RESEARCH ARTICLE

The region-of-origin effect in the purchase of wine: The moderating role of familiarity

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Abstract

Research on the place-of-origin effect has proliferated in recent decades, although there are still gaps in this field, especially in relation to the region-of-origin (ROO) and to the influence of certain moderating variables on the effect. The purpose of this paper is to analyse the ROO effect in the purchase of wine, paying special attention to the moderating role played by familiarity. Via a survey of 427 consumers carried out in the region of Extremadura (Spain), the paper study how variables as the region's overall image, its image as a wine producer, the perceived quality of its products, and consumer ethnocentrism affect the intention to purchase regional wines. To reach that goal, a structural equation model was applied using the Partial Least Square technique to identify the variables that explain and moderate this intention. The results show the region's overall image (2.65% of contribution to the purchase intentions explained variance), its image as a wine producer (8.39%), the perceived quality of its products (22.42%), and consumer ethnocentrism (10.23%) to affect the purchase intentions directly and indirectly. The confirmation of a moderating effect of familiarity in one of the model relationships contributes to give answer to one of the most significant questions in marketing theory about the origin effect. These results have important managerial implications for policy decision-makers, confirming the value of implementing communication campaigns that pursue improvement of the region's image as a brand.

Additional key words: Spanish wine market; partial least square; structural equation modelling; consumer behaviour; region image; perceived quality; consumer ethnocentrism.

Abbreviations used: AVA (American Viticultural Area); AVE (Average Variance Extracted); DVA (Designated Viticultural Area); GoF (Goodness-of-Fit); PDO (Protected Designations of Origin); PGI (Protected Geographical Indications); PLS (Partial Least Squares); ROO (Region-of-Origin).

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Introduction

Globalization and the consequent increase in the level of competition have made the origin or source of a product an attractive attribute for brand differentiation. This is especially so in certain categories of agrofood products. For this reason, academic research on the so-called "place-of-origin effect" has proliferated in recent decades. Papadopoulos & Heslop (2003) define this effect as "*a set of strengths and weaknesses related to the place-of-origin that incorporate or subtract the value supplied by a brand or service to the producer and/or its clients*". This added value can come from environmental and human factors already existing in the place. It may manifest itself in different ways: through the consumer's perceived quality of the prod-

uct, through their attitudes and preferences, or through their purchase intention.

A review of the academic literature showed that most of the studies looking at the variables that influence the existence of a place-of-origin effect have focused on the nation level, *i.e.* the country-of-origin effect (Claret *et al.*, 2012; Godey *et al.*, 2012; Lee *et al.*, 2013; Lagerkvist *et al.*, 2014). Conversely, the study of the region-of-origin (ROO) effect has been left somewhat in the background (González & Villanueva, 2001; Pharr, 2005; De Francesco *et al.*, 2012). However, there are some product categories, such as wine, in which the differentiating attributes are generated by the characteristics of a specific region of the country. This is the reason for the growing importance of Pro-

tected Designations of Origin (PDO) and Protected Geographical Indications (PGI) in southern European countries, the American Viticultural Areas (AVAs) in the USA, the Designated Viticultural Areas (DVAs) in Canada, or the Australian Geographical Indications. The greater uniformity and consistency of the characteristics of a region than those of a country allow these products to convey an identity based on the know-how of its people, its climate, its agricultural conditions, and its traditions. The product is thus endowed with a unique personality and identity that cannot be imitated by other regions or countries that do not have all these characteristics together simultaneously. Research on this topic usually treats the ROO effect as a primarily two-dimensional construct, with human factors comprising one dimension and natural conditions the other (van Ittersum et al., 2003).

In wine production in particular, regions are much more homogeneous in terms of human and natural factors than countries. Hence, according to Bruwer & House (2003), regional branding allows the possibility of differentiating a product from both foreign and domestic competition.

Due to the above, there exists a need for a further research on the influence of ROO on consumer behaviour. Based on a number of ideas and hypotheses suggested by a prior qualitative study carried out by the research team (García-Galán et al., 2012, 2014), this paper aims to study how variables as the region's overall image, its image as a wine producer, the perceived quality of its products and consumer ethnocentrism, affect the consumer intention to purchase regional wines. In addition, the moderating role played by familiarity with the product category and with the product origin is also examined in order to contribute to one of the most significant questions in marketing theory about the origin effect.

Material and methods

Proposal of a model of the ROO effect

In European wine-producing countries, previous research has shown that ROO is one of the most important attributes in consumers' purchase processes; in some cases, even more so than price. Perrouty et al. (2006) used a discrete choice method to survey European wine purchasers (from four countries), and found that ROO equity is significantly moderated by the other attributes of the wine. In Italy, Casini et al. (2009) showed that, when consumers are choosing a wine for a dinner at home with their friends, they firstly tended to select a wine they had tried previously, and sec-

ondly matched the wine to the food. However, these Italian consumers seemed to give less importance to the origin of the wine, although the vast majority of them usually bought wines produced in their own region. Some studies of the Spanish market have shown the relevance of the ROO and the PDO (Martínez-Carrasco et al., 2006; Bernabéu et al., 2008, 2013; Kallas et al., 2013). Except for some regions (Martínez-Carrasco et al., 2006; Bernabéu et al., 2008), consumers have a strong preference for locally produced wines as against national and imported wines.

Regarding "New World" wine countries such as Australia or USA, where grape varietal marketing has played a significant role in consumers' purchase processes, ROO is also gaining importance in wine marketing since the end of 1990´s (Bruwer & House, 2003; Johnson & Bruwer, 2007). The importance of the ROO effect in these markets has been analysed by various authors. Bruwer & House (2003) found that ROO ranked third behind price and grape variety/wine style in Australian consumers' wine purchase intention in a retail outlet. According to Johnson & Bruwer (2007), the wine's region is the most important quality-predicting information on wine labels in the California market, with over 85% of consumers taking the region into account when evaluating a wine label. Indeed the region was the most often reported source of information, above brand, vintage, appellation, state, or country. Similarly, Atkin et al. (2007) found that the geographic origin of the wine was the most important attribute for both Australian and New Zealand consumers when choosing wines; in addition, local wines were preferred over all the other choices presented. A study by Atkin & Johnson (2010) found brand to be the commonest attribute used by consumers, followed by two geographical elements (country and region). Less important were other attributes such as vintage, state, label, medals won, alcohol content, appellation, and organic production attributes. Lacey et al. (2009) found that, for Australian consumers in a fine restaurant setting, the region followed only grape variety in being the strongest attribute they used in their risk reduction strategies when selecting the wine to go with their meal. However, other studies in Australia report different results. For instance, the relative importance of ROO among the main wine product attributes was found to be just fifth in a study by McCutcheon et al. (2009), after quality, price, style and variety.

Besides the study of the importance given to the place-of-origin, an important question that still remains to be important and should be analysed in detail is the existence of certain antecedent and moderating variables of the place-of-origin effect (Pharr, 2005). The literature review carried out for this study allows high-

lighting some of the main conclusions obtained by the scholars about these variables:

- The place's image (González & Villanueva, 2001; Verlegh *et al.,* 2005; Ahmed & d'Astous, 2007; Lee & Lockshin, 2011; Lee *et al.*, 2013), which refers to the mental picture that consumers have of a particular place, whether in relation to historical, cultural, political, economic, geographical, or human aspects, or to some combination of them.
- The region's image as a producer of a given product category (Van Ittersum *et al.*, 2003).
- Familiarity with or knowledge about the product category (Insch & McBride, 2004; Jiménez & San Martin, 2010; Fandos & Flavián, 2011).
- Familiarity with a place and its products (González & Villanueva, 2001; Ahmed & d'Astous, 2007; Lee & Lockshin, 2011; Gázquez *et al.*, 2012).
- Consumer ethnocentrism (Shimp & Sharma, 1987; Klein *et al.*, 1998; González & Villanueva, 2001; Luque *et al.*, 2004; Dmitrovic *et al.*, 2009), understood as the belief that a product deriving from your own ethnic or cultural group is inherently superior to similar products from other cultural or ethnic groups.
- Consumer animosity (Klein *et al.*, 1998; González & Villanueva, 2001; Jiménez & San Martín, 2010), *i.e.*, "*feelings of animosity towards a country related to previous or ongoing military, political, or economic events, which are reflected in the purchasing behaviour of consumers in international markets*" (Klein *et al.*, 1998).
- Certain sociodemographic variables such as age, gender, income, or education level.

As we noted above, most of the studies on the place-of-origin effect have focused on the nation level and further research is needed on the ROO effect (González & Villanueva, 2001; Pharr, 2005; De Francesco *et al.*, 2012). Based on the literature review, we designed the structural model shown in Fig. 1a with which to study the ROO effect in the Spanish wine market. The specific objective was to determine the variables that explain and moderate the intention to purchase regional wines. The model proposes direct and indirect effects of the following antecedent variables on the purchase intention: the region's image, the region's image as a producer in this product category, the perceived quality of the region's products, and consumer ethnocentrism.

The model poses a number of ideas and hypotheses that had been suggested by a prior qualitative study carried out by the research team. This was an exploratory, qualitative, longitudinal (2002-2008) study, the objective of which was to assess the views and beliefs of the managers of wineries in a wine-producing region of Spain about the importance of regional origin and the PDO for consumers (García-Galán *et al.*, 2012, 2014).

Ahmed & d'Astous (2007) showed that perceptions of a product's quality are influenced by the image consumers have of its country of origin. Similar findings have been reported in other studies, such as those by González & Villanueva (2001), Srinivasan *et al.* (2004), and Verlegh *et al.* (2005). Van Ittersum *et al.* (2003) showed how consumers' attitudes towards an ROO influence their perceptions of quality, although only for one of the two product categories they analysed in their study. In the case of the product under study in this present work, Lee & Lockshin (2011) found that the image of Australia has a strong positive influence on the perceptions of its wines. Given the above, we posit the following hypothesis:

H_1: The better the overall image consumers have of a region, the better their perceptions of the quality of its products.

In addition to the aforementioned effect that the overall image of a place has on the perception of its products' quality, various studies have shown that this image also affects purchase intentions. In particular, it has a direct and positive influence on the final variable of our model (Van Ittersum *et al.*, 2003; Srinivasan *et al.*, 2004; Verlegh *et al.*, 2005; Ahmed & d'Astous, 2007; Lee *et al.*, 2013). On the basis of these results, we therefore posit the following hypothesis:

H_2: The better the overall image consumers have of a region, the greater their purchase intention towards its products.

Another of the conclusions drawn from the literature review was that the perception of quality of the products of a given origin directly and positively influences the purchase intention or preference towards products of that origin (González & Villanueva, 2001; Van Ittersum *et al.*, 2003). More recently, Lee & Lockshin (2011) have shown that consumers' beliefs about the wines of some given place are positively related with the purchase intentions. For this reason, we posit the following hypothesis:

H_3: The better the perception of quality consumers have of a region's products, the greater their purchase intention towards them.

As mentioned above, there have been several studies that have examined the role the overall image of a place plays in the purchasing behaviour of consumers towards its products. However, according to Van Ittersum *et al.* (2003), when the study is focused on a specific product category, the predictive value of this variable is usually not high. They state that it is also necessary

to measure the region's image as a producer in that product category. In this regard, there have as yet been few studies that have included this variable. Nevertheless, we posit the following hypothesis:

H4: The better the image consumers have of a region as producer of a specific product category, the better their perceptions of quality of that region's products.

Van Ittersum *et al.* (2003) attempted to show that this variable has no direct influence on consumer preferences for the region's products. They were unable to accept this hypothesis, however, since it was not confirmed in one of the two categories they studied. In the present study therefore, we posit the following hypothesis:

H5: The better the image consumers have of a region as producer of a specific product category, the better their purchase intention towards the region's products.

Furthermore, the aforecited authors consider that consumers' overall attitude or image about a region can directly influence their image of it as a producer of a particular category of product. We therefore posit the following hypothesis:

H6: The better the overall image consumers have of a region, the better their image of it as producer of a specific product category.

Finally, we included the consumer ethnocentrism variable in the model as numerous studies have found it to be positively related to both domestic purchasing behaviour and the perceived quality of domestic products (*e.g.,* Luque *et al.*, 2004; Dmitrovic *et al.*, 2009). The hypotheses to be tested are:

H7: Consumers' ethnocentric tendencies are directly and positively related to the purchase intention towards their region's products (domestic purchasing behaviour).

H8: Consumers' ethnocentric tendencies are directly and positively related to their perceptions of quality of their region's products.

In addition to analysing the relationships between the variables of the structural model, a further objective was to determine the moderating role that a consumer's familiarity with the product category can play in some of the relationships of the model. Studies such as those by Perrouty *et al.* (2006), Atkin & Johnson (2010), and Atkin & Newton (2012) have shown that consumers who are more expert and involved in the purchase of wine give greater importance to the ROO information in their purchasing process. Other studies that have included this variable in the general place-of-origin context are those of Insch & McBride (2004) and Srinivasan *et al.* (2004). In these cases, however, the results have been contradictory as to whether such a moderating effect exists, and if so, in which sense. Our working hypotheses were therefore (Fig. 1b):
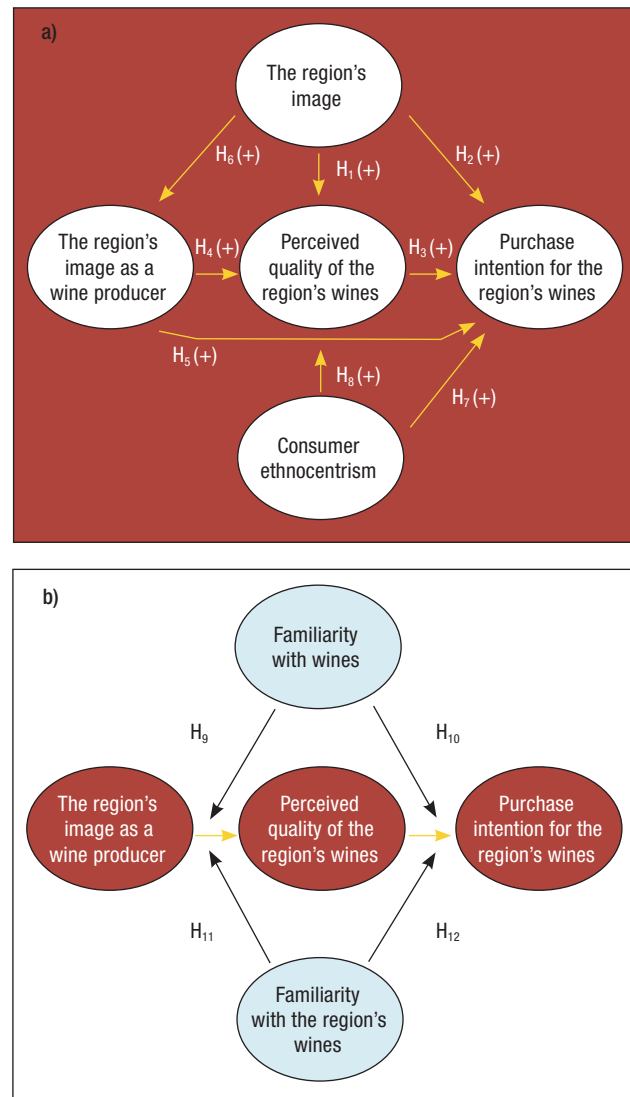

Figure 1. Structural model proposed to study the region-of-origin (ROO) effect in the Spanish wine market, to determine the variables that explain and moderate the intention to purchase regional wines. (a) Hypotheses 1 to 8. (b) Hypotheses 9 to 12.

H9: Familiarity with the product category moderates the relationship between a region's the image as producer of the product category and the perceived quality of the products from that region.

H10: Familiarity with the product category moderates the relationship between the perceived quality of a region's products and the purchase intention towards those products.

The same as with familiarity with the product category, consumers' level of knowledge of an origin or of its products may play a moderating role in the relationships between the variables of the structural model (González & Villanueva, 2001; Lee & Lockshin, 2011; Gázquez *et al.*, 2012). Therefore, our last two hypotheses were (Fig. 1b):

H_{11}: Familiarity with an origin's products moderates the relationship between a region's image as a producer of a specific product category and the perceived quality of that region's products.

H_{12}: Familiarity with an origin's products moderates the relationship between the perceived quality of that region's products and the purchase intention towards those products.

Research design

To test the proposed relationship model, we applied the partial least squares (PLS) regression technique (Chin, 1998). All computations were done using the SmartPLS software package. The data came from a survey of regular or occasional purchasers of wine in the region of Extremadura (Spain). The study's technical data sheet is given in Table 1. The sampling procedure was non-probabilistic, by gender and province of residence quota, with the aim of achieving a sample representative of the region. The final sample size was 427 individuals.

The questionnaire included various questions to measure each of the model's variables. To measure the overall image that the respondents have of the region, we adapted the scale proposed by González & Villanueva (2001). This has five items with which to measure the image of a country: quality of life, wealth, technological level, education level, and political stability. We excluded this last item because in general it is not an element that differentiates regions of the same country. We added three more items: one relating to the attractiveness of the region as a tourist destination, another to the effectiveness of the region's political management, and one to the region's overall image. Thus, the final scale comprised seven items. The respondents scored their responses on a 7-point Likert scale.

To measure the image that the respondents had of the region as a wine producer, we took as referent the

Table 1. The study's technical data sheet

Population	Wine purchasers over the age of 18
Sample	427 consumers
Geographical scope	Regional (Extremadura, Spain)
Sample type	Non-probabilistic by quota (gender and residence)
Type of survey	Personal, self-administered
Fieldwork	February to June 2012

work of Van Ittersum *et al.* (2003). According to those authors, the image of a country or region as a producer of a product category has three dimensions: the human factor, the climate factor, and the natural environment factor. They therefore introduced items referring to the qualifications of the region's workforce, to its people's culture and experience, to its climate, and to its soil types, among others. For the purposes of the present study, we adapted some of those items to the specific case of wine. The final scale used comprised seven items.

The scale to measure the perceived quality of the region's wines was based on the proposals of Klein *et al.* (1998) and González & Villanueva (2001). The former used four items, three of which were retained for the present study – those relating to overall quality, to the quality-price relationship, and to the respondents' confidence regarding the quality of the region's wines. The excluded item referred to the good workmanship of the product, an aspect associated with other industrial products, but not with wine. With respect to the scale proposed by Klein *et al.* (1998), this included items on the workforce, technological level, quality, reliability, design, and value in relation to the product's price. Most of them do not apply to agro-food products, but the item regarding the quality of the region's product in comparison with those produced in other regions was retained. Thus, the final scale used comprised four items.

To measure the respondents' purchase intentions towards the region's products, we took items from the scales proposed by Olsen *et al.* (1993), and Klein *et al.* (1998), eliminating those that did not apply to agro-food products. The final scale used comprised four items that the respondents scored on a 7-point Likert scale.

To measure the level of the respondents' ethnocentrism as consumers, we chose to use the CETSCALE scale created by Shimp & Sharma (1987). This has been validated for different countries and contexts (*e.g.,* Olsen *et al.*, 1993; Klein *et al.*, 1998; González & Villanueva, 2001; Luque *et al.*, 2004; Srinivasan *et al.*, 2004; Jiménez & San Martín, 2010; Dmitrovic *et al.*, 2009). It consists of 17 items scored on a 7-point Likert scale. The minimum score for a respondent would thus be 17 points, and the maximum 119 points. For the present study, we adapted the items to refer to a regional level since the original scale referred to countries.

The respondents' familiarity with the product category was measured by four questions about the wine-making process and types of wine. The respondents could choose one of the three options available: "*true*", "*false*", or "*do not know*". With this system, we di-

vided the respondents into two groups: high (expert) and low levels of knowledge. For a respondent to be considered an expert in the product category they had to answer three of the four questions correctly. It was felt that this system was more objective than evaluating the respondent's knowledge about the products by means of a self-assessment question (Ahmed & d'Astous, 1999).

Finally, to measure the respondents' familiarity with the products from their region, we included an open question in the questionnaire in which the respondents were asked to enumerate the region's wine PDOs that they knew. Those respondents who recognized the Ribera del Guadiana PDO were considered to have a sufficient level of familiarity with wine from Extremadura.

To analyse the moderating effect of both types of familiarity, comparisons were made using the multigroup analysis (Chin, 2000). In this procedure, a Student's t-test is calculated using Eq. [1] below. This equation derives from a Student's t-distribution with $m+n-2$ degrees of freedom, where S_p (Eq. [2]) is an estimator of the pooled variance of the standard errors, m and n are the sample sizes of the two subgroups, and the SEs are the standard errors of the structural model's standardized coefficient for each group.

$$t = \frac{\beta_a - \beta_b}{S_p \sqrt{\frac{1}{m} + \frac{1}{n}}} \qquad [1]$$

$$S_p = \sqrt{\frac{(m-1)^2}{m+n-2}SE_a^2 + \frac{(n-1)^2}{m+n-2}SE_b^2} \qquad [2]$$

Results

The measurement model was analysed taking into account the individual item reliability and the constructs' discriminant validity. First, the loadings were estimated for each item onto the respective latent variable, accepting as valid those whose loadings were ≥0.707, indicating that over 50% of the observed variance is explained by the construct. Initially, various items did not meet this criterion. They were therefore eliminated from the model, which was then re-run so as to detect further items to eliminate. After four rounds of this procedure, eight items had been eliminated from the ethnocentrism scale, four from the regional image scale, one from the region's image as a wine producer scale, and another one from the perceived quality scale (Table 2).

The reliability and convergent validity indices (Table 2) surpassed the critical values for acceptance. Specifically, the values of Cronbach's alpha for the five constructs were between 0.696 and 0.93, indicative of good reliability among each construct's indicators. Only that for the image of the ROO did not exceed the reference value of 0.7, although even then it came very close. In addition, the composite reliability indices of all the constructs far exceeded the reference value of 0.60. Also, the values of the average variance extracted (AVE) were greater than 0.5, thus ensuring the convergent validity of the model.

Finally, to assess the discriminant validity of constructs, Barclay *et al.* (1995) suggested that no item should have greater loadings on other constructs than on that which is to be measured. Thus, a construct will have discriminant validity when its AVE is greater than the square of the correlations of that construct with the rest. Table 3 shows that discriminant validity was confirmed, so that it was possible to proceed with the evaluation of the structural model.

Figure 2 shows the results of the estimation of the structural model. Using the bootstrap resampling technique with 500 sub-samples, we obtained the t-values and verified the significance of the causal relationships established in the model. All the values of the Stone-Geisser Q^2 criterion were greater than zero, confirming the model's predictive relevance. The perceived quality of the region's wine (22.42%) is the variable that contributes most to the explanation of purchase intention. It is followed by ethnocentrism (10.23%) and, to a lesser extent, the region's image as a wine producer (8.39%) and its overall image (2.65%). Analysing variable by variable, one observes the influence of the region's image as wine producer on the perceived quality (28.15%) and, to a lesser extent, its direct influence on the purchase intention towards its wines (8.39%). The region's overall image plays an important role in the model because, even though the percentages are low, it contributes to the explanation of three of the model's variables: the region's image as a wine producer (4.72%), perceived quality (3.18%), and purchase intention (2.65%). Finally, consumer ethnocentrism shows an influence on the two variables with which it is related in the model: perceived quality (7.43%) and purchase intention towards the region's wines (10.23%). Therefore, all of the hypotheses posited in the study are confirmed.

The model shows an acceptable predictive level (R^2) as it contributes to explaining 43.7% of the variance in purchase intention, 38.8% in perceived quality, and 4.7% in the region›s image as a wine producer. The model has an overall moderate goodness-of-fit (GoF=0.196).

Table 2. Evaluation of the measurement model

Construct	Loadings	Cronbach's alpha	Composite reliability	AVE
Image of the ROO		0.696	0.831	0.622
The educational level of the inhabitants of Extremadura is high	0.828			
Extremadura has an advanced level of technology	0.771			
Overall, the image I have of Extremadura is positive	0.765			
The image of the ROO as a wine producer		0.903	0.925	0.674
Extremadura has a long tradition in producing wine	0.787			
There is a profound wine-making culture in Extremadura	0.756			
Extremadura has the suitable raw materials to produce wine	0.831			
Extremadura has a suitable natural environment for wine production	0.889			
The soil and the land in Extremadura are suitable for wine production	0.827			
The climate in Extremadura is suitable for wine production	0.830			
The perceived quality of the region's wine		0.826	0.896	0.742
The quality of Extremadura's wines is high	0.843			
The quality/price relationship of Extremadura's wines is good	0.839			
Extremadura's wines are reliable wines	0.900			
The consumer's ethnocentrism		0.930	0.941	0.640
It is not right to buy products that are not from Extremadura because it leaves its people out of work	0.824			
A true Extremaduran should always buy products made in Extremadura	0.830			
We should buy products made in Extremadura instead of allowing other regions or countries to enrich themselves at our expense	0.755			
There should be very little trading or purchasing products from outside Extremadura unless necessary	0.823			
People from Extremadura should not buy products from outside the region because it is bad for Extremadura's businesses and employment	0.824			
There should be a brake put on all imports	0.773			
Businesses from outside Extremadura should not be allowed to put their products on our markets	0.817			
We should only buy from other regions and countries the products that we cannot obtain within our own region	0.742			
Extremaduran consumers who purchase products made in other regions or countries are responsible for putting their fellow Extremadurans out of work	0.807			
Purchase intention towards the region's wines		0.853	0.901	0.695
I will mainly buy in shops that make a special effort to sell wine produced in Extremadura	0.840			
I am willing to buy Extremadura wines whenever possible	0.877			
If two wines are similar in quality, but one is from Extremadura and the other is not, I am willing to pay 10% more for the Extremaduran one	0.735			
When I buy wine, I usually opt for brands from Extremadura	0.876			

AVE: average variance extracted.

Table 3. Discriminant validity

	QualPerc	Ethnoc	RegIm	RegImPro	PurInt
QualPerc	**0.8613443**				
Ethnoc	0.353774	**0.80018248**			
RegIm	0.27129	0.221835	**0.78865899**		
RegImPro	0.569692	0.238042	0.217286	**0.82089463**	
PurInt	0.589995	0.433374	0.286612	0.470831	**0.83389508**

The diagonal elements (in bold) are the square root of the average variance extracted (AVE).
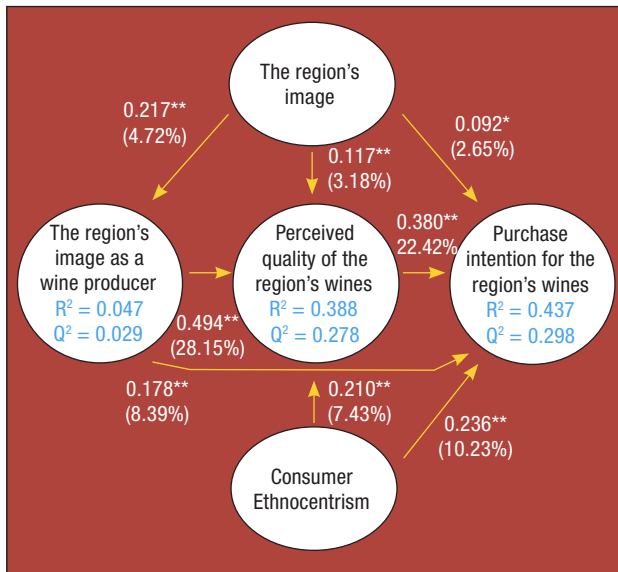
Figure 2. Results of the estimation of the structural model. The arrows indicate causal relationships. The number next to each arrow is the corresponding standardized coefficient, with the product of the standardized coefficient and the coefficient of correlation between the two constructs, expressed as a percentage, given in parentheses. R^2: explained variance for dependent variables. Q^2: Stone-Geisser test; indicator of predictive relevance of the model. $*p < 0.05$; $**p < 0.01$; Goodness-of-Fit = 0.196.

We next carried out an analysis to determine whether familiarity moderated two of the model's relationships – that between the region's image as a wine producer and the perceived quality of its wines, and that between this latter and the purchase intention towards those wines. To this end, the sample was divided into two subgroups of respondents, those who had shown a high level of knowledge and those who had shown a low level.

The moderating effect of familiarity with the product category was confirmed only for the relationship between the region's image as a wine producer and the perceived quality (Table 4). Thus, hypothesis H_9

is accepted and hypothesis H_{10} is rejected. The negative value of the differences between the loadings of the two groups indicates that, in this case, the relationship between these two variables is stronger for the group with the lower level of familiarity with wine, *i.e.,* those consumers with less knowledge about this product present a stronger link between the image formed in their minds about the region as a wine producer and their perception of the quality of its wines.

The case with the second moderating variable (familiarity with the region's wines) is the same (Table 4). The moderating effect was confirmed only for the first relationship, confirming hypothesis H_{11} and rejecting hypothesis H_{12}. Moreover, the results again confirm that consumers who are less familiar with the region's wines present a stronger link between the image formed in their minds about the region as a wine producer and their perception of the quality of its wines.

Discussion

Competing in the agro-food sector is becoming increasingly complex with the liberalization of its markets and their ever more exigent demands. Small regional producers today have to face competition not only from other producers in their own country, but also from a growing number of international competitors who are entering their domestic market thanks mainly to the procurement policies of the large retail chains.

In this environment, the agro-food industry has been forced to look for mechanisms that allow it to access sales channels by differentiating their offer from those of its competitors. These mechanisms include those related to strict requirements of food safety and quality. However, implementing the strategies and marketing actions needed to differentiate their brands is often

Table 4. Moderating effect of familiarity with wine and with the region's wines

Moderating effect of familiarity:	S_p	β_a-β_b	t
—With wine			
Region's image as a wine producer → Perceived quality of the region's wines	0.7055	0.1435	1.9548
Perceived quality of the region's wines → Purchase intention towards the region's wines	0.8757	0.0482	0.5293
—With the region's wines			
Region's image as a wine producer → Perceived quality of the region's wines	0.7643	0.1745	2.2718
Perceived quality of the region's wines →Purchase intention towards the region's wines	0.7982	0.0228	0.2839

S_p: estimator of the pooled variance of the standard errors. βa: path coefficient for the non-familiar group. βb: path coefficient for the familiar group. *t*: t-value.

very difficult and expensive for small regional producers. Acting independently is not profitable. Any option has therefore to involve regional industries forming associations to promote the demand for quality domestic products. The product's origin has to become a key factor in consumers' purchase intentions, and hence a source of competitive advantage for the region's businesses.

From a marketing perspective, one of the most important associative measures is the creation and enhancement of branding by means of guarantee labels that cover conjointly the products of all the associated producers. Two examples of these guarantee labels are the PDOs and the "*Alimentos de…*" ["*Foods from…*"] brands. These combine criteria of quality and place-of-origin in the selection of products approved to use them.

Europe's public administrations, and in particular, those of the different regions, consider today that support for these brands should be a priority in their commercial policies to protect their agro-food sector. But the effectiveness of this policy will depend on the value consumers attach to those brands. Therefore, for a public administration to be able to design optimal promotion strategies, it is necessary first to answer the key question: How important is the ROO in consumers' food purchasing decisions (the place-of-origin effect)?

To answer this question, we have here tested a structural equation model that explains the purchase intention for a region's wines. The model's results confirmed the direct effects of the region's overall image on purchase intention, which is coherent with the studies of Van Ittersum *et al.* (2003), Srinivasan *et al.* (2004), Verlegh *et al.* (2005), Ahmed & d'Astous (2007) and Lee *et al.* (2013). There is also confirmation of a direct effect of the region´s image as a wine producer on purchase intention, as it was shown in the study of Van Ittersum *et al.* (2003). The indirect effects of these two variables on purchase intentions through the perceived quality of the region's wines was also confirmed, as previous research had shown (González & Villanueva, 2001; Van Ittersum *et al.*, 2003; Srinivasan *et al.*, 2004; Verlegh *et al.*, 2005; Ahmed & d'Astous, 2007; Lee & Lockshin, 2011).

These results have important managerial implications for policy decision-makers. For one thing, they confirm the value of implementing communication campaigns that pursue improvement of the region's image as a brand, *i.e.,* they confirm that collective regional brands not only have value as tools for external promotion, but also as an incentive for domestic consumption of the region's products, especially by the more ethnocentric consumers. It was found that an improvement in the region's overall image would have positive effects on the sale of the region's wines. Hence, joint action of the region's wine-makers and its public administration in matters of communication will have positive effects in terms of marketing this product domestically.

The case is similar for the region's image as a wine producer variable, which directly influences the perceived quality and the purchase intention. Awareness campaigns targeted at the society of the region about its wine-making culture and tradition, as well as the possible actions of training qualified personal and of environmental conservation of the region's soils and land-use will redound in an enhanced purchase intention for its wines.

In line with previous studies on this subject (Shimp & Sharma, 1987; Luque *et al.*, 2004; Dmitrovic *et al.*, 2009), we found a positive relationship between consumer ethnocentrism and both the perceived quality of the wines and the purchase intention. This also provides clues for those in the regional governments and firms who are responsible for commercial policies on how to set the focus of their communication campaigns. If ethnocentrism influences these variables positively, the communication strategy can be focused on praising the product's regional origin, highlighting the positive effect of consumers' decision to opt for the region's products in helping support and revitalize employment and the economy in their immediate environment.

Another important conclusion of this study, because of its contribution to one of the most significant questions in marketing theory about the origin effect, is the confirmation of a moderating effect of familiarity in one of the model's relationships. The results showed that both familiarity with the product category and familiarity with products from a specific origin moderate the relationship between the region's image as a wine producer and the perceived quality of those wines. In this sense, the results allow us to conclude that those consumers with less knowledge about wine present a stronger link between the image formed in their minds about the region as a wine producer and their perception of the quality of its wines. These results are contrary to the conclusions reached by Perrouty *et al.* (2006), Atkin & Johnson (2010), and Atkin & Newton (2012). Those authors found that consumers who are more expert and involved in their purchase of wine give greater importance to information about its ROO in their purchasing process. The present results are, however, consistent with the theory of the halo and summary construct effects (Han, 1989). Jaffe & Nebenzahl (2001) define the halo effect as follows: "*Due to the need to evaluate products when one has limited information about their attributes, consumers use the images or stereotypes they have about the countries-of-origin to formulate attitudes*

about those products." According to those authors, when the consumer gains familiarity with the true attributes of a product category, their image of the country becomes a "summary" of the attributes related to the product categories they know about that are produced in that country. In the present study, the consumers who are relatively unfamiliar with wine tend to make quality assessments based on the image they have of the region as a wine producer. The results for the second moderating variable – familiarity with the region's wines – reinforce this theory of the halo and summary effects defended by Han (1989) and Jaffe & Nebenzahl (2001). It was, however, not possible to confirm any moderating effect of familiarity in the relationship between perceived quality and purchase intention towards the region's wines. Future research could address this question into a greater depth.

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