The effect of personality traits on consumers' preferences for extra virgin olive oil

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ABSTRACT

The aim of this paper is to investigate the role of psychological factors on building the consumer's behavioral decision process towards extra virgin olive oil, with special attention paid to the organic attribute. The paper hypothesises that differences in consumers' personality traits, such as food-related personality traits, purchasing habits and lifestyles, affect consumers' preferences for extra virgin olive oil. The methodological framework is based on the specification of an extended hybrid choice model (HCM), which was estimated following a two-step procedure. In the first step, a structural equation model was estimated to test for hierarchical relationships between latent variables to explain purchasing intentions towards an organic olive oil. In the second step, the predicted latent variables were introduced in a random parameter logit (RPL) model to investigate the main determinants of consumers' choices related to extra virgin olive oil and the specific role of the organic attribute. The results from this study reinforce the need to include the psychological characteristics of consumers, such as attitudes, food-related personality traits, purchase habits and lifestyle orientation, to better explain how individuals make food choices and to better understand the decision maker's process. Interestingly, Catalan consumers perceive a disutility from the organic attribute compared to other production system alternatives (conventional and PDO), while subjective norms and a higher perception of behavioral control only partially mitigate this effect. Environmental or health concerns seem to not be relevant to consumers' choices related to olive oil as the conventional olive oil is already perceived as a healthy product per se.

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1. Introduction

Olive oil is a food product consumed in most Mediterranean countries and is an essential component of the Mediterranean diet (Garcia-Closas, Berenguer, & González, 2006). Its importance in the daily lives of consumers reflects its ancient traditions, its social and agro-environmental dimensions, as well as its health and nutritional benefits. The European Union produces 73% of the world's olive oil and consumes about 66% (International Olive Oil Council, 2013). As Fig. 1 shows, the main olive oil producers and consumers are Spain and Italy. However, an important expansion of olive oil consumption may be observed outside the traditional Mediterranean countries (United States International Trade Commission, 2013). The Mintel Global New Products Database (GNPD) database reveals that 1116 new olive oils were launched from 2011

to 2013 all around the world. Of these, stores in the USA stocked about 15%, followed by Brazilian stores with about 13% (see Table 1).

Olive oil characteristics are regulated within the EU by Regulation (EEC) N° 2568/91, which establishes a list of physical, chemical, and organoleptic characteristics, as well as methods for their measurement. However, continuous research and development (R&D) in this sector has produced a large variety of olive oil types and specifications, making consumers more dependent on displayed information to make their purchasing decisions. Olive oil quality attributes are mainly communicated on the product label, which builds pre-consumption confidence among consumers (Scarpa & Del Guidice, 2004). Olive oil labels typically fall within the category of "credence attributes," including organic production certifications and protected denomination of origin (PDO), which consumers cannot directly value through consumption of the oil (Nocella, Boecker, Hubbard, & Scarpa, 2012).

Understanding oil consumption requires accounting for new olive oil varieties and trademarks developed worldwide and for

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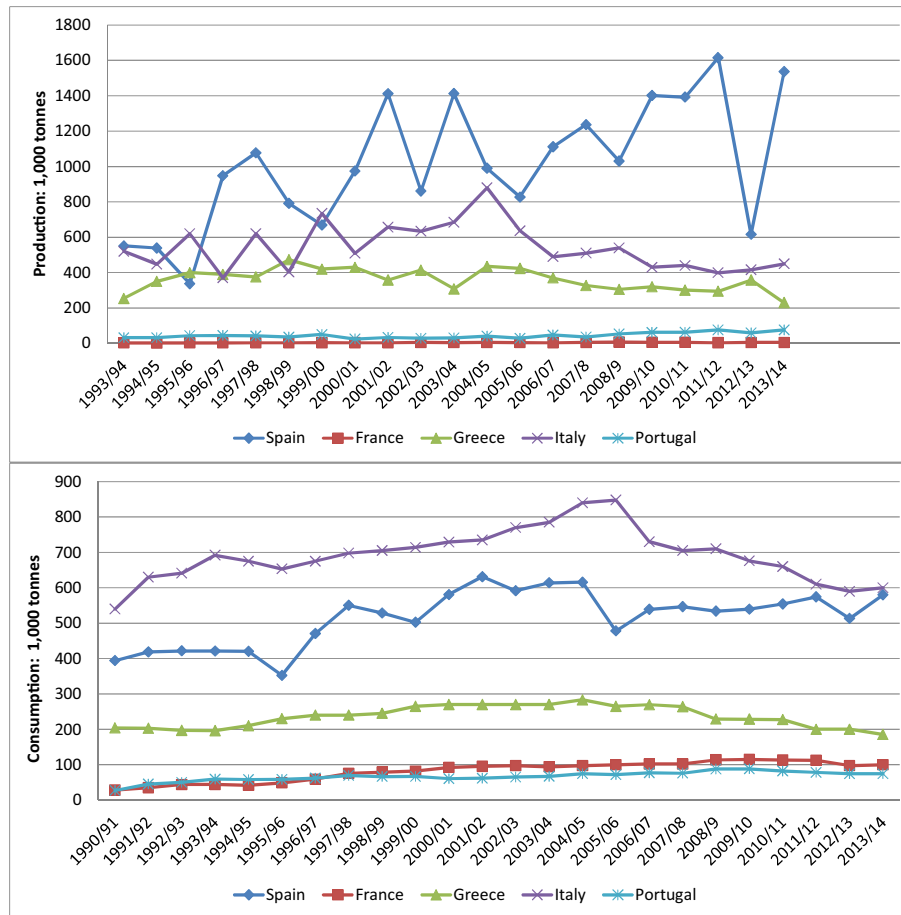
Fig. 1. World olive oil production and consumption 1993–2014 (main countries). *Note:* 2012/13 data are provisional and 2013/14 data are estimated. Source: Data from the international olive oil council (November 2013).

the increasing public awareness of the health and environmental benefits associated with the Mediterranean diet and PDO products. However, different consumers may focus on different information cues, and therefore may develop specific behavioral criteria when making purchasing decisions (Menapace, Colson, Grebitus, & Facendola, 2011; Philippidis, Kakaroglou, & Sanjuan A., 2002). Hence, better understanding of how consumers evaluate olive oil is essential to help producers succeed in an increasingly competitive market.

More understanding of how consumers construct their evaluations and their consequent purchasing decisions with respect to marketed olive oils is also important to EU policy makers and regulators. It is extremely likely that olive oil consumption will increase at world level. The current orientation of EU olive oil policy, as stated in the European Commission web page,[1] is "to maintain and strengthen its position in world markets by encouraging production of a high quality product for the benefit of growers, processors, traders and consumers." However, this is not an easy task, as an individual's preferences depend not only on the extrinsic and intrinsic attributes of the products to be purchased but also on factors unrelated to food (Chen, 2007; Nocella et al., 2012).

This paper aims to identify the effect of consumers' specific characteristics, namely the role of food-related personality traits, lifestyle orientations, and purchase habits in shaping their purchase intentions regarding olive oil. To achieve this objective, data from a survey carried out from a representative sample of

Catalonian (north-eastern Spain) consumers have been employed. The methodological framework is based on a discrete-choice modeling approach, named the hybrid choice model (HCM). This model specifically accounts for preference heterogeneity in examining the effects of individual personality traits, lifestyles, and habits.

Traditionally, the HCM model has involved two steps.[2] In the first step, latent variables (i.e., food-related personality traits, lifestyles or purchase habits, among others) are derived from observed indicators via a "multiple-indicator, multiple cause" model (MIMIC), used to relate latent individual traits to observable determinants. In the second step, the predicted latent variables are incorporated into the discrete-choice model as explanatory variables to estimate a multinomial logit model.

Our paper extends the existing literature in at least two ways. First, it does not merely estimate latent variables from observed indicators, but also estimates the hierarchical relationships between latent variables using a structural equation model (SEM), providing better insight into the consumers' cognitive decision-making processes. Second, this study employs an HCM in a panel-data context constructed from the repeated-choice data set while considering sample heterogeneity. It estimates a random parameter logit (RPL) model, considering the latent variables as

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[2] Alternatively, the HCM can be seen as resulting in both efficient and consistent estimates (Ben-Akiva et al., 2002; Kløjgaard & Hess, 2011; Rungie, Coote, & Louviere, 2012). However, this approach usually results in convergence and identification problems, as the number of latent variables increases (Ashok, Dillon, & Yuan, 2002). In this study, due to the high number of latent variables introduced, the sequential estimation method of the HCM based on the mixed logit model is used.