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RESEARCH ARTICLE

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Exploring consumption profiles, consumer experience and quality claims of Canary Islands' cider (Spain): A multidimensional analysis

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Abstract

The exponential expansion of the global cider market positions it as a viable alternative to traditional choices such as wine and beer. Nevertheless, there exists a paucity of research examining the various factors influencing consumer interest in cider. This article undertakes an analysis of the cider consumption experience, with a specific focus on consumer preferences related to distinct quality attributes, encompassing factors like brand, organic certification, and protected designations of origin (PDO). This analysis also takes into consideration the socio-demographic profile, frequency of consumption, and willingness to pay (WTP). Our study concentrates on the Canary Islands in Spain, an area where no formal certification system yet exists to differentiate locally produced cider in the market. Our data collection methodology encompassed face-to-face surveys administered to a probabilistic sample of 1000 respondents in the Canary Islands. The results demonstrate that consumers who place emphasis on quality attributes such as commercial brands,

Abbreviations: ANOVA, analysis of variance; CAPI, computer-assisted personal interviewing; DV, dependent variable; ISTAC, Canary Statistics Institute; IV, independent variable; PDO, protected designations of origin; VIF, variance inflation factors; WTP, willingness to pay.

organic certification, and PDOs, tend to assign value to various cognitive aspects of the product. Conversely, those who do not prioritize these quality attributes tend to emphasize the affective dimension of the product and the specific consumption occasions. Additionally, consumers who accord the highest importance to PDOs exhibit a WTP a premium price. The findings of this study hold valuable implications for policymakers and cider manufacturers, aiding them in identifying opportunities for the promotion of Canary Islands cider, both within the local market and on a global scale. [EconLit Citations: A14 Sociology of Economics, Q00 Agricultural and Natural Resource Economics, Environmental and Ecological Economics: General].

KEYWORDS

Canary Islands, cider consumer experience, consumer research, Spain

1 | INTRODUCTION

1.1 | Research context

Cider is an alcoholic beverage produced through apple fermentation, with its historical roots in various European countries, particularly Spain, France, Germany, and Ireland. The primary market for cider, by a significant margin, is the United Kingdom (Ricome et al., 2022). Cider's resurgence as an appealing choice, in contrast to beer, wine, and spirits, is attributed to the increasing popularity of craft, natural, and locally sourced drinks (Miles et al., 2020). Although the cider market is comparatively smaller than other alcoholic beverages, it has experienced substantial growth since the early 21st century. The global cider production volume increased from 1861 to 2808 million liters between 2010 and 2019, with an average annual growth rate exceeding 5% during this period (Baker, 2021).

This growth in the cider sector can be attributed to two key factors. First, the introduction of flavored, carbonated, and sweet alcoholic beverages marketed as “cider,” often produced by major beer companies. These products permit the addition of gas, concentrated apple juices, and may be blended with water, sweeteners, and colorants. The apple juice content in these flavored ciders is usually below 50%, and in some cases, less than 25%, depending on the brand and region. This poses a challenge to traditional cider-producing countries and small businesses, especially in France and Spain, where regulations permit the “cidre” or “sidra” label only for products made exclusively from apples (Dhaliwal et al., 2022). As these new beverages do not comply with Spanish or French legal definitions of cider, they are marketed under the English designation “cider.”

For instance, the introduction of Heineken's “cider” Ladrón de Manzanas in the Spanish market in 2018 led to a 36% increase in value and a 38% increase in volume of cider sales within 1 year (García Ropero, 2019). Considering Spain's prominent role as both a major cider producer and the principal consumer within the European Union (AICV, 2021), the emergence of these new products significantly impacted the market. In response, traditional cider companies swiftly introduced their “cider” products alongside their traditional sidra, with even the largest Spanish company, El Gaitero from Asturias, joining in. By 2021, natural cider had lost market share in Spain, representing

24% of sales compared to 76% for "ciders" (Raffin, 2022). Natural cider maintains dominance only in regions with strong cider-making traditions and ample apple production, such as the Basque Country (76% of market share), Asturias, and Navarra (68%), all of which possess a PDO for their traditional ciders.

The second factor contributing to the rapid growth of the cider market is the increased demand among urban markets, particularly from young consumers, notably in Eastern Europe. Between 2010 and 2020, the market in this region grew by over 400%, surging from 36 million liters in 2010 to 234 million liters in 2020 (Ricome et al., 2022). These developments have given rise to a globalized market influenced by large corporations, challenging the traditional craft cider production methods.

1.2 | Theoretical framework

Despite the global growth in cider production and consumption, research in this sector remains limited. Existing studies have mainly focused on the production side's challenges, including the sudden growth of the US hard cider industry (Fabien-Ouellet & Conner, 2018). On the consumer side, research has explored consumer profiles for specific cider types (Didier et al., 2012), WTP for specific cider profiles (Tozer et al., 2015), and the influence of geographical origin on cider perception (Farris et al., 2019; Jamir et al., 2020; Knowles et al., 2022). Concurrently, the paucity of research in the field of cider stands in stark contrast to the burgeoning studies on beer or the long-standing existing research on wine. In particular, consumer experience studies in the field of food and beverage mainly seek to identify and explore consumers' subjective experiences derived from interaction with products (Schifferstein & Cleiren, 2005). In a hypermodern lifestyle, consumption has shifted from a functional dimension to a more experiential one (Lipovetsky, 2017), making unique consumption experiences a competitive advantage (Walls et al., 2011). The consumer experience has been characterized as a cognitive, affective and sensory multidimension (Warell, 2008). For instance, recent research indicates that the affective dimension or the context of consumption, as well as the cognitive dimension associated with the information found on labeling, is crucial for understanding the consumption experience in the case of beer (Jaeger et al., 2021). Conversely, the sensory dimension related to aspects such as taste, aroma, or color plays a pivotal role in the wine consumption experience (Oyinseye et al., 2022).

Although consumer experience studies in the realm of food and beverages have explored wine and beer drinking experiences, the cider consumer experience remains unexplored. This study aims to address this research gap by examining cider as an experiential product, with a particular focus on consumer preferences related to distinct quality attributes such as brand, organic certification, and PDO. This is to understand the governance challenges in the sector associated with the impact of cider in the marketplace. Specifically, our research question is: Which dimensions of the consumption experience (sensory, affective, and cognitive) characterize cider consumption, and which quality claims (brand, organic certification, and PDO) may influence purchase decisions?

To address this question, this research focuses on the Canary Islands, a context that presents a paradigmatic case study for two primary reasons. First, addressing this question will allow us to contribute to experiential consumption studies with the inaugural research on cider and, second, it will enable us to make an applied contribution in an emerging Spanish cider region grappling with the decision of whether to establish a PDO scheme as a quality claim for its traditional cider. Despite having a cider-making tradition dating back to the 18th century, with 20 operational cideries and at least 55 apple varieties, the Canary Islands are the only Spanish cider-producing region that lacks a certification distinguishing it in the market, unlike its counterparts in Asturias and the Basque Country, which possess a PDO.

By conducting a face-to-face survey directed at a representative sample of the Canarian population, the data collected aim to be robust for the purpose of being replicable in other contexts. The results are structured as follows: first, a description of the sociodemographic profile of cider consumers is provided; second, the consumption experience is analyzed based on consumer profiles; and finally, the consumption experience is related to attitudes toward quality claims.

Understanding these consumption profiles, preferences, and experience drivers will have implications for the academic debate, delving deeper into the field of experiential consumption studies in food and beverage through the first study on the social perception of cider. This knowledge is also crucial for the industry, governance models, and labeling schemes in the Canary Islands and beyond. We hypothesize that consumer sociodemographic profiles and experiences will differ between those who prefer cider based on a brand or organic certification (both of which include "cider") and those who favor a PDO label (which excludes "cider" from the certification system). If our hypothesis is corroborated, the results of this study could provide a foundation for other regions where traditional ciders coexist with "cider"-type products. The argument is that regional economic success can be influenced by understanding consumer profiles and consumption experiences, and there is no inherent contradiction between promoting innovative products and maintaining traditional beverages. For these reasons, the outcomes of this research could prove vital for regions with a tradition of cider consumption and production, such as the Canary Islands.

2 | MATERIALS AND METHODS

2.1 | Data collection

The data collection process comprised a probabilistic face-to-face survey targeting individuals in the Canary Islands aged 18 and above (which is the legal drinking age in Spain). This survey included 1000 cases and aimed to provide a highly representative sample of the entire population (Table 1). The margin of sampling error was ±3.1% with a 95% confidence level, and the probability of success (p) and the probability of failure (q) were both set at 0.5. The sampling procedure involved stratifying the sample by sex and age, following the 2021 population statistics for the region provided by the Canary Statistics Institute (ISTAC).

Subsequently, nonprobabilistic geographic quotas were established with the objective of reaching the main metropolitan areas of the archipelago. Thus, the survey was conducted in four areas of the Canary Islands, chosen for their representation of the primary shopping locations. In each of these areas, 25% of the total sample is divided into the following areas: Las Palmas and Telde in the province of Las Palmas de Gran Canaria, and Santa Cruz and La Laguna in the province of Santa Cruz de Tenerife. The survey took place through face-to-face interviews during the months of June and July in the year 2022, utilizing the computer-assisted personal interviewing (CAPI) method.

The survey questionnaire (see Supporting Information S1) consisted of 35 questions structured around multiple-choice answer options without visual cues, categorized into four main thematic blocks: (1) Demographic Information: This section aimed to gather information about the socio-demographic profile of the surveyed individuals. (2) Cider Consumption Patterns: This block focused on the frequency and occasions of cider consumption. (3) Cider Attributes and WTP: It sought to gauge respondents' interest in various attributes of cider

TABLE 1 Demographic characteristics of the sample.

	Male		Female		Total	
Sample strata (age/sex)	N_i	n_i	N_i	n_i	N	n
18–30	161,643	88	159,609	87	1,862,828	1000
31–50	350,683	191	346,057	189		
51 and more	387,228	212	427,608	233		

and their WTP for a bottle. (4) Knowledge and Interest in Canary Island Cider: This section assessed the participants' knowledge and interest in Canary Island cider and its certification. Notably, it did not directly inquire about the preference for natural cider over conventional "cider." This omission was due to a pilot study using ethnographic methods as part of the SIDRACAN project, which revealed that consumers had limited awareness of the distinctions between these two cider production methods. Furthermore, cider certification depended on the brand and country of origin, complicating the issue. To delve deeper into this matter, the questionnaire introduced several questions related to sensory aspects of cider production, such as the importance of sweetness and gas intensity, rated on a Likert scale from 1 (not important at all) to 5 (very important).

Before participating in the survey, all respondents provided informed consent, which included information about the research's purpose, the voluntary nature of participation, the number of questions, estimated response time, and the ability to exit the survey at any point. Fieldwork procedures adhered to an action and data protection protocol in line with the UNE-ISO 20252:2019 standard on market, social, and opinion research, encompassing insights and data analytics. The survey received approval from the CSIC Ethics Committee (#090/2022).

2.2 | Data analysis

The data analysis consisted of three phases and was performed using the SPSS 22.0 program for Windows and R version 4.3.0. A summary of the key variables used in the study, their categories, and levels of measurement can be found in Table 2.

The first phase centered on characterizing cider consumer profiles in the Canary Islands through a descriptive frequency analysis. These profiles were defined using sociodemographic variables such as age, gender, level of education, income, and consumption frequency. Additionally, the context of cider purchase and the WTP per bottle of cider were analyzed in relation to consumption frequency. Consumption frequency was categorized into two groups: occasional consumption (individuals who drink cider once or twice a year) and frequent consumption (individuals who consume cider at least once a month). The importance of various variables was assessed using a Likert scale ranging from 1 to 5. Subsequently, an analysis of variance (ANOVA) was conducted to identify how the means of purchase context and WTP varied based on consumption frequency. Statistically significant differences ($p < 0.01$) were examined, with the ANOVA serving as the primary method. In cases where the normality assumption was not met, the Kruskal–Wallis nonparametric test was used to validate the results. This test was employed to verify the relationship between the factor and dependent variables and was particularly useful in distinguishing consumer preferences (Hecke, 2012; Norman, 2010; Olsen et al., 2015; Parga-Dans et al., 2022).

In the second phase, our focus shifted toward characterizing the cider consumer experience in relation to consumption frequency. To begin, the cider consumer experience was analyzed by grouping variables on affective (e.g., the importance of sharing cider with friends and family), cognitive (e.g., the significance of cider being organic, artisanal, and its origin), and sensory (e.g., the importance of sweet and carbonated flavors) dimensions. These variables were assessed using a Likert scale (Table 2). In this phase, we conducted ANOVA analyses to discern how the means of these various variables, which collectively constitute the consumption experience, vary with respect to consumption frequency.

The third phase of our analysis centered on characterizing the quality claims associated with cider. Initially, we employed a descriptive analysis of frequencies to examine the extent of consumer knowledge about Canary Island cider and their interest in the presence of certification, denomination, or branding. Subsequently, we employed different ordinal logistic regression models to assess the significance of brand, organic certification, and denomination of origin as dependent variables. The independent variables encompassed aspects related to consumption frequency, the consumption experience, and WTP for cider. This type of analysis is commonly employed in the literature (Mauracher et al., 2019; Vecchio et al., 2023).

TABLE 2 Key variables, categories, and measurements.

	Variable	Categories/measurement/scale
Sociodemographic data	Sex	1 = male; 2 = female
	Age	1 = 18–30; 2 = 31–50; 3 = 51 and more
	Income	1 = <1000€; 2 = 1000–2000€; 3 = >2000€
	Education	1 = no studies/primary studies; 2 = secondary studies; 3 = high school; 4 = university level
Consumption frequency	Cider consumer	1 = yes; 2 = no
	Consumption frequency	1 = regular consumption (drinks cider once a month); 2 = occasional consumer (drinks cider once or twice a year).
Purchase	I buy cider in supermarkets	1 = nothing; 5 = a lot
	I buy cider online	
	I buy cider in specialized shops	
	I buy cider in other places	
WTP for a cider bottle	I would be WTP up to 5€	1 = disagree; 5 = agree
	I would be WTP up to 10€	
	I would be WTP more than 10€	
Aspects related to Canary cider	Do you know there is cider in the Canary Islands?	1 = yes, 2 = no
	Degree of interest in Canary cider	1 = nothing; 5 = a lot
	Do you consider that a brand, PDO or certification would be useful to distinguish Canary cider?	1 = disagree; 5 = agree
Sensory dimension	I like/would like cider to be sparkling	1 = disagree; 5 = agree
	I like/would like cider to be sweet	
Affective dimension	I consume cider in Christmas	1 = nothing; 5 = a lot
	I consume cider with friends	
	I consume cider in family meetings	
	I consume cider in bars and/or restaurants	
	I consume cider at home with meals	
Cognitive dimension	I would like cider to be Spanish	1 = disagree; 5 = agree
	I would like cider to be local	
	I would like cider to be organic	
	I would like cider to be artisanal	
	I focus on alcohol volume	
	I focus on the brand	
	I focus on prizes and recognitions	
	I focus on the PDO label	

Interpretations of the models were substantiated by significant odds ratios, denoting primary key drivers of cider consumption with a significance level of $p < 0.01$, or secondary key drivers at $p < 0.05$. The overall validity of the models was assessed using an Omnibus contrast ($p < 0.01$). Additionally, to gauge which model best fit the study's context, we calculated the residual R^2 of Nagelkerke (1991), an adjusted version of Cox and Snell's R^2 (Cox, 2018), covering a full range from 0 to 1, elucidating the variance explained in the dependent variable. To identify high multicollinearity in the calculated models, we employed the variance inflation factor (VIF). The usual threshold to exclude multicollinearity was a VIF of less than 5 for each independent variable.

3 | RESULTS AND DISCUSSION

3.1 | Cider consumer profile and preferences

The results of the survey reveal that most of the people surveyed have drunk cider in the last year (70.0%), being a widely known and consumed drink. However, the consumption of cider is occasional (81.8% of those who reported drinking cider did so once or twice a year), except for 18.2% who claim to drink cider frequently or at least once a month. These figures contrast with previous research on cider consumer profiles in the United States conducted by Tozer et al. (2015), where 58.0% of the analyzed population reported frequent cider consumption, or at least once a month.

Significantly, cider is the least consumed alcoholic beverage. Beer is the most widely consumed alcoholic beverage (52%), followed by wine (28%), spirits (10%), and lastly, cider (6%). These findings align with Rodrigues et al. (2022), who assert that Spaniards primarily consume beer, followed by wine, spirits, and cider. It's worth noting that Spain, particularly the Canary Islands, has a strong tradition of wine production and consumption (Duarte, 2015). However, current consumption patterns indicate that beer is the dominant choice, and cider ranks as the least consumed alcoholic beverage, trailing even spirits. This is the case despite Pereira-Lorenzo et al. (2018) documentation of the cider production tradition in the Canary Islands.

Creating an estimated profile of the Canary Islands population claiming to have consumed cider in the past year reveals certain socio-demographic characteristics (Table 3). First, cider is more preferred by women (55.4%), and it is particularly popular among older individuals (41.8% of consumers are between 51 and 65 years old, 38.8% are between 30 and 50 years old, and 19.4% fall within the 18–30-year-old range). The preference for cider among women has been noted in prior research, such as Tozer et al.'s (2015) consumer panel in the United States and Didier et al. (2012) study in France. However, our results differ when it comes to the age groups associated with cider consumption. Yenerall et al. (2022) identified millennials and Generation X as the most likely populations to purchase cider. Among participants who reported higher consumption frequency, a higher percentage of men (48.5%) stands out.

Examining education and income levels, our results indicate that these are relatively high among frequent cider consumers. Specifically, 38.6% have higher education, and 48.0% have a monthly income between 1000 and 2000€. It's worth mentioning that there is a gap in the literature when it comes to characterizing the profile of cider consumers, as highlighted in Outreville and Le Fur (2020) study. This gap becomes even more pronounced when considering the extensive body of literature on consumer profiles in specific wine segments, such as organic and natural wine (Vecchio et al., 2023), and on the consumption of craft and industrial beer (Aquilani et al., 2015; Baiano, 2021).

In terms of the cider purchase context (Table 4), supermarkets emerge as the preferred location for acquiring cider, scoring 4.19 out of 5 in terms of preference. Nevertheless, it's worth noting that the context of purchasing cider in specialized shops, which scores 1.28 out of 5, is a noteworthy finding. This preference for specialized shops, although unusual, is significantly more pronounced among regular cider consumers.

TABLE 3 Sociodemographic factors and consumption frequency.

		Cider consumer (n = 727)	Regular consumer[a] (n = 132)	Occasional consumer[b] (n = 595)
Sex (%)	Man	44.6	48.5	43.7
	Woman	55.4	51.5	56.3
Age (%)	18–30 years	19.4	22.0	18.8
	31–50 years	38.8	38.6	38.8
	51–65 years	41.8	39.4	42.4
Income (%)	<1000€	45.7	44.8	45.9
	1000–2000€	46.4	48.0	46.1
	>2000€	7.9	7.2	8.1
Education (%)	Primary studies/No studies	14.6	10.6	15.5
	Secondary studies	16.9	12.1	18.0
	High school	36.0	38.6	35.5
	University level	32.5	38.6	31.1

[a]Drinks cider once a month.

[b]Drinks cider once or twice a year.

TABLE 4 Cider purchase context and willingness to pay (WTP) for a cider bottle (mean values, SD, and analysis of variance [ANOVA]).

		Cider consumer		Regular or occasional consumption (ANOVA)			
				Regular consumer	Occasional consumer		
		Average	SD	Average	Average	F	$p < 0.01$
Purchase	I buy cider in supermarkets	4.19	1.45	4.56	4.10	10.833	0.001*
	I buy cider online	1.03	0.29	1.05	1.03		
	I buy cider in specialized shops	1.28	0.90	1.51	1.23	10.074	0.002*
	I buy cider in other places	1.38	1.09	1.34	1.38		
WTP for a cider bottle	I would be WTP up to 5€	3.75	1.69	4.03	3.69	8.676	0.003*
	I would be WTP up to 10€	2.26	1.62	2.50	2.25		
	I would be WTP more than 10€	1.57	1.22	1.86	1.51		

*Statistically significant differences between regular and occasional consumers at the $p < 0.01$ according to Kruskal–Wallis test.

The preference for shopping in supermarkets is closely associated with a preference for obtaining cider at an affordable price. Specifically, the most favored option is to pay no more than five euros per bottle, earning a score of 3.75 out of 5. In contrast, other options, such as paying up to 10 euros (score of 2.26 out of 5) or more than 10 euros (score of 1.57 out of 5), receive lower preference ratings. This finding aligns with the research by Le Fur and Outreville (2021), which indicates that cider is often perceived as an affordable and festive product, as observed in a sample of 433 young French individuals. Similarly, frequent cider consumers are willing to pay more for a bottle compared to occasional consumers, with a WTP increasing to up to 10 euros per bottle.

Previous research has established cider as typically characterized by its affordability. However, there is evidence that consumers may be willing to pay a premium for specialty varieties such as rosé or artisanal ciders (Le Fur & Outreville, 2021) or for locally produced ciders (Jensen et al., 2021; Tozer et al., 2015). Nonetheless, before this study, no research had analyzed the WTP for cider as it relates to consumption frequency. Our results demonstrate that it is the frequent cider consumer who exhibits a WTP a premium price, irrespective of the sensory characteristics associated with its production method.

3.2 | Cider consumption experience

We initiated our examination of the cider consumer experience by emphasizing the significance of the affective dimension (Table 5). Our findings reveal that Christmas is the most pertinent occasion for cider consumption, garnering a score of 4.26 out of 5. This represents the highest level of agreement concerning variables associated with the consumption experience. This finding highlights the affective dimension of the consumption experience and underscores the seasonal nature of cider consumption.

Subsequently, we observed the prominence of the sensory dimension, particularly the importance attributed to the sweet taste and carbonation (both scoring 3.79 out of 5). These descriptive results lead us to infer a connection between cider consumption and a preference for characteristic attributes of the newly developed “cider” beverages, specifically the significance of a sweet taste and effervescence, as noted by Yenerall et al. (2022). In line with our observations, the research conducted by Le Fur and Outreville (2021) underscores the relevance of sensory aspects like sweet sugar, dark, and golden attributes in cider.

Moreover, aspects within the cognitive dimension of the consumption experience also stood out, including the importance of ciders being of Spanish origin (scoring 3.75 out of 5), the brand (scoring 3.43 out of 5), the fact that it is handcrafted (scoring 3.41 out of 5), and its local origin (scoring 3.28 out of 5). These aspects align with the study by Outreville and Le Fur (2020), which concludes that the region of origin and producer identification are key factors influencing cider price. Specifically, Jensen et al.'s research (2021) indicates that cider consumers are willing to pay a premium for locally produced cider. Consequently, our results suggest that proximity and/or local origins may impact consumers’ purchasing decisions and WTP.

Nonetheless, Farris et al.'s study (2019) implies that the definitions of “local” and “proximity” necessitate an in-depth examination to assess their effect on consumer preferences for local cider. These concepts may be based on geopolitical boundaries rather than measures of geographic distance. Therefore, building on the findings of previous research, we conducted an ANOVA to ascertain whether there exists an association between consumption frequency (treated as the fixed factor) and the various dimensions of the consumption experience: affective, sensory, and cognitive (Table 5).

In terms of the affective dimension, it's notable that frequent cider consumers are more inclined to enjoy cider during social and familial occasions, such as leisure time with friends and family gatherings. Consequently, the frequent cider consumer exhibits a notably distinct consumption profile compared to occasional consumers. Nevertheless, for both categories of consumers, the affective dimension or the context of consumption remains the most pivotal. This underlines the significance of the affective dimension in shaping the cider consumption experience.

TABLE 5 Cider consumption experience (sensory, affective, and cognitive) (mean values, SD, and analysis of variance [ANOVA]).

		Cider consumer		Regular or occasional consumption (ANOVA)			
				Regular consumer	Occasional consumer		
		Average	SD	Average	Average	*F*	*p* < 0.01
Sensory dimension	I like/would like cider to be sparkling	3.79	1.54	3.82	3.94		
	I like/would like cider to be sweet	3.79	1.46	3.93	3.92		
Affective dimension	I consume cider in Christmas	4.26	1.23	4.25	4.26		
	I consume cider with friends	2.53	1.63	3.75	2.25	103.665	0.000*
	I consume cider in family meetings	2.81	1.69	3.65	2.63	41.929	0.000*
	I consume cider in bars and/or restaurants	1.54	1.09	2.38	1.35	112.476	0.000*
	I consume cider at home with meals	1.45	1.02	2.29	1.26	127.523	0.000*
Cognitive dimension	I would like cider to be Spanish	3.75	1.63	3.78	3.77		
	I would like cider to be local	3.28	1.74	3.40	3.29		
	I would like cider to be organic	2.83	1.75	2.95	2.77		
	I would like cider to be artisanal	3.41	1.70	3.57	3.38		
	I focus on alcohol volume	2.59	1.79	2.59	2.51		
	I focus on the brand	3.43	1.76	3.57	3.47		
	I focus on prizes and recognitions	2.41	1.67	2.70	2.26	8.040	0.005*
	I focus on the PDO label	2.87	1.76	2.93	2.79		

*Statistically significant differences between regular and occasional consumers at the $p < 0.01$ according to Kruskal–Wallis test.

In this context, the cider consumption experience shares more similarities with beer, where the affective dimension takes precedence (Jaeger et al., 2021). In contrast, this differs from wine consumption, where the sensory dimension assumes a decisive role (Oyinseye et al., 2022).

Turning our focus to the sensory dimension of the experience, we find no significant differences concerning consumption frequency. Consequently, this aspect appears to be less influential for frequent cider consumers, in a manner akin to beer. This trend diverges from the wine domain, where a substantial cohort of tasters and professionals prioritize the sensory attributes of the product over other factors that may impact the consumption experience (Oyinseye et al., 2022).

However, when we delve into the cognitive dimension of the cider consumption experience, we observe that frequent cider consumers exhibit a stronger interest compared to occasional consumers in the cider they choose having received awards and accolades. Similar to the realm of beers, the cognitive dimension and the information conveyed through labeling assume significance in the context of cider, particularly in situations where tasting is not the primary focus (Jaeger et al., 2021).

3.3 | Preferences concerning quality claims: Brand, PDO and organic certification

This section delves into the examination of potential quality claims for distinguishing Canary Island cider in the market. The descriptive analysis of frequencies reveals that a majority of the survey participants are unaware of the existence of cider made in the Canary Islands (66.2%). However, despite this lack of awareness, most respondents place significant importance on establishing a quality claim for Canary Island cider, rating it at 4.60 out of 5. Consequently, in the pursuit of identifying market opportunities for differentiating Canary Island cider, we further scrutinized various potential quality claims using various ordinal logistic regression models.

The dependent variables (DV) considered the level of interest in the cider brand and the organic certification, which may encompass "cider" or products derived from cider (Table 6), as well as the interest in PDO certification, excluding "cider" (Table 7). The independent variables (IV) that constituted each model included factors that define the cider consumption experience (including affective, sensory, and cognitive dimensions) and the WTP (WTP) per bottle of cider. In all models, unless stated otherwise, the Omnibus contrasts indicated a significance level of $p < 0.01$, and the VIFs did not exceed five points for any independent variable. Consequently, the models exhibited weak multicollinearity, preventing inflated standard errors.

3.3.1 | The cider brand claim

Regarding the "importance of the commercial brand" as a DV (Table 6), several noteworthy aspects emerge as significant odds ratios ($p < 0.01$), or primary key drivers: (1) The significance of sparkling cider, (2) Consumption of cider during Christmas, (3) Interest in cider being of Spanish origin, (4) The alcoholic content, and (5) Awards and recognitions received. These five attributes, which are connected to the sensory, affective and cognitive dimensions, collectively drive interest in the cider brand. Additionally, secondary key drivers, indicated by odds ratios with a significance level of $p < 0.05$, encompass, (6) Consumption of cider at home with meals, (7) Consumption in a context of enjoyment with friends, and (8) PDO certification.

In summary, as consumer interest in the brand increases, so does their interest in aspects related to taste, such as effervescence, cognitive attributes including origin, alcohol content, and awards and recognitions, and affective elements tied to the drinking occasion. Conversely, an increase in interest in local cider is associated with decreased interest in the brand (signified by odds ratios less than 1).

Furthermore, when examining each dimension of the consumption experience (sensory, affective, and cognitive), the logistic model that offers the most explanatory power for the independent variable is the one involving cognitive variables (yielding a residual Nagelkerke R^2 of 0.223).

This model indicates that a heightened interest among consumers in a cider brand is closely associated with an increased emphasis on cognitive variables. When consumers pay special attention to the brand, the cognitive dimension takes precedence over sensory and affective attributes. This result enables us to delineate specific consumption experiences that differ from those linked to socio-demographic characteristics and consumption frequency. In both occasional and frequent cider consumers, the primary

TABLE 6 Logistic model for predicting "I focus on the brand" (DV) in relation with the consumption experience.

		B	Standard error	Sig.	Odds ratio	Nagelkerke's residual R^2
Sensory dimension	I like/would like cider to be sparkling	0.284	0.0419	0.000*	1.329	0.084
	I like/would like cider to be sweet	0.053	0.0436	0.227	1.054	
Affective dimension	I consume cider in Christmas	0.202	0.0588	0.001*	1.224	0.062
	I consume cider with friends	0.116	0.0559	0.039**	1.123	
	I consume cider in family meetings	−0.045	0.0524	0.391	0.956	
	I consume cider in bars and/or restaurants	−0.144	0.0722	0.047**	0.866	
	I consume cider at home with meals	0.166	0.0794	0.037**	1.180	
Cognitive dimension	I would like cider to be Spanish	0.450	0.0458	0.000*	1.583	0.223
	I would like cider to be local	−0.047	0.0499	0.008*	0.871	
	I would like cider to be organic	−0.020	0.0493	0.097	0.917	
	I would like cider to be artisanal	−0.004	0.0526	0.157	0.924	
	I focus on alcohol volume	0.226	0.0365	0.000*	1.307	
	I focus on prizes and recognitions	0.145	0.0462	0.000*	1.209	
	I focus on the PDO label	0.179	0.0435	0.012**	1.133	
WTP for a cider bottle	I would be WTP up to 5€	0.017	0.0406	0.670	1.017	0.002
	I would be WTP up to 10€	0.011	0.0525	0.839	1.011	
	I would be WTP more than 10€	0.046	0.0633	0.469	1.047	

*$p < 0.01$; **$p < 0.05$.

determinant of the consumption experience is the occasion or the affective dimension, followed by sensory attributes. However, the cognitive dimension assumes greater importance among consumers who prioritize the brand.

These findings emphasize the need to analyze specific consumer profiles when characterizing the consumer experience, not only for cider but also for wine and beer, contributing to ongoing research initiated by Oyinseye et al. (2022) and Gómez-Corona et al. (2017).

Regarding WTP, the logistic model does not align correctly, as indicated by the lack of significance in the Omnibus contrast. This suggests that an increased interest in the brand does not influence the WTP a premium price per bottle of cider.

TABLE 7 Logistic model for predicting "I focus on the PDO" (DV) in relation with the consumption experience.

		B	Standard error	Sig.	Odds ratio	Nagelkerke's residual R^2
Sensory dimension	I like/would like cider to be sparkling	0.000	0.0416	0.007*	1.118	0.090
	I like/would like cider to be sweet	−0.092	0.0427	0.032**	0.912	
Affective dimension	I consume cider in Christmas	−0.005	0.0577	0.935	0.995	0.070
	I consume cider with friends	−0.089	0.0544	0.102	0.915	
	I consume cider in family meetings	−0.040	0.0509	0.434	0.961	
	I consume cider in bars and/or restaurants	0.263	0.0708	0.000*	1.301	
	I consume cider at home with meals	0.197	0.0732	0.007*	1.217	
Cognitive dimension	I would like cider to be Spanish	0.297	0.0477	0.000*	1.315	0.510
	I would like cider to be local	0.184	0.0489	0.030**	1.120	
	I would like cider to be organic	0.155	0.0490	0.222	1.066	
	I would like cider to be artisanal	0.379	0.0536	0.000*	1.472	
	I focus on alcohol volume	0.161	0.0374	0.000*	1.178	
	I focus on prizes and recognitions	0.149	0.0390	0.000*	1.905	
	I focus on the brand	0.754	0.0450	0.009*	1.120	
WTP for a cider bottle	I would be WTP up to 5€	0.086	0.0397	0.030**	1.090	0.401
	I would be WTP up to 10€	0.096	0.0524	0.067	1.101	
	I would be WTP more than 10€	0.187	0.0637	0.003*	1.206	

*$p < 0.01$; **$p < 0.05$.

3.3.2 | The cider PDO certification label scheme

Concerning the PDO certification system as a DV (Table 7), several aspects emerge as significant odds ratios ($p < 0.01$), indicating primary key drivers: (1) Awards and recognitions, (2) handcrafted nature of the cider, (3) Spanish origin of the cider, (4) alcohol content, (5) the importance of the brand, (6) consumption of cider at home with meals, (7) the importance of the cider being sparkling.

Similar to the model associated with the brand, an increased emphasis on the PDO certification is associated with a heightened importance of the sensory attribute related to effervescence and several attributes related to the cognitive dimension, such as the alcoholic content, Spanish origin, and recognition through awards. Moreover, the PDO label scheme underscores the significance of the cider being handcrafted, as well as the enduring importance of the brand. This implies that the PDO certification label scheme places greater demands on product quality, aligning with prior cider research (Knowles et al., 2022; Outreville & Le Fur, 2020). Introducing odds ratios with a significance level of $p < 0.05$, two additional attributes come into play: (8) The importance of the cider being local, (9) The sensory attribute associated with sweetness.

In the case of the latter, unlike the other variables, the significant odds ratio is less than 1. This implies an inverse relationship between the importance of consumers noticing that the cider has PDO certification and their interest in the sweetness of the beverage. This indicates that the surge in "cider" or flavored apple-based beverages does not pose a threat to traditional cider production methods under PDO certification, as "cider" cannot be encompassed within this system (Dhaliwal et al., 2022).

Hence, consumers seeking the PDO quality claim value the absence of sweetness, thereby excluding apple-derived products such as "cider." This aligns with Harding (2021) study, which demonstrated that in the 19th century, when middle-class "bandwagoners" developed a taste for champagne sparkling wine, "snobs" gravitated towards drier champagne wine as a marker of quality, distinguishing themselves from the middle classes.

The logistic model regarding the consumption experience that most effectively elucidates the variance related to PDO certification pertains to the cognitive dimension (yielding a residual Nagelkerke R^2 of 0.510), a pattern mirroring that of the brand.

Hence, for consumers who consider both the brand and PDO certification, cognitive aspects tied to the product assume paramount importance. The augmented significance of the cognitive dimension among consumers placing higher emphasis on PDO certification or the brand may be attributed to their familiarity and experience with cider as a product (Ballester et al., 2008; Gómez-Corona et al., 2017; Lelièvre-Desmas et al., 2015). In the wine context, more engaged consumers possessing substantial knowledge of the product can discern and utilize a broader range of external cues to gauge quality (Sáenz-Navajas et al., 2014). Enhanced familiarity with quality cues simplifies access to product information stored in semantic memory, fostering stronger perceived correlations between recognized cues and expected quality (Banović et al., 2012). This familiarity effect has been noted to be product-specific (Park & Lessig, 1981). In the context of cider, consumers more acquainted with quality cues, such as brand or PDO, experience improved cognitive engagement, as their familiarity facilitates mental product representation and access to memory.

These findings underscore distinctions in the cider consumption experience among consumers exposed to the product at varying levels and, consequently, varying levels of engagement with cider. This variation leads to differences in the significance attached to quality claims, corroborating similar findings in other beverages such as beer (Gómez-Corona et al., 2017) and wine (Oyinseye et al., 2022).

Lastly, an association exists between the variable reflecting interest in PDO as a certification system and the WTP a high price per bottle of cider. A highly significant odd ratio ($p < 0.01$) exceeding one is observed between this DV and WTP for a bottle of cider exceeding 10€. In fact, the three independent variables comprising the model related to different bottle prices jointly elucidate 40.1% of the variance in the DV, as indicated by the Nagelkerke R^2 value. Therefore, in contrast to the results regarding the brand, the significance of PDO certification influences WTP for a premium price exceeding 10€ per bottle of cider.

These results contribute to the research by Outreville and Le Fur (2020), who concluded that the region of origin significantly impacts cider prices and accentuates its quality. This study bolsters this hypothesis but exclusively with regard to PDO certification and not the brand variable.

3.3.3 | The organic certification claim

Finally, the importance of organic certification was assessed as a DV (Table 8). The primary key drivers, with odds ratios indicating a significance level of $p < 0.01$, are as follows: (1) Cider being artisanal (notably the covariate with the highest odd ratio among all analyses conducted for the DV, indicating a very robust relationship between organic and artisanal), (2) cider being local, and (3) cider having prizes and awards.

TABLE 8 Logistic model for predicting "I would like cider to be organic" (DV) in relation with the consumption experience.

		B	Standard error	Sig.	Odds ratio	Nagelkerke's residual R^2
Sensory dimension	I like/would like cider to be sparkling	−0.040	0.0406	0.324	0.961	0.001
	I like/would like cider to be sweet	0.035	0.0424	0.404	1.036	
Affective dimension	I consume cider in Christmas	0.037	0.0593	0.538	1.037	0.051
	I consume cider with friends	−0.012	0.0542	0.825	0.988	
	I consume cider in family meetings	−0.130	0.0512	0.011**	0.878	
	I consume cider in bars and/or restaurants	0.249	0.0711	0.000*	1.283	
	I consume cider at home with meals	0.126	0.0729	0.083	1.135	
Cognitive dimension	I would like cider to be Spanish	−0.030	0.0561	0.587	0.970	0.518
	I would like cider to be local	0.323	0.0537	0.000*	1.381	
	I would like cider to be artisanal	0.863	0.0564	0.000*	2.370	
	I focus on alcohol volume	0.041	0.0402	0.308	1.042	
	I focus on the brand	−0.071	0.0439	0.106	0.931	
	I focus on prizes and recognitions	0.131	0.0492	0.008*	1.140	
	I focus on the PDO label	0.090	0.0521	0.085	1.094	
WTP for a cider bottle	I would be WTP up to 5€	0.081	0.0395	0.039**	1.085	0.205
	I would be WTP up to 10€	0.134	0.0530	0.011**	1.144	
	I would be WTP more than 10€	0.039	0.0623	0.526	1.040	

*$p < 0.01$; **$p < 0.05$.

The only secondary driver was the consumption of cider at family gatherings, displaying a significance level of $p < 0.05$ with an odds ratio exceeding 1, signifying an inverse relationship in terms of occurrence with the DV. In other words, as the significance attached to cider being certified organic increases, its consumption at family gatherings decreases.

In contrast to prior models, the DV "organic certification" does not exhibit a statistically significant relationship with either the brand or the PDO certification. This suggests that "cider" might be accommodated within this framework. This flexibility arises because it would lack a legislative constraint linked to the production model. In other words, organically certified "ciders" could be produced and valued by consumers as long as these cider products guarantee an artisanal process. This assertion seems somewhat incongruous considering the industrial nature of certain "ciders."

Similar to the brand and PDO model, the cognitive dimension most effectively expounds the variance of the DV (with a Nagelkerke R^2 equal to 0.518). When each of the consumer experience dimensions (sensory, affective, and cognitive) is analyzed individually, the cognitive dimension best clarifies the heightened consumer interest in organic certification. In fact, the sensory dimension fails to yield a valid model fit, as indicated by the nonsignificant Omnibus contrast. Consequently, variables associated with the sensory dimension fail to elucidate the increased interest in organic certification. For instance, the sensory aspect operates entirely independently for this type of consumer.

Finally, analogous to the PDO model, a relationship exists between the model pertaining to organic certification and WTP (with a Nagelkerke R^2 equal to 0.205). Two odds ratios, with a significance level of $p < 0.05$, indicate that consumers interested in organic certification are willing to pay between 5 and 10€ per bottle. These findings concur with Le Fur and Outreville (2021), who demonstrated that consumers are willing to pay a premium for organic cider.

4 | CONCLUSION

This paper represents a substantial contribution to consumer experience studies within the food and beverage sector, with a special emphasis on societal perceptions of cider. Until now, the consumer experience surrounding cider has deserved little attention in the scholarly literature. The Canary Islands provide a paradigmatic context due to their tradition in producing and consuming this beverage, yet they still lack an identifying certification in the marketplace, which the sector is currently debating.

Our study's findings reveal notable disparities in the consumption experience between consumers who consider quality claims such as brand, PDO, or organic certification when purchasing cider, and those who do not. Those who regard quality claims as significant also value aspects related to the cognitive dimension of the cider-drinking experience. In contrast, consumers who overlook quality claims are inclined to prioritize the affective dimension of the consumption experience and value the cost-effectiveness per bottle of cider. The WTP a higher price per bottle of cider is associated with the presence of a PDO label, a system that excludes "cider" or products derived from cider, and with organic certification as a model that emphasizes the product being handcrafted and includes "cider."

The practical implications for the cider industry and policymakers entail establishing varied strategies for market differentiation depending on which facet of the experience—cognitive, affective, or sensory—one aims to evoke. In light of the findings, diverse quality claim models can coexist in the market. The most advisable approach for producers in the Canary Islands would be to manufacture both a traditional cider certified under a PDO and a more affordable cider featuring added carbonation and sweetness under a commercial brand. The quality claim associated with organic certification would be linked to the significance of the product being handmade, irrespective of its taste or flavor. Public campaigns aimed at promoting awareness of Canary cider, both among the local population and tourists, are highly recommended, given the prevailing lack of knowledge about its existence. Lastly, our results indicate that despite growing global apprehensions regarding PDOs, they remain pertinent for a significant consumer sector willing to pay more for a premium product. The primary limitation of this study is that it is based on a specific region. Future research should undertake cross-regional studies regarding the cider sector, as well as delve deeper into the various sociodemographic profiles of consumers in relation to the consumption experience.

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CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

ETHICS STATEMENT

This research received approval from the CSIC Ethics Committee with the number #090/2022.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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