Appendix 1: Questionnaire (Portuguese, original version)

Intro and Screening

Q1. Caro participante,

O questionário que se segue é parte integrante de uma tese de mestrado em marketing pela Católica Lisbon School of Business & Economics.

A sua opinião é única e de grande relevância para este estudo. Como tal, solicito a sua honestidade na resposta às perguntas apresentadas. Todos os dados recolhidos são confidenciais e anónimos e serão utilizados apenas no âmbito do presente estudo académico. Este questionário levará cerca de 5 minutos a ser respondido e é muito importante que o complete na totalidade.

Caso tenha alguma questão, não hesite em contactar-me através do email: ritadias93@gmail.com

Muito obrigada pela sua colaboração! Rita Dias

Q2. É Português/Portuguesa?

• Sim (1)

• Não (2)

Skip To: End of Survey If Q2 = Não (2)

Q3. Vive em Portugal?

• Sim (1)

• Não (2)

Skip To: End of Survey If Q3 = Não (2)

Q4. É consumidor(a) de azeite?

• Sim (1)

• Não (2)

Skip To: End of Survey If Q4 = Não (2)

Label Mandatory (PI & PQ)

Q5. Por favor preste atenção à imagem apresentada e responda às questões que se seguem tendo em consideração as características do produto apresentado:



Q6. Supondo que compraria azeite na sua próxima ida ao supermercado, qual a probabilidade de optar por um produto com estas características?

- Muito Improvável (1)
- Improvável (2)
- Algo Improvável (3)
- Indiferente (4)
- Algo Provável (5)
- Provável (6)
- Muito Provável (7)

Q7. Qual a probabilidade deste produto ser de confiança?

- Muito Improvável (1)
- Improvável (2)
- Algo Improvável (3)
- Indiferente (4)
- Algo Provável (5)
- Provável (6)
- Muito Provável (7)

Q8. Este produto aparenta ter:

- Péssima Qualidade (1)
- Má Qualidade (2)
- Alguma Má Qualidade (3)
- Indiferente (4)
- Alguma Boa Qualidade (5)
- Boa Qualidade (6)
- Excelente Qualidade (7)

Q9. Qual a probabilidade deste produto ser credível?

- Muito Improvável (1)
- Improvável (2)
- Algo Improvável (3)
- Indiferente (4)
- Algo Provável (5)
- Provável (6)
- Muito Provável (7)

Q10. Qual a probabilidade deste produto ser duradouro?

- Muito Improvável (1)
- Improvável (2)
- Algo Improvável (3)
- Indiferente (4)
- Algo Provável (5)
- Provável (6)
- Muito Provável (7)

Labels (PI & PQ)

Q11. Por favor preste atenção à imagem apresentada e responda às questões que se seguem tendo em consideração as características do produto apresentado:



Q12. Supondo que compraria azeite na sua próxima ida ao supermercado, qual a probabilidade de optar por um produto com estas características?

- Muito Improvável (1)
- Improvável (2)
- Algo Improvável (3)
- Indiferente (4)
- Algo Provável (5)
- Provável (6)
- Muito Provável (7)

Q13. Qual a probabilidade deste produto ser de confiança?

- Muito Improvável (1)
- Improvável (2)
- Algo Improvável (3)
- Indiferente (4)
- Algo Provável (5)
- Provável (6)
- Muito Provável (7)

Q14. Este produto aparenta ter:

- Péssima Qualidade (1)
- Má Qualidade (2)
- Alguma Má Qualidade (3)
- Indiferente (4)
- Alguma Boa Qualidade (5)
- Boa Qualidade (6)
- Excelente Qualidade (7)

Q15. Qual a probabilidade deste produto ser credível?

- Muito Improvável (1)
- Improvável (2)
- Algo Improvável (3)
- Indiferente (4)
- Algo Provável (5)
- Provável (6)
- Muito Provável (7)

Q16. Qual a probabilidade deste produto ser duradouro?

- Muito Improvável (1)
- Improvável (2)
- Algo Improvável (3)
- Indiferente (4)
- Algo Provável (5)
- Provável (6)
- Muito Provável (7)

Container Mandatory (PI & PQ)

Q17. Por favor preste atenção à imagem da garrafa de azeite apresentada e responda às questões que se seguem tendo em consideração as características desta embalagem:



Q18. Supondo que compraria azeite na sua próxima ida ao supermercado, qual a probabilidade de optar por um produto com estas características?

- Muito Improvável (1)
- Improvável (2)
- Algo Improvável (3)
- Indiferente (4)
- Algo Provável (5)
- Provável (6)
- Muito Provável (7)

Q19. Qual a probabilidade deste produto ser de confiança?

- Muito Improvável (1)
- Improvável (2)
- Algo Improvável (3)
- Indiferente (4)
- Algo Provável (5)
- Provável (6)
- Muito Provável (7)

Q20. Este produto aparenta ter:

- Péssima Qualidade (1)
- Má Qualidade (2)
- Alguma Má Qualidade (3)
- Indiferente (4)
- Alguma Boa Qualidade (5)
- Boa Qualidade (6)
- Excelente Qualidade (7)

Q21. Qual a probabilidade deste produto ser credível?

- Muito Improvável (1)
- Improvável (2)
- Algo Improvável (3)
- Indiferente (4)
- Algo Provável (5)
- Provável (6)
- Muito Provável (7)

Q22. Qual a probabilidade deste produto ser duradouro?

- Muito Improvável (1)
- Improvável (2)
- Algo Improvável (3)
- Indiferente (4)
- Algo Provável (5)
- Provável (6)
- Muito Provável (7)

Containers (PI & PQ)

Q23. Por favor preste atenção à imagem da garrafa de azeite apresentada e responda às questões que se seguem tendo em consideração as características desta embalagem:



Q24. Supondo que compraria azeite na sua próxima ida ao supermercado, qual a probabilidade de optar por um produto com estas características?

- Muito Improvável (1)
- Improvável (2)
- Algo Improvável (3)
- Indiferente (4)
- Algo Provável (5)
- Provável (6)
- Muito Provável (7)

Q25. Qual a probabilidade deste produto ser de confiança?

- Muito Improvável (1)
- Improvável (2)
- Algo Improvável (3)
- Indiferente (4)
- Algo Provável (5)
- Provável (6)
- Muito Provável (7)

Q26. Este produto aparenta ter:

- Péssima Qualidade (1)
- Má Qualidade (2)
- Alguma Má Qualidade (3)
- Indiferente (4)
- Alguma Boa Qualidade (5)
- Boa Qualidade (6)
- Excelente Qualidade (7)

Q27. Qual a probabilidade deste produto ser credível?

- Muito Improvável (1)
- Improvável (2)
- Algo Improvável (3)
- Indiferente (4)
- Algo Provável (5)
- Provável (6)
- Muito Provável (7)

Q28. Qual a probabilidade deste produto ser duradouro?

- Muito Improvável (1)
- Improvável (2)
- Algo Improvável (3)
- Indiferente (4)
- Algo Provável (5)
- Provável (6)
- Muito Provável (7)

Demographics

Q29. Género

- Masculino (1)
- Feminino (2)

Q30. Idade

- Menos de 18 anos (1)
- 18 a 25 anos (2)
- 26 a 35 anos (3)
- 36 a 45 anos (4)
- 46 a 55 anos (5)
- 56 a 65 anos (6)
- Mais de 65 anos (7)

Q31. Estado Civil

- Solteiro/a (1)
- Casado/a ou Junto/a (2)
- Divorciado/a (3)
- Viúvo/a (4)

Q32. Qual o seu nível de habilitações académicas (já concluído ou em curso)?

- Ensino Básico (1)
- Ensino Secundário (2)
- Licenciatura (3)
- Mestrado (4)
- Doutoramento (5)

Q33. Em que zona do país reside?

- Grande Lisboa (1)
- Grande Porto (2)
- Norte (3)
- Centro (4)
- Sul (5)
- Madeira (6)
- Açores (7)

Q34. Ocupação

- Estudante (1)
- Empregado/a (2)
- Desempregado/a (3)
- Doméstico/a (4)
- Reformado/a (5)

Q35. Quantas pessoas (contando consigo) constituem o seu agregado familiar?

- 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 ou mais (6)

Q36. Qual o seu rendimento mensal líquido (depois de impostos)?

- Menos de 500€ (1)
- Entre 500€ e 1000€ (2)
- Entre 1001€ e 2000€ (3)
- Entre 2001€ e 3000€ (4)
- Entre 3001€ e 4000€ (5)
- Entre 4001€ e 5000€ (6)
- Mais de 5000€ (7)
- Prefiro não responder (8)

Appendix 2: Questionnaire (English version)

Intro and Screening

Q1. Dear respondent,

This survey is part of a master thesis at CLSBE.

Your opinion is unique and highly relevant for this study. Please answer the questions presented as honestly as possible. All the data collected is confidential and anonymous, used only for the present study. This questionnaire will take approximately 5 minutes and it's important that you complete it entirely.

If you have any doubt, please don't hesitate to contact me through my email address: ritadias93@gmail.com

Thank you for your collaboration! Rita Dias

Q2. Are you Portuguese?

- Yes (1)
- No (2)

Skip To: End of Survey If Q2 = Não (2)

Q3. Do you live in Portugal?

- Yes (1)
- No (2)

Skip To: End of Survey If Q3 = Não (2)

Q4. Are you a consumer of olive oil?

- Yes (1)
- No (2)

Skip To: End of Survey If Q4 = Não (2)

Label Mandatory (PI & PQ)

Q5. Please pay attention to the following image and answer the following questions considering the characteristics of the product presented:



Q6. Assuming you would buy olive oil on your next trip to the supermarket, what is the probability that you would buy a product with these characteristics?

- Very Unlikely (1)
- Unlikely (2)
- Somewhat Unlikely (3)
- Indifferent (4)
- Somewhat Likely (5)
- Likely (6)
- Very Likely (7)

Q7. What is the probability that this product is reliable?

- Very Unlikely (1)
- Unlikely (2)
- Somewhat Unlikely (3)
- Indifferent (4)
- Somewhat Likely (5)
- Likely (6)
- Very Likely (7)

Q8. This product appears to have:

- Very Bad Quality (1)
- Bad Quality (2)
- Somewhat Bad Quality (3)
- Indifferent (4)
- Somewhat Good Quality (5)
- Good Quality (6)
- Very Good Quality (7)

Q9. What is the probability that this product is dependable?

- Very Unlikely (1)
- Unlikely (2)
- Somewhat Unlikely (3)
- Indifferent (4)
- Somewhat Likely (5)
- Likely (6)
- Very Likely (7)

Q10. What is the probability that is product would be durable?

- Very Unlikely (1)
- Unlikely (2)
- Somewhat Unlikely (3)
- Indifferent (4)
- Somewhat Likely (5)
- Likely (6)
- Very Likely (7)

Labels (PI & PQ)

Q11. Please pay attention to the following image and answer the following questions considering the characteristics of the product presented:



Q12. Assuming you would buy olive oil on your next trip to the supermarket, what is the probability that you would buy a product with these characteristics?

- Very Unlikely (1)
- Unlikely (2)
- Somewhat Unlikely (3)
- Indifferent (4)
- Somewhat Likely (5)
- Likely (6)
- Very Likely (7)

Q13. What is the probability that this product is reliable?

- Very Unlikely (1)
- Unlikely (2)
- Somewhat Unlikely (3)
- Indifferent (4)
- Somewhat Likely (5)
- Likely (6)
- Very Likely (7)

Q14. This product appears to have:

- Very Bad Quality (1)
- Bad Quality (2)
- Somewhat Bad Quality (3)
- Indifferent (4)
- Somewhat Good Quality (5)
- Good Quality (6)
- Very Good Quality (7)

Q15. What is the probability that this product is dependable?

- Very Unlikely (1)
- Unlikely (2)
- Somewhat Unlikely (3)
- Indifferent (4)
- Somewhat Likely (5)
- Likely (6)
- Very Likely (7)

Q16. What is the probability that is product would be durable?

- Very Unlikely (1)
- Unlikely (2)
- Somewhat Unlikely (3)
- Indifferent (4)
- Somewhat Likely (5)
- Likely (6)
- Very Likely (7)

Container Mandatory (PI & PQ)

Q17. Please pay attention to the following image and answer the following questions considering the characteristics of the product presented:



Q18. Assuming you would buy olive oil on your next trip to the supermarket, what is the probability that you would buy a product with these characteristics?

- Very Unlikely (1)
- Unlikely (2)
- Somewhat Unlikely (3)
- Indifferent (4)
- Somewhat Likely (5)
- Likely (6)
- Very Likely (7)

Q19. What is the probability that this product is reliable?

- Very Unlikely (1)
- Unlikely (2)
- Somewhat Unlikely (3)
- Indifferent (4)
- Somewhat Likely (5)
- Likely (6)
- Very Likely (7)

Q20. This product appears to have:

- Very Bad Quality (1)
- Bad Quality (2)
- Somewhat Bad Quality (3)
- Indifferent (4)
- Somewhat Good Quality (5)
- Good Quality (6)
- Very Good Quality (7)

Q21. What is the probability that this product is dependable?

- Very Unlikely (1)
- Unlikely (2)
- Somewhat Unlikely (3)
- Indifferent (4)
- Somewhat Likely (5)
- Likely (6)
- Very Likely (7)

Q22. What is the probability that is product would be durable?

- Very Unlikely (1)
- Unlikely (2)
- Somewhat Unlikely (3)
- Indifferent (4)
- Somewhat Likely (5)
- Likely (6)
- Very Likely (7)

Containers (PI & PQ)

Q23. Please pay attention to the following image and answer the following questions considering the characteristics of the product presented:



Q24. Assuming you would buy olive oil on your next trip to the supermarket, what is the probability that you would buy a product with these characteristics?

- Very Unlikely (1)
- Unlikely (2)
- Somewhat Unlikely (3)
- Indifferent (4)
- Somewhat Likely (5)
- Likely (6)
- Very Likely (7)

Q25. What is the probability that this product is reliable?

- Very Unlikely (1)
- Unlikely (2)
- Somewhat Unlikely (3)
- Indifferent (4)
- Somewhat Likely (5)
- Likely (6)
- Very Likely (7)

Q26. This product appears to have:

- Very Bad Quality (1)
- Bad Quality (2)
- Somewhat Bad Quality (3)
- Indifferent (4)
- Somewhat Good Quality (5)
- Good Quality (6)
- Very Good Quality (7)

Q27. What is the probability that this product is dependable?

- Very Unlikely (1)
- Unlikely (2)
- Somewhat Unlikely (3)
- Indifferent (4)
- Somewhat Likely (5)
- Likely (6)
- Very Likely (7)

Q28. What is the probability that is product would be durable?

- Very Unlikely (1)
- Unlikely (2)
- Somewhat Unlikely (3)
- Indifferent (4)
- Somewhat Likely (5)
- Likely (6)
- Very Likely (7)

Demographics

Q29. Gender

- Male (1)
- Female (2)

Q30. Age

- Under 18 (1)
- 18 to 25 years old (2)
- 26 to 35 years old (3)
- 36 to 45 years old (4)
- 46 to 55 years old (5)
- 56 to 65 years old (6)
- Over 65 (7)

Q31. Marital Status

- Single (1)
- Married (2)
- Divorced (3)
- Widowed (4)

Q32. Scholar Level (finished or in progress)?

- Elementary School (1)
- High School (2)
- Bachelor (3)
- Master (4)
- Doctorate (5)

Q33. In which are of the country do you live?

- Grande Lisboa (1)
- Grande Porto (2)
- North (3)
- Center (4)
- South (5)
- Madeira (6)
- Açores (7)

Q34. Occupation

- Student (1)
- Employed (2)
- Unemployed (3)
- Housewife (4)
- Retired (5)

Q35. Household (including yourself)?

- 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 or more (6)

Q36. What is your liquid monthly income (after tax)?

- Under 500€ (1)
- Between 500€ and 1000€ (2)
- Between 1001€ and 2000€ (3)
- Between 2001€ and 3000€ (4)
- Between 3001€ and 4000€ (5)
- Between 4001€ and 5000€ (6)
- Over 5000€ (7)
- Don't want to answer (8)

Appendix 3: Sample Characterization

Gender

	Frequency	Percent	Valid Percent	Cumulative Percent
Male	259	26,9	26,9	26,9
Female	703	73,1	73,1	100,0
Total	962	100,0	100,0	

Age

	Frequency	Percent	Valid Percent	Cumulative Percent
Under 18	4	0,4	0,4	0,4
18 to 25	542	56,3	56,3	56,8
26 to 35	121	12,6	12,6	69,3
36 to 45	116	12,1	12,1	81,4
46 to 55	123	12,8	12,8	94,2
56 to 65	53	5,5	5,5	99,7
Over 65	3	0,3	0,3	100,0
Total	962	100,0	100,0	

Marital Status

	Frequency	Percent	Valid Percent	Cumulative Percent
Single	650	67,6	67,6	67,6
Married	244	25,4	25,4	92,9
Divorced	63	6,5	6,5	99,5
Widowed	5	0,5	0,5	100,0
Total	962	100,0	100,0	

Region of Residence

	Frequency	Percent	Valid Percent	Cumulative Percent
Grande Lisboa	328	34,1	34,1	34,1
Grande Porto	343	35,7	35,7	69,8
Norte	140	14,6	14,6	84,3
Centro	120	12,5	12,5	96,8
Sul	16	1,7	1,7	98,4
Madeira	5	0,5	0,5	99,0
Açores	10	1,0	1,0	100,0
Total	962	100,0	100,0	

Education Level

	Frequency	Percent	Valid Percent	Cumulative Percent
Elementary School	2	0,2	0,2	0,2
High School	128	13,3	13,3	13,5
Bachelor	479	49,8	49,8	63,3
Master	317	33,0	33,0	96,3
Doctorate	36	3,7	3,7	100,0
Total	962	100,0	100,0	

Occupation

	Frequency	Percent	Valid Percent	Cumulative Percent
Student	534	55,5	55,5	55,5
Employed	386	40,1	40,1	95,6
Unemployed	28	2,9	2,9	98,5
Housewife	5	0,5	0,5	99,1
Retired	9	0,9	0,9	100,0
Total	962	100,0	100,0	

Household Constitution

	Frequency	Percent	Valid Percent	Cumulative Percent
1	89	9,3	9,3	9,3
2	160	16,6	16,6	25,9
3	274	28,5	28,5	54,4
4	331	34,4	34,4	88,8
5	80	8,3	8,3	97,1
6 or more	28	2,9	2,9	100,0
Total	962	100,0	100,0	

Monthly Income (after tax)

	Frequency	Percent	Valid Percent	Cumulative Percent
Less than 500€	155	16,1	16,1	16,1
Between 500€ and 1000€	200	20,8	20,8	36,9
Between 1001€ and 2000€	243	25,3	25,3	62,2
Between 2001€ and 3000€	92	9,6	9,6	71,7
Between 3001€ and 4000€	33	3,4	3,4	75,2
Between 4001€ and 5000€	17	1,8	1,8	76,9
More than 5000€	22	2,3	2,3	79,2
Do not want to answer	200	20,8	20,8	100,0
Total	962	100,0	100,0	

Appendix 4: Linear Regression (SPSS Output)

	R	R ²	Adjusted R ²	Std. Error of the Estimate
Model 1	0,720	0,518	0,514	0,72453

	Sum of Squares	df	Mean Square	F	Sig.
Regression	538,682	8	67,335	128,273	0,000
Residual	500,267	953	0,525		
Total	1038,949	961			

	Unstandardized coefficients		Standardized coefficients	t	Sig.
	B	Std. Error	Beta		
(constant)	-1,353	0,247		-5,475	0,000
A1	0,166	0,032	0,185	5,189	0,000
A2	0,154	0,033	0,121	4,699	0,000
A3	0,125	0,031	0,102	4,006	0,000
A4	0,171	0,035	0,130	4,903	0,000
A5	0,117	0,029	0,107	3,999	0,000
B1	0,139	0,022	0,178	6,329	0,000
B2	0,138	0,020	0,205	6,890	0,000
B3	0,121	0,021	0,168	5,760	0,000