

# Consumer Preferences for Olive-Oil Attributes: A Review of the Empirical Literature Using a Conjoint Approach

José Felipe Jiménez-Guerrero<sup>1</sup>, Juan Carlos Gázquez-Abad<sup>1</sup>,  
Juan Antonio Mondéjar-Jiménez<sup>2</sup> and Rubén Huertas-García<sup>3</sup>

<sup>1</sup>*University of Almería*

<sup>2</sup>*University of Castile La Mancha*

<sup>3</sup>*University of Barcelona*  
*Spain*

## 1. Introduction

### 1.1 Olive oil: Some general aspects

During the last decade, olive oil consumption has experienced a major breakthrough in the world, not only in producing countries but also among those who are not. Undoubtedly, this growth in consumption is a consequence of the consolidation of a cultural phenomenon established between the main producing countries (Spain, Italy and Greece), owing to the so-called Mediterranean diet<sup>1</sup>; a food concept that provides important health benefits and of which olive oil is one of the main components. The recent recognition of United Nations Educational, Scientific and Cultural Organization (UNESCO) – it has declared to the Mediterranean diet ‘the intangible cultural heritage of humanity’ – offers promising perspectives for the Mediterranean diet in the coming years.

The major producer of olive oil in the world is the European Union (EU), which produces 80 per cent and consumes 70 per cent of the world’s total olive oil production (European Commission, 2010). Italy and Spain are the major producers and can influence the prices of olive oil (Blery and Sfetsiou, 2008). Greece takes third place in world production after Spain and Italy (Sandalidou and Baourakis, 2002) and first place in olive oil consumption

---

<sup>1</sup> The Mediterranean Diet is a way of eating based on the traditional foods (and drinks) of the countries surrounding the Mediterranean Sea. The principal aspects of this diet include high olive oil consumption, high consumption of pulses unrefined cereals, fruits and vegetables, as well as moderate consumption of dairy products (mostly as cheese and yogurt), moderate to high consumption of fish, low consumption of meat and meat products, and moderate wine consumption. Olive oil is particularly characteristic of the Mediterranean diet. It contains a very high level of mono-unsaturated fats, most notably oleic acid, which epidemiological studies suggest may be linked to a reduction in the risk of coronary heart disease. There is also evidence that the antioxidants in olive oil improve cholesterol regulation and ‘Low-density lipoprotein’ (LDL) cholesterol reduction, and that it has other anti-inflammatory and anti-hypertensive effects.

(Hellonet, 2006). Olive farming provides an important source of employment in many rural areas of the Mediterranean, including many marginal areas where it is either a principal employer or an important part-time employer which can be combined with other activities, such as tourism. Olive farming is also an important part of local rural culture and heritage in many areas, and is maintained and 'valorized' through labelling schemes in some cases. Olive production is an important economic sector in many rural areas of the Mediterranean. In some areas, it is the principal economic activity and the basis for other sectors (Beaufoy 2002:11). The greatest concentration of oil production is found in two Spanish provinces, Jaén and Córdoba in Andalusia, which between them account for over one-third of EU output. Olive farming has both positive and negative environmental effects. As Beaufoy's (2002:30) report indicates, such effects depend on several factors, including prevailing environmental conditions in and around the plantation (soil type, slope, rainfall, adjacent land uses, presence of water bodies, etc.) and farm management, pest control, irrigation and the type of land (and previous land cover) on which new plantations are established. In particular, Beaufoy (2002) identified the following as the main categories of actual and potential environmental effects associated with the management of olive plantations: soil, water, air, biodiversity (flora and fauna), and landscape.

Among the EU non-producing countries of olive oil, Germany and the UK are the main consumers (de la Viesca *et al.*, 2005), although the US is the most important market outside the Mediterranean basin (Zampounis, 2006). In the US, interest in and consumption of olive oil has been growing exponentially over the last 20 years (Delgado and Guinard, 2011). Indeed, the US ranks fourth in olive oil consumption after Italy, Spain and Greece. US consumption went from 88,000 tons in 1990 to 260,000 tons in 2009; an increase of 228% (International Olive Council, 2008). Something similar is happening in China, where the demand for olive oil is expected to increase significantly in the next few years (Soons, 2004). According to this author, Chinese tourism to Mediterranean countries will affect the general awareness of the healthy Mediterranean kitchen and its use of olive oil in a positive way.

The increasing preference for olive oil worldwide denotes a change in consumer behaviour, either by strengthening the role of it in their diet or by incorporating it in a novel way. The set of tangible and intangible attributes that consumers believe to particularly meet their needs, is a concept of product marketing. From this point of view, the concept is intended to reflect two fundamentally different approaches: a) considering the product itself as a sum of characteristics or physical attributes; or b) considering the needs of the consumer, where the buyer's choice rests not with the product, but with the service they expect to receive or the problems it can solve.

During the purchase process, consumers form their preferences based on the best combination of attributes, evaluating the brands that are part of their evoked sets, or are considered important in terms of attributes such as price, country of origin, quality or design, among others. Olive oil, like any other commodity, is not immune to this stage of the buying process, despite the uniqueness of its attributes that determine the degree of preference for the consumer. In this chapter, we aim to describe what attributes assume greater importance, and therefore are preferred, by the consumer. In order to do so, a review of the previous literature focusing on this stage of olive oil consumer-buying behaviour is developed.

The rest of the chapter is structured as follows. Section 2 discusses the importance of culture as a factor in the formation of consumer preferences with respect to olive oil. In Section 3, we discuss consumer preferences for olive oil from the literature review, with reference to the methodology on conjoint analysis. Finally, we present the findings of the work.

## 2. Consumer behaviour in purchasing food: The role of culture in the consumption of olive oil

The study of consumer behaviour and marketing discipline has focused on analysing how individuals make decisions to spend their resources in categories related to consumption (Schiffman and Kanuk, 2001). The act of purchase is considered as an activity aimed at solving a problem (Howard and Sheth, 1986). Typically, the consumer is faced with a multitude of decisions to make, whose complexity varies depending on product and purchase situation (Lambin, 1995). Consequently, understanding consumer behaviour requires assessing how people made and make their purchasing and consumption decisions (Blackwell et al., 2001), considering that a decision is the result of selecting a choice from two or more alternative possibilities (Schiffman and Kanuk, 2001).

In the context of food products, Steenkamp (1997) proposes a conceptual model of consumer behaviour in which four stages in the purchase decision process are identified: (1) problem recognition; (2) information search; (3) evaluation of alternatives; and (4) choice. In addition, there are three groups of factors that influence this process: a) properties of foods; b) Individual-related factors (e.g., biological, psychological and demographic); and c) environmental factors (i.e., economic, cultural factors and marketing aspects (see Figure 1).

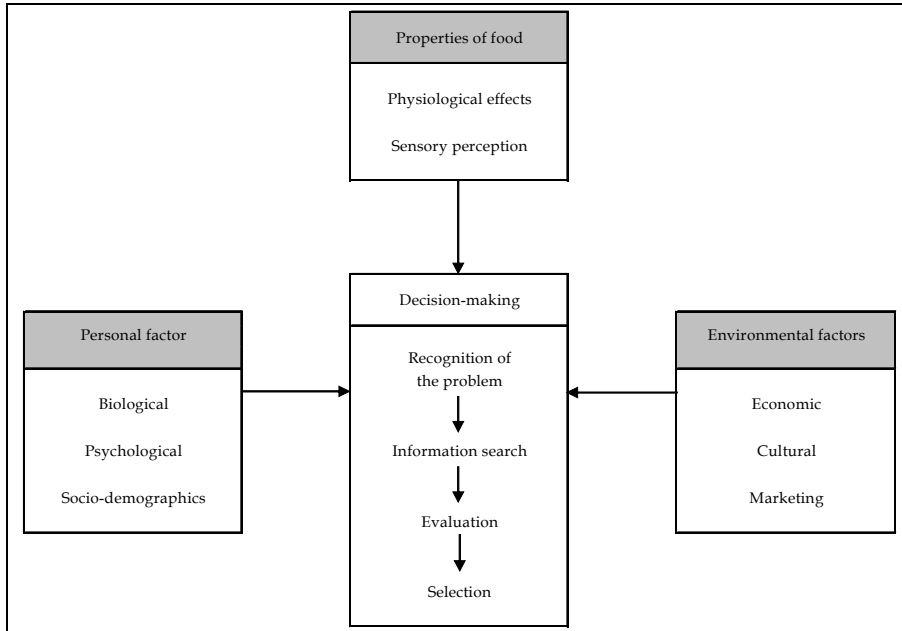


Fig. 1. Model of consumer behaviour for food (Steenkamp, 1997)

As Figure 1 shows, culture is a key concept for understanding consumer behaviour. According to Solomon *et al.* (1999), this is a consequence of culture representing the collective memory of society and the prism through which such society develops its perception. Culture includes a complex of values, ideas, attitudes and other meaningful symbols that allow humans to communicate, interpret and evaluate as members of a society (Blackwell *et al.*, 2001). According to Schiffman and Kanuk (2001), it is the sum of learned beliefs, values and customs helping to determine the behaviour of members of a given society as a consumer. Undoubtedly, culture is a key element not only because it affects all stages of consumer choice, but also because it exerts a major influence on the reasons why people of different cultures buy and consume products (Blackwell *et al.*, 2001). In this manner, culture helps to explain the behavioural differences between them. Specifically, during the evaluation stage, culture mainly influences the way in which consumers assign a greater value to certain attributes of the product over others. As Solomon and colleagues (1999) indicate, a consumer culture determines the priorities of certain products and the success or failure thereof.

When consumers buy a product, they expect it to perform their need. But these needs are different between cultures. This is, for instance, the case of olive oil. There are big differences between olive oil producing, Mediterranean countries and non-producing countries. For the former, olive oil can be considered as a traditional food product. In this respect, the literature shows some important associations between the consumption of such traditional products and cultural aspects such as values, beliefs and life-style orientations (Vanhonacker *et al.*, 2010). In this respect, as noted by Govers and Schoormans (2005), some studies have tested how consumers prefer products or brands with a particular symbolic meaning, compatible with the image they wish to convey of themselves. In some cases, this is intended to resemble the kind of people who normally use the product (Heath and Scott, 1998). Thus, traditional food consumers are generally not caught up in modern ways of life (Guerrero *et al.*, 2009), where time pressure, business and convenience orientation dominate. Housewives are usually portrayed in the literature as typical consumers. In addition, traditional food consumers are also portrayed as liking the familiar; one expression of this preference being the consumption of familiar dishes (Dagevos, 2005). According to this author, these consumers have fairly conservative food habits, maintaining culinary customs across generations. In addition, they are concerned about their health. In this context, olive oil plays an important role.

There exist several studies analysing the role of culture and food habits in the behaviour of consumers regarding such products. Thus, Nielsen *et al.*'s (1998) cross-cultural study showed that there were large differences in the perceptions of virgin olive oils across UK, Denmark and France. Olive oil users from all three countries agreed on the health benefits of virgin olive oil, which led to the feeling of good health and a long life. Therefore, both hedonistic and sensory aspects of virgin olive oil appeared the most varied between countries.

In the UK, García *et al.* (2002) used focus groups and conjoint analysis to analyse the product attribute trade-offs that consumers make when choosing olive-oil products. One of this paper's main findings was that British consumers continue to regard olive oil as a set of individual attributes (e.g., size, taste and health) instead of a product that is perceived as encapsulating all these attributes. They found that price was one of the most influential

factors on consumers' preferences for basic olive oil, followed by size of container. The main role of price was recently pointed out by Dekhili and d'Hauteville (2009), who found that price was the most important choice attribute in both producing (e.g., Tunisia) and non-producing (e.g., France) countries. In this respect, although fair prices can be charged for olive oil compared with other vegetable oils, there is a limit to the price many consumers are willing to pay (Mili, 2006). The use of price as a choice criterion for consumers is a consequence of the variety of olive-oil brands. Nevertheless, it is true that aspects such as colour, packaging and product labelling are helping producers to differentiate their brands from those of competing suppliers in the distribution chain for olive oil (Van der Lans et al., 2001).

Moreover, aspects related to the origin of olive oil are becoming more important in consumers' choice behaviour. Dekhili and d'Hauteville (2009) showed that the region of origin was relevant in explaining consumer behaviour. Such a regional image has three components: (i) local agronomic conditions (soils, climate); (ii) traditional human know-how; and (iii) raw product characteristics (variety). Thus, these authors found important differences between France and Tunisia in giving credence to the role of an olive-oil-specific regional image. In particular, these authors found quite significant differences regarding the relative weights of the attributes of this image valued in each country. In this respect, there is a growing segment of consumers who prefer quality food with certification of origin (both Protected Designation of Origin [PDO] and Protected Geographical Indication [PGI]). Dekhili et al. (2011) found that these 'official cues' are more important for those consumers belonging to non-producing olive oil countries (e.g., France), whereas in producing countries (e.g., Tunisia) consumers tend to choose olive oil based on origin and 'sensory cues' (e.g., colour and appearance). For instance, in Spain there are 32 PDOs for olive oil; that is, Andalusia, in southern Spain, the geographical area with the highest number of certifications of origin. Sanz and Macías (2005) confirmed the strategic role of Spanish olive oil PDOs. Thus, these authors found that such PDOs, effectively, add greater value to local production systems and so enhance the final quality and market differentiation of a specific-origin olive oil. In this respect, Scarpa et al.'s. (2005) study in the context of three products (table grapes, oranges and olive oil), confirmed the importance of PDOs. According to these authors, the role of PDOs was stronger for olive oil compared to the other two categories analysed.

Thompson et al. (1994) used Ajzen & Fishbein's (1980) *theory of reasoned decision* (TRA) successfully, as a mean of identifying the major issues influencing olive oil choice in the UK. These authors found that attitudes were strongly related to the user or non-user of olive oil. In this respect, the most significant attitude related to the flavour-improving attributes of olive oil (e.g., improving the taste of salads and cooked meals).

In Mediterranean countries, Saba & Di Natale (1998) surveyed 909 Italians in order to assess their attitudes towards fats and food choice. The researchers also used Ajzen & Fishbein's (1980) TRA, combined with a measure of 'habit', as a theoretical framework. The findings suggested that in Italy, culture and food habits might predict intention to consume fats and oils better than TRA. Saba et al. (2000) recently re-confirmed this attitudinal TRA model in the Italian context.

Another interesting aspect related to culture and purchase habits is the place of purchase. Delgado and Guinard's (2011) study of US consumers, reported that the majority of them bought olive oil (extra-virgin) primarily at the supermarket (68%), specialty stores (50%) and

farmers' markets (43%), in contrast with the ways in which Mediterranean consumers most frequently buy their olive oil. Thus, Fotopoulos and Krystallis (2001) reported that 41% of Cretan consumers buy olive oil at the supermarket, while 38% buy in bulk directly from the producer or farm, and 21% make oil from their own olive orchards. Similar figures can be associated with other Mediterranean producing countries such as Italy or Spain. This habit is a consequence of the consumer experience, of belonging to producing countries and the role of olive oil in their intrinsic cultures. Thus, in buying olive oil at supermarkets or hypermarkets, consumers are not exposed to the sensory properties of the product, as they are at farmers' markets or direct from the producers or farms, and so their decisions are based on extrinsic factors such as packaging materials, bottle material and label design (Delgado and Guinard, 2011). This is the case of US consumers.

This is probably the reason why US consumers prefer Italian oil more than Spanish oil. In our opinion, Italian oil possesses a lower quality than Spanish olive oil. However, Italian oil's marketing strategy, from a general point of view, is stronger than the strategies used by Spanish producers. In contrast, when consumers buy oil in bulk directly from the producer, as is the case with consumers belonging to producing countries, they experience the properties of the oil and can make purchasing decisions based on sensory factors. This is the case for consumers living in Mediterranean countries. Even, nowadays these 'experienced consumers' show a greater interest in organic olive oil, given the increasing interest of consumers in ecologically clean products for health and environmental reasons (Gavruchenko *et al.*, 2003). Consumers' need for safer, good quality food has increased over the last years and thus, healthiness and nutritional value are the basic reasons given by consumers for purchasing organic olive oil. In this way, more consumers are willing to pay a higher price, since they take into account organic olive oil's contribution (Sandalidou *et al.*, 2002:405). Nevertheless, Sandalidou *et al.* (2003) pointed out that there is a large number of people who still do not know what an organic product is. For this reason, these authors suggest that the systematic provision of information, mainly through advertising, is necessary, in order to enhance consumers' awareness of organic olive oil's features and nutritional content.

### 3. Analysis of consumer preferences of olive oil

What motivates consumers to prefer and purchase olive oil is not clear (Delgado and Guinard, 2011:214). As has been indicated before, some authors highlight, as the main motivators behind consumption, the oil's region of origin, focusing on the influence of PDO designation and the degree to which an oil typifies the characteristics of that particular region. This is especially true for those consumers who are experienced, local or familiar with a particular region of origin, whereas these factors do not seem to affect urban, less knowledgeable and less experienced consumers (Caporale *et al.*, 2006).

Other authors focus on olive oil's health benefits and flavour (including its use to enhance the taste of recipes) as main motivators for olive oil consumption. Thus, olive oil is promoted as beneficial for health, and industrial strategies and advertising are often based on health claims (Duff, 1998) although, nowadays, EU regulation has imposed the use of 'nutrient profiles', which are already in use in the USA and Canada, and which are under development (Blery and Sfetsiou, 2008:1151). However, many critics argue that this aspect would mean that products such as olive oil should not carry health claims. At present, there is no harmonized legislation at EU level to ensure the scientific accuracy and

appropriateness of such claims. Nevertheless, homogeneous regulation is expected to set clear parameters across Europe for health claims, and they will be allowed only if they are substantiated scientifically (Tamsin *et al.*, 2005). Given the increasing number of countries being integrated into the EU in the last few years, this seems to be even more important for the success of European olive oil production.

New olive oil consumers seem to be more interested in olive oil for two main reasons: health benefits and flavour (Santosa, 2010). Olive oil is claimed to be beneficial for health, as it is rich in vitamin E and it does not contain preservatives (Blery and Sfetsiou, 2008). Among health benefits, lowering the risk of coronary disease, preventing certain kinds of cancer and reducing inflammation have been highlighted (Medeiros and Hampton, 2007). For these reasons, Duff (1998) pointed out that the preference for olive oil is a result of health reasons because the replacement of saturated fats by olive oil results in a lowering of the rate of heart disease. Nevertheless, it is true that there other cheaper seed oils being used as substitutes (Bernabéu *et al.*, 2009). In this respect, olive oil has a high price, although it depends on its origin and its quality (Bourdieu, 1984). For instance, virgin and extra-virgin olive oils are more expensive than standard olive oil. With regard to flavour, Santosa and Guinard (2011) recently reported that this is an important aspect in both the consumption and purchase motivations for olive oil, especially for extra-virgin olive oil, where sensory characteristics are even more important. According to Thompson *et al.* (1994), this is also a consequence of improving the taste of salads and meals.

### 3.1 Study of consumer preferences of olive oil through conjoint analysis

The measurement of attitudes/preferences using a multi-attribute methodology, especially a conjoint Analysis of Multivariate technique, is most appropriate.

In fact, this methodology has become an important tool to assess the preferences that a consumer assigns to the various attributes of a specific product/brand (Ruiz and Munuera, 1993). Hair *et al.* (2009) define conjoint analysis as:

‘a multivariate technique used specifically to understand how respondents develop preferences about products or services, and is based on the simple premise that consumers assess the value of a product/service idea (real or hypothetical) combining separate amounts of value provided by each attribute. The utility, which is the conceptual basis for measuring this value, is a subjective preference unique to each individual which includes all the features of a product or service, both tangible and intangible, and as such, is the measure of overall preference’.

The most direct application of conjoint analysis is as a tool to find the weight or importance that different levels or categories of product attributes play on the formation of consumer preferences (Múgica, 1989). Therefore, conjoint analysis seeks to establish the relative importance of attributes and levels, inferring the utility (satisfaction) that consumers express when they are presented with a series of product concepts that vary in a systematic way (Walley *et al.*, 1999). The application of this methodology in the field of food has, until recently, been quite limited (Van der Pol and Ryan, 1996), starting in the 1990s when it began to generate a relevant scientific production. This confirms the suitability of this methodology to improve knowledge about consumer behaviour when purchasing food. Thus, when reviewing the literature, it appears that it has only been in recent years that

there has been further development in this field of research, ranging from the wine, to the meat, dairy, fruit and vegetable industries. In the case of olive oil, although the literature is not extensive, there are several studies that have examined consumer preferences in deferent countries, as shown in Table 1.

Despite the tradition existing in the consumption of olive oil in the main producing countries, studies carried out to analyse consumer preferences in these countries have been scarce. Probably, this is a consequence of the olive oil's difficulties for differentiating itself in order to better meet the needs of consumers.

One of the first studies that examined consumer preferences is Fotopoulos and Krystallis (2001) that analysed Greek consumer preferences based on two attributes: price and character of protected designation of origin (PDO). Van der Lans *et al.* (2001), in turn, focus their analysis of preferences on extra-virgin olive oil, a variety that is characterized by acidity (oleic acid) to a maximum of 0.8 g per 100 g. According to these authors, the selected attributes were price, colour, origin and appearance, like the unit sample in two Italian regions.

Garcia *et al.* (2002) provide the first work that analyses consumer preferences of olive oil in a non-producing country such as the UK. Following this study, other countries have been used (e.g., Japan (Mtimet *et al.*, 2008) and Canada (Menapace *et al.*, 2011)).

Therefore, in analysing consumer behaviour for olive oil, there are various areas of analysis that take us beyond the attributes that have been considered in each study. In this respect, preference will be conditioned by the variety of olive oil covered by the study, and analysed even if the consumer resides in a country producing this product or not.

A first result that emerges from the literature review is that the extrinsic attributes of olive oil (e.g., price, origin or variety) are the most important when consumers face the act of purchase. Instead, intrinsic attributes, such as colour or flavour, are relegated to second place, with the exception of Mtimet *et al.* (2008), who analysed the Japanese consumer, for whom colour comes first.

Focusing specifically on the extrinsic attributes, a second interesting result refers to the importance of price when buying olive oil. Indeed, in five of the nine studies analysed this is the attribute with the highest relative importance. It should also be noted that this is true for consumers belonging to both producer and non-producer countries, and is also irrespective of the variety of olive oil.

In addition, our analysis shows that origin of oil is also an extrinsic attribute of interest to the consumer. Thus, in a majority of the papers analysed, it is the first or second attribute in order of importance, either in the consumer's conceptualization of country of origin, the region of origin or as part of a Protected Geographical Indication.

With regard to the variety of olive oil, another interesting finding is that, for the case of extra-virgin olive oil, price is always the most important attribute.

Finally, with regard to the sampling unit of analysis, it can be observed that among consumers of non-producing countries, the origin of oil is not the primary attribute on which they make their purchasing decision. Indeed, in two of the three studies analysed, the origin of the oil is the second attribute in importance. In the third study, this factor was not considered. This conclusion is very different among consumers of producer countries, probably as a consequence of the fact that they are more familiar with the product.



	Type	Country	Producing	Attribute	Rank (relative importance) (%)
Fotopoulos and Krystallis (2001)	Olive	Greece	Yes	PDO Price	1 <sup>st</sup> - (55.51) 2 <sup>nd</sup> -. (44.49)
van der Lans, van Ittersum, De Cicco and Loseby (2001)	Extra-virgin olive	Italy	Yes	Price Colour Origin Appearance	1 <sup>st</sup> -. (n.d.) 2 <sup>nd</sup> -. (n.d.) 3 <sup>rd</sup> -. (n.d.) 4 <sup>th</sup> -. (n.d.)
García, Aragonés and Poole (2002)	Olive	UK	No	Price Size Packaging	1 <sup>st</sup> -. (37.40) 2 <sup>nd</sup> -. (33.48) 3 <sup>rd</sup> -. (29.12)
Scarpa and Del Giudice (2004)	Extra-virgin olive	Italy	Yes	Price Quality Certification Origin Appearance	1 <sup>st</sup> -. (44.44) 2 <sup>nd</sup> -. (28.60) 3 <sup>rd</sup> -. (25.41) 4 <sup>th</sup> -. (1.54)
Krystallis and Ness (2005)	Olive	Greece	Yes	Origin Organic label Health info Quality certifications (HACCP, ISO) PDO label Price Glass bottle	1 <sup>st</sup> -. (21.71) 2 <sup>nd</sup> -. (19.07) 3 <sup>rd</sup> -. (16.96) 4 <sup>th</sup> -. (11.11) 5 <sup>th</sup> -. (9.58) 6 <sup>th</sup> -. (8.10) 7 <sup>th</sup> -. (7.17) 8 <sup>th</sup> -. (6.29)
Mtimet, Kashiwagi, Zaibet and Masakazu (2008)	Olive	Japan	No	Colour Origin Price Olive oil type Taste	1 <sup>st</sup> -. (30.14) 2 <sup>nd</sup> -. (29.06) 3 <sup>rd</sup> -. (20.50) 4 <sup>th</sup> -. (10.34) 5 <sup>th</sup> -. (9.94)
Bernabeu, Olmeda, Diaz y Olivas (2009)	Olive	Spain	Yes	Oil type Origin Price Production System	1 <sup>st</sup> -. (41.09) 2 <sup>nd</sup> -. (33.35) 3 <sup>rd</sup> -. (25.35) 4 <sup>th</sup> -. (0.20)
Chan-Haldbrent, Zhllima, Sisor and Imami (2010)	Olive	Albania	Yes	Price Olive oil type Origin Taste Place purchase	1 <sup>st</sup> -. (34.70) 2 <sup>nd</sup> -. (22.16) 3 <sup>rd</sup> -. (20.96) 4 <sup>th</sup> -. (18.66) 5 <sup>th</sup> -. (3.52)
Menapace, Colson, Grebitus and Facendola (2011)	Extra-virgin olive	Canada	No	Price Origin Production system Geographic identification Appearance Colour	1 <sup>st</sup> -. (36.88) 2 <sup>nd</sup> -. (26.54) 3 <sup>rd</sup> -. (23.72) 4 <sup>th</sup> -. (12.49) 5 <sup>th</sup> -. (0.35) 6 <sup>th</sup> -. (0.00)

Table 1. Analyses for consumer preferences of olive oil.

#### 4. Conclusions and recommendations

From a marketing point of view, consumers' purchasing behaviour is affected by the presence of heterogeneous preferences that are derived from their own needs. This is especially important when the consumer is faced with new products or innovations. With regard to olive oil, an agrofood product that is one of the main components of the well-known Mediterranean diet, this heterogeneity is still greater, given the lower consumer knowledge in relation to such a product. Nevertheless, it is not exclusive of markets in the first stages of adopting olive oil, but is also, to a lesser extent, present in countries with a stronger tradition of olive oil consumption. Thus, the majority of studies report a stronger role of extrinsic aspects over intrinsic attributes. In this context, price is the major factor affecting consumer behaviour. Nevertheless, when the consumer is familiar with the product, the country of origin is the most influential aspect in determining consumer purchases.

The results obtained here lead the authors to offer a number of implications for marketing management in the olive oil sector. Given the strong presence of olive oil in international markets, as well as production systems strongly linked to a specific area of origin, promoting familiarity or experience of the products could provide firms with an effective source of competitive advantage, because of the positive consequences for the product image.

In particular, for those markets with less knowledge of olive oil (e.g., the US or China) communication actions will be critical for increasing consumers' familiarity and consequently their knowledge about these products. Thus the objective of commercial communication should consider not only different perceptions of the product cues, but also the differences in product familiarity. In particular, for countries in which product knowledge is greater and consumers have greater knowledge of the intrinsic characteristics of the product, communication campaigns should aim to reinforce consumers' image of the product. In contrast, in countries where the product knowledge is more limited, communication should focus on raising the consumers' level of familiarity and knowledge. This will raise the consumer confidence and, by extension, their purchase intention (Laroche *et al.*, 1996). In general terms, such campaigns should be divided into four consecutive stages:

1. *Campaign to raise awareness among producers and exporters of olive oil.* This first stage should focus on informing producers/exporters about the positive consequences that a favourable image of the area of origin can have for each firm in particular, and for the sector in general. It is necessary to improve training in marketing and communication, for producing and commercial firms, so that they adopt a market orientation approach. For instance, this is the case for Spanish olive oil. Such campaigns are necessary if Spanish olive oil wants to improve its international market penetration, in relation to Italian olive oil.
2. *Educational campaign aimed at consumers.* The main objective at this stage should be to inform the consumer about the area of origin, the olive oil's area characteristics, the production techniques, and so forth. In short, the objective should be to communicate to the consumer the sector's enormous experience in the cultivation of olive oil, and the quality and safety processes used to obtain the end product. This stage of the campaign should also include communication actions aimed at prescribers (e.g., restaurant owners, food specialists) so that they recommend the product to the end consumers (current and potential consumers).

3. *Campaign aimed at distinguishing the most important product cues in the formation of the image in each target market.* The advertising messages should be adapted to each market as a function of its preferences, and the tools and communications media chosen should be consistent with the messages. The messages should transmit the idea that olive oil from the area of origin has attributes that are the most important for that particular consumer.
4. *Campaign to increase consumption and maintain loyalty to the brand.* After achieving the positioning, the consumer should be reminded of the benefits of consuming olive oil from the specific area of origin. At this stage, the communication campaigns must consolidate the product image and be aimed at different segments. Likewise, in the distribution channel, the communication should be flexible and adapted to the particular needs of each channel agent.

In developing all these communication campaigns, public institutions and governments can play an important role. Given the importance of olive oil sector in their socio-economic context, this is especially relevant for the case of Mediterranean olive oil producing countries. Therefore, public institutions are advised to collaborate with their own countries' olive oil sector.

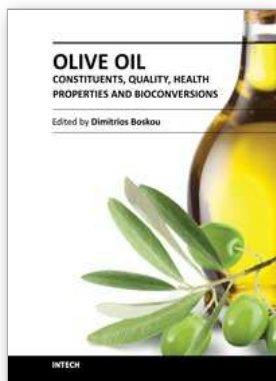
## 5. References

- Ajzen, I. & Fishbein, M. (1980). *Understanding and predicting social behaviour*, Englewood Cliff, NJ: Prentice Hall
- Bernabéu, R.; Olmeda, M.; Díaz, M. & Olivas, R. (2009). Oportunidades comerciales para el aceite de olive de Castilla-La Mancha. *Grasas y Aceites*, Vol.60 No.5, pp. 525-533.
- Blackwell, R.D.; Miniard, P.W. & Engel, J. (2001). *Consumer behaviour*, 9<sup>th</sup> ed., Hartcourt Collage Publishers, Fort Worth, TX.
- Blery, E. & Sfetsiou, E. (2008). Marketing olive oil in Greece. *British Food Journal*, Vol. 110, No.11, pp. 1150-1162.
- Bourdieu, P. (1984). *Distinction: A Social Critique of the Judgment of Taste*, Routledge & Kegan, Paul, London.
- Caporale, G.; Policastro, S.; Carlucci, A. & Monteleone, E. (2006). Consumer expectations for sensory properties in virgen olive oils, *Food Quality and Preferences*, 17, pp. 116-125.
- Chan-Halbrendt, C.; Zhllima, E.; Sisor, G.; Imami, D. & Leonetti, L. (2010). Consumer preferences for olive oil in Tirana, Albania. *International Food and Agribusiness Management Review*, Vol.13, No. 3, pp. 55-74.
- Dagevos, H. (2005). Consumers as four-faced creatures: looking at food consumption from the perspective of contemporary consumers, *Appetite*, Vol. 45, pp. 32-9.
- de la Viesca, R.; Fernández, E.; Fernández, S. & Salvador, J. (2005). Situation of European SMEs in the olive oil and table olive area. Survey, *Grasas y Aceites*, Vol. 56, No.3, pp. 209-219.
- Dekhili, S. & d'Hauteville, F. (2009). Effect of the region of origin on the perceived quality of olive oil: an experimental approach using a control group, *Food Quality and Preference*, Vol. 20, pp. 525-532.
- Dekhili, S.; Sirixel, L. & Cohen, E. (2011). How consumers choose olive oil: the importance of origin cues, *Food Quality and Preference*, doi:10.1016/j.foodqual.2011.06.005

- Delgado, C. & Guinard, J-X. (2011). How do consumer hedonic rating for extra virgen olive oil relate to quality ratings by experts and descriptive analysis ratings?, *Food Quality and Preference*, Vol. 22, pp. 213-225.
- European Commission (2010). Statistical and economic information report 2009, available at: [http://bookshop.europa.eu/en/agriculture-in-the-eu-pbKFAC10001/downloads/KF-AC-10-001-EN-C/KFAC10001ENC\\_002.pdf?FileName=KFAC10001ENC\\_002.pdf&SKU=KFAC10001ENC\\_PDF&CatalogueNumber=KF-AC-10-001-EN-C](http://bookshop.europa.eu/en/agriculture-in-the-eu-pbKFAC10001/downloads/KF-AC-10-001-EN-C/KFAC10001ENC_002.pdf?FileName=KFAC10001ENC_002.pdf&SKU=KFAC10001ENC_PDF&CatalogueNumber=KF-AC-10-001-EN-C) (accessed August 2, 2011).
- Fotopoulos, C. & Krystallis, A. (2001). Are quality labels a real marketing advantage? A conjoint application on Greek PDO protected olive oil. *Journal of International Food & Agribusiness Marketing*, Vol.12, No.1, pp. 1-22.
- García, M.; Aragonés, Z. & Poole, N. (2002). A repositioning strategy for olive oil in the UK market. *Agribusiness*, Vol.18, No.2, pp. 163-180.
- Gavruchenko T.; Baltas G.; Chatzitheodoridis F.; & Hadjidakis S. (2003). Comparative marketing strategies for organic olive oil: The case of Greece and Holland, in A. Nikolaidis *et al* (eds) *The Market for Organic Products in the Mediterranean Region*, Cahiers Options Mediterraneennes, Vol 61, pp. 247-255
- Govers, P. & Schoormans, J. (2005). Product personality and its influence on consumer preference. *Journal of Consumer Marketing*, Vol. 22, No.4, pp. 189-197.
- Guerrero, L.; Guardia, M.; Xicola, J.; Verbeke, W.; Vanhonacker, F.; Zakowska, S.; Sajdakowska, M.; Sulmont-Rosse´, C.; Issanchou, S.; Contel, M.; Scalvedi, L.; Granli, B. & Hersleth, M. (2009). Consumer-driven definition of TFP and innovation in traditional foods. A qualitative cross-cultural study, *Appetite*, Vol. 52, pp. 345-54
- Hair, J.F.; Anderson, R.E.; Tatham, R.L. & Black, W.C. (2009). *Multivariate data analysis*, 7<sup>th</sup> ed., Prentice Hall.
- Heath, A.P. & Scott, D. (1998). The self-concept and image congruence hypothesis: an empirical evaluation in motor vehicle market. *European Journal of Marketing*, Vol.32, No.11/12, pp. 1110-1123.
- Hellonet (2006). The Greek olive oil, available at: [http://hellonet.teithe.gr/GR/aboutgreece\\_gr.htm](http://hellonet.teithe.gr/GR/aboutgreece_gr.htm) (accessed August 2, 2011).
- Howard, J. A. & Sheth, J.N. (1969). *The Theory of Buyer Behavior*, Nueva York, John Wiley & Sons.
- International Olive Council (2008). *Olive products market report summary*, Market Commentary.
- Krystallis, A. & Ness, M. (2005). Consumer preferences for quality foods from a South European perspective: A conjoint analysis implementation on greek olive oil. *International Food and Agribusiness Management Review*, Vol.8, No.2, pp. 62-91.
- Lambin, J.J. (1995). *Marketing Estratégico*. Mc Graw Hill.
- Laroche, M.; Kim, Ch.; & Zhou, L. (1996). Brand familiarity and confidence as determinants of purchase intention: an empirical test in a multiple brand context, *Journal of Business Research*, Vol. 37, pp. 115-120.
- Lilien, G.L. & Kotler, P. (1990). *Toma de decisiones en mercadotecnia. Un enfoque a la construcción de modelos*. CECSA.
- Medeiros, D. & Hampton, M. (2007). Olive oil and health benefits, in R.E.C. Wildman (Ed.), *Handbook of nutraceuticals and functional foods*, CRC Press, Boca Raton, FL.

- Menapace, L.; Colson, G.; Grebitus, C & Facendola, M. (2011). Consumers' preferences for geographical origin labels: evidence from the Canadian olive oil market. *European Review of Agricultural Economics*, Vol.38, No.2, pp 193-212
- Mili, S. (2006). Olive oil marketing in non-traditional markets: prospects and strategies, *New Medit*, Vol. 5, No.1, pp. 27-37.
- Mtimet, N.; Kashiwagi, A.K.; Zaiabet, L. & Masakazu, N. (2008). Exploring Japanese olive oil consumer behavior. *International Congress from European Association of Agricultural Economists*, August 26-29, Ghent, Belgium, Paper No. 44447.
- Múgica, J.M. (1989). Los modelos multiatributo en marketing: el análisis conjunto. *IP-MARK*, Vol.324, pp. 63-71.
- Nielsen, N., Bech-Larsen, T. & Grunert, K. (1998). Consumer purchase motives and product perceptions: a laddering study on vegetable oil in three countries. *Food Quality and Preference*, Vol.9, No.6, pp. 455-466
- Ruiz, S. & Munuera, J.L. (1993). Las preferencias del consumidor: Estudio de su composición a través del análisis conjunto. *Estudios sobre Consumo*, Vol.28, pp. 27-44.
- Saba, A. & Di Natale, R. (1998). Attitudes, intention and habit: their role in predicting actual consumption of fats and oils. *Journal of Human Nutrition and Dietetics*, Vol. 11, No. 1, pp. 21-32.
- Saba, A., Vassallo, M. & Turín, A. (2000). The role of attitudes, intentions and habit in predicting actual consumption of fat containing foods in Italy. *European Journal of Clinical Nutrition*, Vol. 54, No.7, pp. 540-545.
- Sandalidou, E. & Baourakis, G. (2002). Customers perspectives on the quality of organic olive oil in Greece, *British Food Journal*, Vol. 104 Nos. 3/5, pp. 391-406.
- Sandalidou, E.; Baourakis, G. & Siskos, Y. (2002). Customers' perspectives on the quality of organic olive oil in Greece. A satisfaction evaluation approach, *British Food Journal*, Vol. 104, No. 3/4/5, pp. 391-406.
- Sandalidou E.; Baourakis G.; Grigoroudis E. & Siskos Y. (2003). Organic and conventional olive oil consumers: a comparative analysis using a customer satisfaction evaluation approach, in A. Nikolaidis *et al.* (eds), *The Market for Organic Products in the Mediterranean Region*, Cahiers Options Mediterraneennes, Vol. 61, pp. 265-276.
- Santosa, M. (2010). *Analysis of sensory and non-sensory factors mitigating consumer behaviour: a case study with extra virgin olive oil*, PhD Dissertation, Food Science, University of California, Davis.
- Santosa, M. & Guinard, J-X. (2011). Means-end chains analysis of extra virgin olive oil purchase, *Food Quality and Preference*, Vol. 22, pp. 304-316.
- Sanz, J. & Macías, A. (2005). Quality certification, institutions and innovation in local agro-food systems: protected designations of origin of olive oil in Spain, *Journal of Rural Studies*, Vol. 21, pp. 475-486.
- Scarpa, R. & Del Giudice, T. (2004). Market segmentation via mixed logit:extra-virgin olive oil in urban Italy. *Journal of Agricultural & Food Industrial Organization*, Vol.2, No.1, pp.
- Scarpa, R., Philippidis, G. & Spalatro, F. (2005). Product-country images and preference heterogeneity for Mediterranean food products: a discrete choice framework, *Agribusiness*, Vol. 21, No.3, pp. 329-349.
- Schiffman, L. & Kanuk, L. (2001): *Comportamiento del consumidor*, Prentice Hall, 7<sup>a</sup> ed.

- Solomon, M.; Bamossy, G. & Askegaard, S. (1999). *Consumer Behaviour. A European Perspective*, Prentice Hall Europe.
- Soons, L. (2004). The olive oil market of Mainland China, Master Thesis, Lund University, available at:  
<http://lup.lub.lu.se/luur/download?func=downloadFile&recordOId=1331369&fileOId=1331370> (accessed August 3, 2011)
- Steenkamp, J.B. (1997). Dynamics in consumer behaviour with respect to agricultural and food products, in B. Wierenga, A. Van Tilburg, K. Grunert, JB. Steenkamp y M. Wedel (eds.), *Agricultural Marketing and Consumer Behaviour in a Changing World*, Kluwer Academic Publishers, Boston, pp. 143-188.
- Tamsin, R.; Walshe, D.; Logstrup, S.; Giorgio-Gerlach, F. & Craplet, M. (2005). Destroying myths and misunderstandings of the claims regulation, European Community of Consumer Cooperatives, Brussels.
- Thompson, K., Haziris, N. & Alekos, P. (1994). Attitudes and food choice behaviour. *British Food Journal*, Vol. 96, No.11, pp. 9-13.
- Vanhonacker, F.; Lengard, V.; Hersleth, M. & Verbeke, W. (2010). Profiling European traditional food consumers, *British Food Journal*, Vol. 112, No. 8, pp. 871-886.
- Van der Lans, I.A.; Van Ittersum, K.; de Cicco, A. & Loseby, M. (2001). The role of the region of origin and EU certificates of origin in consumer evaluation of food products. *European Review of Agricultural Economics*, Vol.28, No.4, pp. 451-477.
- Van der Pol, M. & Ryan, M. (1996). Using conjoint analysis to establish consumer preferences for fruit and vegetables. *British Food Journal*, Vol.98, pp. 5-12.
- Walley, K.; Parsons, S. & Bland, M. (1999). Quality assurance and the consumer: a conjoint study. *British Food Journal*, Vol.101, No.2, pp. 148-161.
- Zampounis, V. (2006). Olive oil in the world market, in D. Boskou (Ed.) *Olive oil chemistry and technology*, AOC Press, pp. 21-39.



## **Olive Oil - Constituents, Quality, Health Properties and Bioconversions**

Edited by Dr. Dimitrios Boskou

ISBN 978-953-307-921-9

Hard cover, 510 pages

**Publisher** InTech

**Published online** 01, February, 2012

**Published in print edition** February, 2012

The health-promoting effects attributed to olive oil, and the development of the olive oil industry have intensified the quest for new information, stimulating wide areas of research. This book is a source of recently accumulated information. It covers a broad range of topics from chemistry, technology, and quality assessment, to bioavailability and function of important molecules, recovery of bioactive compounds, preparation of olive oil-based functional products, and identification of novel pharmacological targets for the prevention and treatment of certain diseases.

### **How to reference**

In order to correctly reference this scholarly work, feel free to copy and paste the following:

José Felipe Jiménez-Guerrero, Juan Carlos Gázquez-Abad, Juan Antonio Mondéjar-Jiménez2 and Rubén Huertas-García (2012). Consumer Preferences for Olive-Oil Attributes: A Review of the Empirical Literature Using a Conjoint Approach, Olive Oil - Constituents, Quality, Health Properties and Bioconversions, Dr. Dimitrios Boskou (Ed.), ISBN: 978-953-307-921-9, InTech, Available from:  
<http://www.intechopen.com/books/olive-oil-constituents-quality-health-properties-and-bioconversions/consumer-preferences-for-olive-oil-attributes-a-review-of-the-empirical-literature-using-a-conjoint->

# **INTECH**

open science | open minds

### **InTech Europe**

University Campus STeP Ri  
Slavka Krautzeka 83/A  
51000 Rijeka, Croatia  
Phone: +385 (51) 770 447  
Fax: +385 (51) 686 166  
[www.intechopen.com](http://www.intechopen.com)

### **InTech China**

Unit 405, Office Block, Hotel Equatorial Shanghai  
No.65, Yan An Road (West), Shanghai, 200040, China  
中国上海市延安西路65号上海国际贵都大饭店办公楼405单元  
Phone: +86-21-62489820  
Fax: +86-21-62489821

© 2012 The Author(s). Licensee IntechOpen. This is an open access article distributed under the terms of the [Creative Commons Attribution 3.0 License](#), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.