



# Model of acceptance of a new type of beverage: application to natural sparkling red wine

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## Abstract

Wine is a traditional beverage with a saturated market, in which consumers are open to innovation. In this context, an innovative experience was launched to create a new natural sparkling red wine with a view to diversifying production and studying its acceptance. This paper uses an original acceptance model for new foods called the Cognitive-Affective-Normative (CAN) model. The model was tested on a sample of 500 Spanish consumers in a real-world test context and explains 64.1% of the intention to consume the new wine. The results showed the importance of the cognitive factor in consumer intention. In particular, sensory and price benefits were found to be the key criteria explaining the intention to consume (41.34%). The results also confirmed the usefulness of expanding the factors that determine new food acceptance to include the emotional and normative dimensions of consumer behaviour. The social norm (18.54%) and affective factors (4.2%) contributed to the explanation of the underlying reasons influencing consumers' assessments of the product. It is proposed that efforts focus on new visual, olfactory and taste-related sensations with a view to producing an appetising product that offers good value for money. Research and development institutes should innovate towards products that highlight these sensations. Therefore, attention should be drawn to the importance of acting on potential consumers' reference groups and membership groups, with a view to involving them in recommending the product. Managers should focus on measuring and influencing social opinion, working on marketing communication to achieve acceptance.

**Additional key words:** consumer acceptance; new foods; wine; performance expectancy; social norm; emotions.

**Abbreviations used:** A (attentive, watchful); AVE (average variance explained); CAN (cognitive-affective-normative); HB (health benefits); IC (intention to consume); KMO (Kaiser-Meyer-Olkin test); NE (negative emotions); PE (positive emotions); RB (regional benefits); SB (social benefits); SN (social norm); SPB (sensory and price benefits)

**Authors' contributions:** The three co-authors participated in all stages of the work, including the conception and design of the research, the revision of the intellectual content and the drafting of the paper.

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## Introduction

Wine is a traditional beverage, with a saturated, highly competitive market (Barrena & Sánchez, 2009). To maintain or expand its market share and profitability, the traditional food industry must innovate (Vanhonacker *et al.*, 2013). However, whilst innovation is necessary for an industry's growth and competitiveness, it remains rare in the food industry, even though European consumers are generally open to innovation in the traditional food market (Beckeman & Skjöldebrand, 2007). Food product innovation models should give more attention to the interrelationship between

technology and consumer behaviour (Linnemann *et al.*, 1999).

In this context, most of the sparkling wines produced in Spain are made according to the traditional *méthode champenoise*, resulting in white wines and rosés. The production of sparkling red wine is marginal, limited to variants such as sparkling sangria, although sparkling reds produced in other countries, such as Australia, Argentina, Italy, Portugal and South Africa, have been well-received by distributors and consumers alike. In 2015 Spain was the world's third largest wine producer, producing 36.6 million hectolitres (OIV, 2016).

In light of this situation, an innovative experience was launched in the Spanish regions of La Rioja and Castilla-León to create a natural sparkling red wine with a view to diversifying production and studying its acceptance. As part of this project, this paper presents an original model consistent with Siegrist's (2008) theoretical study, which holds that three types of factors influence the acceptance of a new food: (i) factors related to the product, (ii) psychological factors, and (iii) social trust and norms. It is likewise consistent with Sorenson & Henchion's (2011) theoretical review of the acceptance of new technological processes for the development of foods, in which factors such as the benefits of a new food, neophobia, social and moral concerns regarding the long-term health effects of new technologies, and cultural and psychosocial factors featured prominently.

In the theoretical framework of the research, new foods are considered to be food products that are new on the market because there are no identical products or because they were developed using new technological processes. In this research, the factors affecting their acceptance are:

(i) *The influence of the expected benefit on the intention to consume a new food.* In the field of food acceptance, most research has focused more on how a food's attributes influence the decision to consume it than on the influence of its expected benefits. However, consumers mentally convert product attributes into benefits (Barrena & Sánchez, 2009). Indeed, several authors have sought to demonstrate the role of benefits in the acceptance of a new food (e.g. Sorenson & Henchion, 2011; Barrena & García, 2013; Barrena *et al.*, 2015). The following hypotheses were formulated based on the conceptual framework for how the aforementioned expected health benefits (Wilkinson *et al.*, 2005; Verbeke, 2005; Jones & Jew, 2007; Lee *et al.*, 2007; Annunziata & Vecchio, 2011), regional and social benefits (e.g. Frewer *et al.*, 1997; Ronteltap *et al.*, 2007; Vanhonacker *et al.*, 2013), and sensory attributes (e.g. Elsner *et al.*, 1998; Herrera *et al.*, 2007; Sae-Eaw *et al.*, 2007; Chung *et al.*, 2011; Montouto *et al.*, 2012; Talsma *et al.*, 2013; Espina *et al.*, 2014; Bearth *et al.*, 2014) influence the intention to consume:

H1: The expected health benefits of the new natural sparkling red wine positively affect the intention to consume it.

H2: The expected benefits of the new natural sparkling red wine for the region and its traditions positively affect the intention to consume it.

H3: The expected sensory benefits of the new natural sparkling red wine positively affect the intention to consume it.

H4: The expected social benefits of the new natural sparkling red wine positively affect the intention to consume it.

(ii) *Influence of emotions on the intention to consume a new food.* Siegrist (2008) established that psychological factors influence the acceptance of foods. Likewise Lockie *et al.* (2004), King *et al.* (2010), Dalenberg *et al.* (2014), Barrena *et al.* (2015) and Gutjar *et al.* (2015) concluded that there is a considerable emotional dimension associated with the purchase and consumption of a new food. Nevertheless, King & Meiselman (2010) found that emotional intensity is sometimes related to acceptance and sometimes differs, suggesting that food acceptance does not depend solely on emotions. In this context, Ronteltap *et al.* (2007) pointed to the role of risk and uncertainty as a determinant of consumer acceptance of food innovations. The construct includes several aspects, namely, safety issues, consumer concerns, emotions and trust. Wilkinson *et al.* (2005) highlighted the importance of fear in the acceptance of new food products created to reduce the risk of disease. Jaeger *et al.* (2003) and Barrena & Sánchez (2012) examined food neophobia, understood as the psychological rejection some people express towards new or unfamiliar foods. Few papers have dealt specifically with wine and emotions. Ferrarini *et al.* (2010) studied emotional adjectives Italians could use to describe the experience of consuming wine and found a greater bias towards the use of words expressing pleasant rather than unpleasant emotions. In light of these precedents and the two-dimensional structure of emotions (Watson *et al.*, 1988), the following hypotheses were proposed:

H5. Positive emotions towards the new natural sparkling red wine positively affect the intention to consume it.

H6. Negative emotions towards the new natural sparkling red wine negatively affect the intention to consume it.

(iii) *Influence of the subjective norm on the intention to consume a new food.* The subjective norm refers to 'the perceived social pressure to perform or not to perform [a given] behaviour' (Ajzen, 1991, p.188). In terms of how it influences the intention to consume new foods, the subjective norm has received little attention in the literature (Ronteltap *et al.*, 2007; Siegrist, 2008). Nevertheless, some authors have argued that social and cultural norms influence what we eat (e.g. Birch, 1998; Choo *et al.*, 2004; Siegrist, 2008; Qiu *et al.*, 2012). In the field of wine, the findings are contradictory. Whilst some authors have shown the influence of the social norm to be one of the most important factors in purchasing decisions (Barber *et al.*, 2009; Barber, 2012), others have reported that the social norm does not influence product acceptance (James & Christodoulidou, 2011; De-Magistris *et al.*, 2015). In light of this background, the following hypothesis was proposed with a view to gaining insight into the contradictory findings of studies on wine:

H7. A subjective norm favourable to the consumption of the new natural sparkling red wine positively affects the intention to consume it.

The formulated hypotheses make up the proposed integrative theoretical model of variables, called the Cognitive-Affective-Normative (CAN) model, designed with the aim of explaining people's intention to consume the new natural sparkling red wine, as shown in Figure 1. The CAN model is derived from Pelegrín *et al.* (2016), who hold that three types of factors influence the acceptance of new technological products. The CAN framework is consistent with Siegrist's (2008) aforementioned theoretical structure for the acceptance of new food products.

## Methodology

### Measurement scales

Given that the scales for technology acceptance models are not directly applicable to the acceptance of new foods, a new scale was developed to measure the expected benefits of the new natural sparkling red wine experimentally developed in the context of the research project.

To identify a new list of cognitive benefits, an initial qualitative study was carried out consisting of a personal survey of 44 experts and a sensory analysis of the new natural sparkling red wine. Wine connoisseurs are able to identify a wide range of arguments and potential benefits, as they conceive of wine as a multi-faceted (or multidimensional) product; they can thus establish relationships between wines, infer quality, or change their preferences depending on the occasion for consumption (Araneda & Esteban, 2013). The sample of expert tasters was selected in the cities of Valladolid and Logroño (Spain).

To determine which cognitive benefits were truly perceived, the experts were asked three open-ended questions:

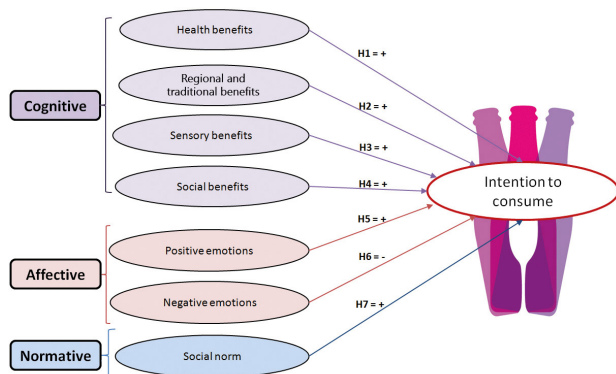


Figure 1. CAN model

• First, the respondents were asked to define the new beverage in approximately 20 words, with a view to sales. The aim was to encourage them to reflect on which of the perceived characteristics were most important and valid for the market (reasons to purchase/drink the new wine).

• Second, they were asked to think about why people might find the new beverage appealing and what the main expected benefits were.

• Third, with a view to encouraging them to consolidate their positions with regard to the benefits they had cited in the previous question, the experts were asked to explain 'why people will think they will achieve those benefits', providing a reason for each one.

With regard to data collection, two researchers were present at each tasting session, ensuring the atmosphere and that the tasting was properly performed and assisting with the completion of the questionnaire. The authors then transcribed the responses and read them over several times for the purposes of coding them. Each team member individually identified and coded the perceived benefits according to the categorisation process developed by Lincoln & Guba (1985) and used by Arnold & Reynolds (2003) to categorise shopping motivations. Subsequently, the authors met to discuss the benefits and the selection thereof. The goal was to identify common points in order to achieve the most accurate representation possible of each domain and to develop the scale of expected benefits. The initial qualitative study resulted in a 24-item scale, as shown in Table 1.

To measure emotions, the PANAS scale (Watson *et al.*, 1988) was used. The PANAS scale was chosen based on a review of the most commonly used scales for measuring basic emotions in consumer behaviour (Kuesten *et al.*, 2014; Pelegrín *et al.*, 2015). Authors such as Kuesten *et al.* (2014) have advocated its use in application to food. Both the social norm and the intention to consume were adapted to the scales proposed by Venkatesh *et al.* (2012) in the UTAUT2.

### Product test

Once the scales had been identified and the new natural sparkling red wine had been experimentally developed at the winery, the real-world product test was designed. In order to gather the opinions of a broad sample of consumers, a blind tasting was held at the Berceo Shopping Centre (Logroño, Spain). The blind tasting was announced at the main entrances to the mall. On 19, 20 and 21 November 2015, some 25,000 people visited the mall. Of these, 500 were selected, according to gender and age quotas, and invited to taste the wine and respond to the questionnaire (Table 2).

**Table 1.** Constructs, scale of measurement items, and sources for the variables

Construct / Items	Source
<b>Expected cognitive benefits</b>	
This beverage makes mealtimes more enjoyable; it generates new visual, olfactory and taste sensations; I find this beverage appetising; I enjoy the taste of this beverage; I have an alternative beverage; Drinking it helps me be healthier; It is nourishing; I drink less alcohol; I am consuming a product that offers good value for money; I am drinking a quality product; It quenches my thirst; It makes me look well-informed; It makes me look cutting-edge; I can surprise with this new beverage; I am genuine; it boosts my status; It brings back good memories; it helps me interact socially with others; It helps me relax; I am helping the producer; I am promoting wine culture; by drinking, I am promoting the region; I am keeping up tradition; by drinking, I am showing confidence in local products.	The authors, based on a qualitative study with expert tasters
<b>Emotions</b>	
Interested; distressed; excited; upset; energetic, strong; guilty; scared; hostile; enthusiastic; proud; irritated; alert; ashamed; inspired, innovative; nervous; determined; attentive, watchful; jittery; active; afraid.	PANAS scale (Watson <i>et al.</i> , 1988)
<b>Social norm</b>	
People who are important to me will think I should consume it; people who influence my behaviour will think I should consume it; people whose opinions I value will prefer that I consume it.	UTAUT2 scale (Venkatesh <i>et al.</i> , 2012)
<b>Intention to consume</b>	
Assuming I had access, I would try to purchase it; assuming I had access, I predict that I would drink it.	UTAUT2 scale (Venkatesh <i>et al.</i> , 2012)

## Statistical analysis

Partial least squares regression (using SmartPLS 3.0 software) was used to assess the measurement and models, as it is more robust to violations of normality (Ram *et al.*, 2014). Bootstrapping with 5,000 resamples was used to assess the significance of the path coefficients (Hair *et al.*, 2011).

## Results

### Exploratory factor analysis

Exploratory factor analyses were conducted to verify the factors formed from the scales' observable variables. The results for the *social norm* (SN) and *intention to consume* (IC) scales showed, in each case, a single factor with high explained variance: SN=88.45% (KMO=0.76), IC=87.41% (KMO=0.50). Bartlett's sphericity test reflected a level of significance of less than 0.001 for both scales. With regard to the scale of *emotions* produced by the new natural sparkling red wine, the results identified

three factors that together explained 58.10% of the variance. The KMO index was good (0.91) and Bartlett's sphericity test showed a low level of significance (less than 0.001). As for the *expected benefits* scale, the exploratory factor analysis identified four factors that together explained 61.53% of the variance. The KMO index was also good (0.93) and the Bartlett's sphericity test again showed a level of significance of less than 0.001.

### Assessment of the measurement model

The factors or dimensions obtained in the exploratory factor analysis were used as the starting point. The validity of the items was examined, taking into account the standardised loadings (> 0.70) and t-values (> 1.96). Given that greater convergence can be obtained by re-specifying a model to exclude one or more problematic indicators, indicators with low standardised loadings were eliminated. Consequently, the variables 'nervous' (standardised loading of 0.494), 'alert' (0.318), and 'jittery' (0.351) were eliminated from the *emotions* scale, and the variable 'I have an alternative beverage' (0.478) from the *expected benefits* scale.

**Table 2.** Technical details of the research and sample description

<b>Study with expert tasters</b>	
Universe	Individuals with wine-tasting expertise
Sampling procedure	Convenience
Data gathering	Self-administered survey with open-ended questions
Scope	Logroño (La Rioja) and Valladolid (Castilla-León), Spain
Sample	44 individuals
Fieldwork	April-June 2015
<b>Characteristics of the expert sample</b>	
Gender	45.5% male; 54.5% female
Age	Mean age: 34.8 years old Distribution: < 25 years old: 43.1%; 26-40 years old: 38.6%; 41-60 years old: 27.3%
Expert's occupation in the industry	Production: 29.5%; distribution: 2.3%; researcher: 4.6%; oenology student: 38.6%; certified wine taster: 13.6%; marketing/communication/other: 11.4%
Level of education completed	Intermediate: 15.9%; university: 84.1%
<b>Quantitative research: product test</b>	
Universe	Individuals over the age of 18
Sampling procedure	Stratified by gender and age
Data gathering	Tasting and personal survey
Scope	Logroño (La Rioja), Spain
Sample	500 individuals
Fieldwork	19-21 November 2015
<b>Characteristics of the consumer sample</b>	
Gender	50% male; 50% female
Age	18-25 years old: 20%; 26-35 years old: 20%; 36-45 years old: 20%; 46-55 years old: 20%; 56 years old or older: 20%
Main occupation	Homemaker: 4.6%; unemployed: 8.4%; student: 13.6%; pensioner: 9.4%; employee: 45.6%; self-employed or business owner: 13.6%; other: 4.8%
Monthly income	<€601: 18.85%; €601-€1,200: 22.8%; €1,201-€1,800: 20.4%; €1,801-€3,000: 14.0%; >€3,000: 3.8%; no answer: 20.2%
Level of education completed	Basic: 18.2%; intermediate: 44.8%; university: 37.0%
Wine consumption	Average consumption: 6.5 glasses a week

Additionally, the recommended 0.7 standardised loading rule should be especially flexible when the indicators contribute to factor validity. Therefore, indicators with standardised loadings < 0.70, but with t-values > 1.96, were retained. Ultimately, all indicators included in the model had t-values > 1.96.

The results of the item validations show that the SN and IC scales each had one dimension, whilst the emotions scale had three:

- The dimension including the emotions of feeling 'proud', 'innovative', 'determined', 'active', 'interested', 'excited', 'energetic' and 'enthusiastic' reflects aspects related to proactive feelings generated by the new natural sparkling red wine. In keeping with the authors of the PANAS scale, this dimension was called *positive emotions*.
- The dimension including variables related to negative feelings, such as feeling 'irritated', 'ashamed', 'afraid,

'distressed', 'upset', 'guilty', 'scared' or 'hostile', was called *negative emotions*, likewise in keeping with the authors of the PANAS scale.

- The third dimension consists of just one item, namely, feeling *attentive* or watchful. This dimension was named after that item. Watson *et al.* (1988) integrated this item into positive emotions. In this study, it was integrated into the results as H5a.

Four dimensions were identified for the expected *cognitive benefits* scale:

- The first includes benefits such as 'It makes me look well-informed', 'It makes me look cutting-edge' and 'I am genuine'. It also includes the expected benefits of 'It boosts my status', 'I can surprise with this new beverage', 'It helps me interact socially with others', 'It brings back good memories' and 'It helps me relax'. This dimension was called *social benefits*.

- The second dimension includes indicators such as: ‘This beverage makes mealtimes more enjoyable’, ‘It generates new visual, olfactory and taste sensations for me’, ‘I find this beverage appetising’, ‘I enjoy the taste of this beverage’, ‘I am consuming a product that offers good value for money’ and ‘I am drinking a quality product’. As can be seen, this dimension is clearly related to *sensory benefits*, to which *good value for money* was added. Thus, H3 was modified and the factor was called *sensory and price benefits*. These two benefits have already been established for wine (Barrena & Sánchez, 2009).
- The third dimension, called *regional benefits*, includes indicators referring to the defence of tradition and the region: ‘I am keeping up tradition’, ‘I am helping the producer’, ‘I am promoting wine culture’, ‘By drinking, I am promoting the region’ and ‘By drinking, I am showing confidence in local products’.
- Finally, the fourth dimension consisted of *health benefits*: ‘It quenches my thirst’, ‘Drinking it helps me be healthier’, ‘It is nourishing’ and ‘I drink less alcohol’.

The measurement model was verified in terms of construct reliability (*i.e.*, composite reliability and Cronbach’s alpha), convergent validity and discriminant validity. The composite reliability and Cronbach’s alpha values were greater than 0.70. The convergent validity of the constructs was confirmed, as the average variance explained (AVE) was greater than 0.5 in all cases. Discriminant validity was also confirmed: (1) the square root of the AVE of each construct was greater than the correlations between the constructs (Table 3); and (2) the model loadings were greater than the cross loadings.

### Assessment of the structural model

The first estimate of  $R^2$  was 64.9% and  $Q^2$  was greater than 0 (Table 4). ‘ $Q^2$  values larger than zero indicate that

the exogenous constructs have predictive relevance for the endogenous construct under consideration’. On the whole, the model was highly predictive of the intention to consume the new natural sparkling red wine.

However, an analysis of the amount of variance in the intention to consume explained by each antecedent variable in the proposed model yielded negative explained variance scores (Table 4). This was due to the existence of redundancy. Thus, the variable *sensory and price benefits* was highly correlated with the variables *health benefits* (0.611), *social benefits* (0.711) and *regional benefits* (0.564). The variable *attentive/watchful* was most highly correlated with the variable *positive emotions* (0.481). According to Falk & Miller (1992, p. 76), when correlations are substantial, redundancy is more likely; to eliminate it, those authors suggest eliminating the variables producing the redundancy, unless doing so would result in a large decrease in  $R^2$ .

Following the elimination of the four variables, the value of  $R^2$  was 64.1% (see Table 5), quite similar to that obtained prior to their elimination (64.9%). Moreover, the value of  $Q^2$  remained the same (0.56). Therefore, the elimination of these arrows is advisable and does not pose any problems. A general summary of the assessment of the final measurement model is provided in Table 5.

Figure 2 shows the  $R^2$  of the dependent variable, the parameters and the  $t$ -values of the final model once these variables were eliminated. Support was found for hypotheses H3, H6 and H7, as they were significant, based on the minimal level indicated by a one-tailed Student’s  $t$ -distribution with 4,999 degrees of freedom (Table 6). Additionally, the confidence interval excluded the value 0. Hypotheses H1, H2, H4, H5 and H5a were not supported: H5 because it was not significant in the final model, and H1, H2, H4 and H5a because their contribution to the initial model was negligible

**Table 3.** Construct reliability, convergent validity and discriminant validity

Construct <sup>1</sup>	Composite reliability > 0.7	Cronbach’s alpha	AVE > 0.5	SB	SPB	RB	HB	PE	NE	A	SN	IC
SB	0.91	0.88	0.55	<b>0.74</b>								
SPB	0.92	0.90	0.67	0.71	<b>0.82</b>							
RB	0.92	0.90	0.71	0.57	0.56	<b>0.84</b>						
HB	0.84	0.75	0.58	0.68	0.61	0.50	<b>0.76</b>					
PE	0.91	0.89	0.56	0.69	0.67	0.45	0.56	<b>0.75</b>				
NE	0.90	0.89	0.54	0.00	-0.25	-0.14	-0.02	0.05	<b>0.73</b>			
A	1.00	1.00	1.00	0.31	0.21	0.15	0.24	0.48	0.21	<b>1.00</b>		
SN	0.96	0.94	0.89	0.50	0.58	0.41	0.51	0.51	-0.10	0.18	<b>0.94</b>	
IC	0.93	0.86	0.87	0.53	0.76	0.40	0.46	0.55	-0.25	0.14	0.65	<b>0.94</b>

The diagonal numbers (in bold) are the square root of the average variance explained (AVE). The off-diagonal elements are the correlations between the constructs. <sup>1</sup> SB, social benefits; SPB, sensory and price benefits; RB, regional benefits; HB, health benefits; PE, positive emotions; NE, negative emotions; A, attentive, watchful; SN, social norm; IC, intention to consume

**Table 4.** Effects on the endogenous variable without eliminating latent variables

	$R^2$	$Q^2$	Direct effects	Correlation	Explained variance (%)
Intention to consume	64.9%	0.56			
H1: Health benefits => (+) Intention to consume			-0.052	0.460	-2.39
H2: Regional benefits => (+) Intention to consume			-0.071	0.398	-2.83
H3: Sensory and price benefits => (+) Intention to consume			0.601	0.760	45.68
H4: Social benefits => (+) Intention to consume			-0.025	0.529	-1.32
H5: Positive emotions => (+) Intention to consume			0.081	0.548	4.44
H6: Negative emotions => (-) Intention to consume			-0.081	-0.253	2.05
H5a: Attentive/watchful emotion => (-) Intention to consume			-0.032	0.141	-0.45
H7: Social norm => (+) Intention to consume			0.310	0.635	19.69

**Table 5.** Effects on the endogenous variable eliminating latent variables

	$R^2$	$Q^2$	Direct effects	Correlation	Explained variance (%)
Intention to consume	64.1%	0.56			
H3: Sensory and price benefits => (+) Intention to consume			0.554	0.760	41.34
H5: Positive emotions => (+) Intention to consume			0.035	0.548	1.92
H6: Negative emotions => (-) Intention to consume			-0.090	-0.253	2.28
H7: Social norm => (+) Intention to consume			0.292	0.635	18.54

and, moreover, their explanatory power was already reflected in one of the other variables included in the final model.

## Discussion

In the food industry, incorporating the consumer perspective early on in the innovation process is essential. The success of a new product depends on understanding consumers' needs and developing a product able to meet them (Hauser *et al.*, 2006). However, this process is often difficult because these needs are complex (Von Hippel, 2005; O'Hern & Rindfleisch, 2009); the inability to identify them properly is often one of the key reasons new products fail (Ogawa & Piller, 2006). In this context, the results of this paper make it possible to minimise this risk by providing a model of the acceptance of a new

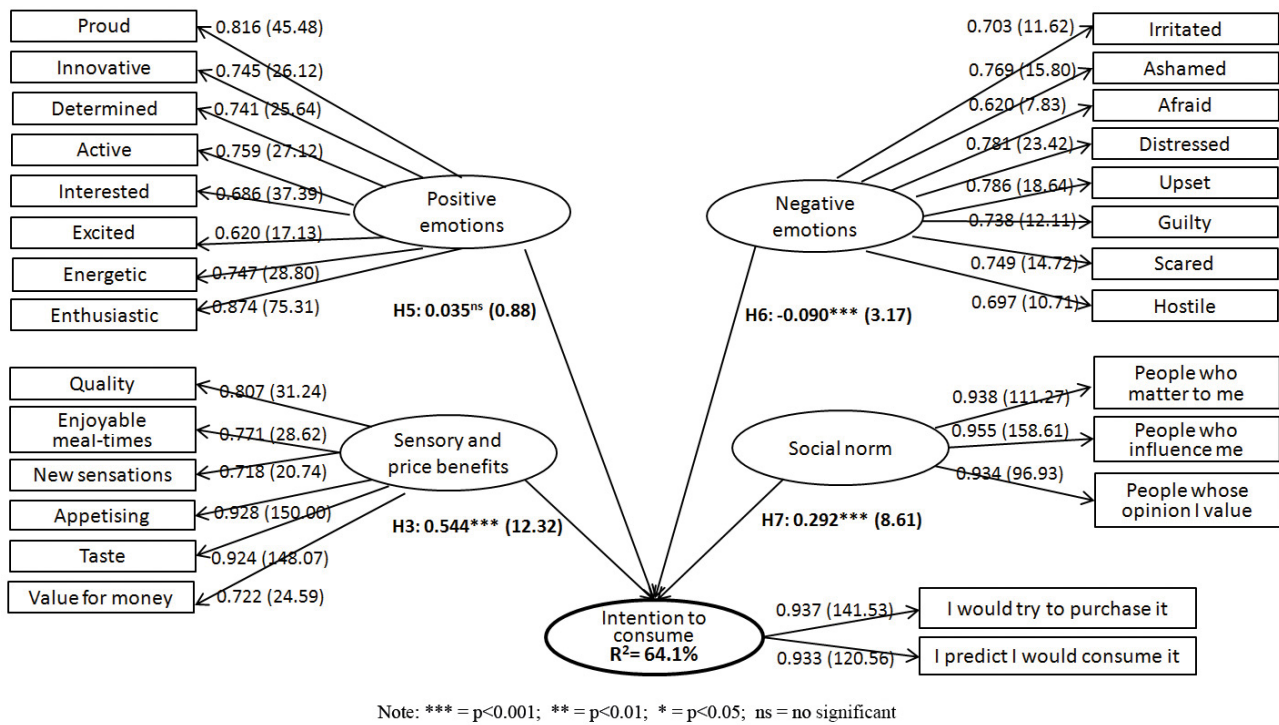
natural sparkling red wine (CAN model) that integrates cognitive factors (expected benefits), affective factors (expressed emotions) and normative factors (the influence of the social norm). The proposed model explains 64.1% of the intention to consume the new wine.

One of this paper's theoretical contributions to the field of the acceptance of new wines is the identification and validation of a scale of expected cognitive benefits consisting of four distinct dimensions (health, regional, sensory and price, and social). Additionally, this study analysed the psychometric properties of the scales used, making it possible to ensure their results. It thus overcame one of the limitations identified in the literature, which could be the origin of the discrepancies regarding the influence of expected benefits on a food product's acceptance.

In accordance with the three factors proposed in the CAN model, the first conclusion that can be drawn is

**Table 6.** Results of the structural model

Hypothesis	Path coefficient	$t$ -value	$p$ -value	Bootstrap percentile at a confidence interval of 95%	
				Low	High
H3: Sensory and price benefits => (+) Intention to consume	0.554	12.316	0.000	0.471	0.615
H5: Positive emotions => (+) Intention to consume	0.035	0.884	0.188	-0.028	0.103
H6: Negative emotions => (-) Intention to consume	-0.090	3.165	0.001	-0.141	-0.047
H7: Social norm => (+) Intention to consume	0.292	8.605	0.000	0.235	0.347



**Figure 2.** Results of the structural model: path coefficients ( $t$ -values) and coefficient of determination ( $R^2$ )

the importance of the cognitive factor to the intention to consume. This factor consists of the four aforementioned dimensions: 1) health benefits, 2) benefits for the region and its traditions, 3) sensory and price benefits, and 4) social benefits. Whilst all of these expected benefits are supported in the literature, the results of this paper show that sensory and price benefits are the key criteria explaining the intention to drink the new natural sparkling red wine. Indeed, the sensory and price benefits dimension absorbs the explanatory power of the other three dimensions. These are the variables that best explain acceptance of this beverage, alone accounting for 41.34% of the variance. In accordance with the antecedents established in the formulation of H3 and as established elsewhere (Ronteltap *et al.*, 2007; Herrera *et al.*, 2007; Sae-Eaw *et al.*, 2007; Chung *et al.*, 2011; Montouto *et al.*, 2012; Talsma *et al.*, 2013; Espina *et al.*, 2014), it is proposed that efforts focus on new visual, olfactory and taste-related sensations with a view to producing an appetising product that offers good value for money. Research and development institutes such as the INIA should innovate towards products that highlight these sensations. Additionally, in contrast to the findings reported by some authors regarding different health benefits (Wilkinson *et al.*, 2005; Verbeke, 2005; Ronteltap *et al.*, 2007; Jones & Jew, 2007; Lee *et al.*, 2007; Barrera & Sánchez, 2009; Annunziata & Vecchio, 2011; Vanhonacker *et al.*, 2013; Bearth *et al.*, 2014), in this study, regional promotion was not found to influence the intention to consume.

The second factor that best explained acceptance of the natural sparkling red wine was the social norm, which accounted for 18.54% of the variance, in keeping with recent papers showing the importance of this variable in the acceptance of new foods (Choo *et al.*, 2004; Ronteltap *et al.*, 2007; Siegrist, 2008; Loebnitz & Grunert, 2014) and refuting the finding by De-Magistris *et al.* (2015), in relation to Spanish consumers' intention to purchase premium foreign red wines, that product acceptance was not influenced by the social norm. Therefore, attention should be drawn to the importance of acting on potential consumers' reference groups and membership groups, with a view to involving them in recommending the product. Managers should focus on measuring and influencing social opinion, working on marketing communication to achieve acceptance.

With regard to emotions, it was the negative ones that had explanatory power for the acceptance of the new alcoholic beverage, albeit only minimally (2.28%). This is in keeping with the importance of negative emotions reported elsewhere (Jaeger *et al.*, 2003; Wilkinson *et al.*, 2005; Ronteltap *et al.*, 2007; Barrera & Sánchez, 2012). The influence of negative emotions suggests that companies seeking to launch new alcoholic beverages on the market should focus on reducing them. The research also revealed a new dimension of the PANAS scale, in addition to negative and positive emotions. This dimension referred to feeling 'attentive' or 'watchful' towards the new beverage. The breakdown of the PANAS scale's dimensions into other dimensions has



already been reported in the literature (e.g. Pelegrín-Borondo *et al.*, 2016). In developing the UTAUT model, Venkatesh *et al.* (2003) identified a dimension related to anxiety towards a new technological product.

These results confirm the benefits of expanding the factors that determine the acceptance of a new food to include the emotional and normative dimensions of consumer behaviour. To a certain extent, the social norm and affective factors help to explain the underlying motives influencing product assessments.

The fact that sensory and price benefits absorb or cancel out the explanatory power of the other expected cognitive benefits in terms of the acceptance of a new alcoholic beverage is critical for companies seeking to launch a product in this category.

The limitations of this study arise from the correlation between the latent variables of the proposed scale of expected benefits. Second-order factor analysis could have been used to generate a factor combining all the *expected benefits*, thereby making it possible to see how the construct *expected benefit* affects purchase intention. Nevertheless, in this paper, it was decided that it would be better to identify the specific expected benefits that best explain the intention to consume the natural sparkling wine. However, future research could analyse how the construct *expected benefit* affects purchase intention. It is also necessary to analyse other food products to see whether the Cognitive-Affective-Normative model varies depending on the type of food analysed.

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