

The World of Great Wines: The Douro Valley Experience

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Abstract—The aim of this paper is to use an experiential view of wine tourism to develop a battery of items that can potentially capture the overall Douro Valley experience from the tourist's perspective. The Douro Valley, a UNESCO World Heritage region located in Portugal, was the target of this study. The research took a mixed approach using both qualitative and quantitative designs. Firstly, we combine the literature review on service quality scales with a content analysis of five in-depth interviews with winery managers and a focus group with wine tourists to identify the main dimensions of the overall tourism experience and to develop a battery of items for each dimension. Eight dimensions of the overall wine tourism experience came out, as follows: winery service and staff, winery facilities, winery service, wine product, wine region environment, wine region accessibilities, wine region's offerings, and the wine region and winery reputation.

Keywords—Wine tourism, Douro region, survey, wineries, experience.

I. INTRODUCTION

THE concept of wine tourism has attracted many travelers and wine consumers, and has appealed to an ever-growing number of researchers and practitioners. Indeed, since the first wine tourism conference held in Australia in 1998, wine tourism has emerged as a strong and growing area of special interest throughout the world. Wine tourism has been studied from diverse research perspectives: wine tourism development [1]-[4], wine tourism and wine preferences link [5], wine tourism 'product' characteristics [6] profiling and segmentation of the wine tourist [7], wine tourist behavior [8]-[10], wine tourism experience [11]-[13], [2] and wine tourism service quality [14], [15], [11].

In wine tourism, as with all segments of tourism, assessing the overall tourism experience is critical. Equipped with an understanding of wine tourism expectations and performance evaluations, wineries, vineyards and wine regions can offer tourists the experience they aspire to.

In this context, the development of a reliable, easy-to-use measure of the overall tourist experience may offer a useful tool for those who wish to succeed in the wine tourism industry. The combination of tourism (service logic), wine (product logic) and region (sustainability logic) increases the complexity of an evaluating method. Previous studies on wine tourism service quality (e.g., O'Neill & Charters [14]; O'Neill, Palmer & Charters [15]) are based on a modified version of the SERVQUAL approach and do not account for important

items of the overall tourism experience. In both studies service quality was evaluated at the cellar door. Few studies have addressed the overall wine tourism experience and what that it involves [6]. This study aims to explore this facet in more detail.

Therefore, the aim of this paper is to develop a battery of items to capture the overall wine tourism experience. The literature concludes that demographics, psychographic and behavioral characteristics of wine tourists vary from region to region [16]. Therefore, Douro Valley, a UNESCO World Heritage region, worldwide known by the Port Wine, was the target of this study. Wine is deeply rooted in the cultural, social, economic and environmental history of the Douro region and its residents.

The structure of the remaining paper is as follows. The next section provides a discussion about the main unique characteristics of the wine tourism. Then, research designed to develop a battery of items to assess the overall tourism experience is described. Afterward, we present the results, namely the evaluations provided by a sample of tourists of the Douro Region. The paper concludes with suggestions for future research and managerial implications for the measurement of wine tourism experience.

II. LITERATURE REVIEW

A. A Special Interest in Wine Tourism

There is no single definition for wine tourism. Several definitions have been pointed out, reflecting the different perspectives from it was analyzed [17] (see for a review). Wine tourism is frequently defined as the experience of visiting vineyards, wineries, wine festivals, and wine shows, wherein wine tasting or experiencing the scenery of a wine region are the major motivations for tourists [18], [19].

Likewise, wine tourism could be conceptualized as a form of consumer behavior, and associated with the travel for the purpose of experiencing wineries and wine regions [20], [21]. Wine Tourism is also a strategy whereby destinations develop themselves, and a marketing opportunity for wineries to educate consumers and to sell directly their wines to consumers [2].

The former definitions highlight three different facets of the wine tourism, as follows: the product, *i.e.*, the products and service offered do the wine tourist; a marketing strategy for the wine industry and wine regions, and an experience for the wine tourist.

Wine tourism is now seen as an increasingly significant component of the regional and rural tourism product of most wine producing countries [1], [2]. The economic importance

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of wine tourism could be assessed by the increasing number of tourists and wine related expenditures observed in recent years. Wine tourism is an indicator of regional development, attracts new investments to the wine region and increases regional employment opportunities and tourism flows [19]. Competitive positioning of wine tourism regions has become an important strategic issue. Indeed, the core of a regions' identity encompasses both wine attributes and the cultural heritage of the region, which should be managed as valuable assets [22].

For wineries, the main advantages in participating in the wine tourism industry would be the direct product sales derived from a positive visitor reaction to wine tasting [19]. Wine tourism can also provide important long-term benefits for wineries, as the tourists may seek out the vineyard's wine when they return home [23] repeat visitation to the region and may recommend both the wine and the region to new customers, as family and friends [24]. The region of origin is known as one of the main choice factors of wine choice [25], [26]. Therefore, the benefits of a delighted experience are maintained over the long run.

B. The Wine Tourism Network

Wine tourism demonstrates a symbiosis between two different economic activities, wine production and tourism, that provides potential for their mutual benefit. As mentioned by [7], these areas are on opposite ends of the industrial spectrum and the characteristics of each activity are essentially different in a microeconomic sense. The wine production is a primary (vineyards management for grape production) and secondary (wine production) industry while tourism is a service industry (tertiary industry).

Wine tourism may be conceptualized as a particular tourism network within this overall tourism system, with its own specificities and dynamics that need to be understood in order to permit the generation of most benefits possible to all stakeholders involved and a better experience to the visitor. Indeed, wine tourism was already defined as a form of consumer behavior, where wine lovers, wine experts, and those interested in wine travel to wine regions, a strategy by which destinations develop and market wine-related attractions and enhance the overall destination appeal and an opportunity for wineries get their wines known, to sell them directly to consumers and to improve consumer wine education [2]. Therefore, consumers, winery and the region integrate the wine tourism network. Wine tourism is for that reason related to the overall travel experience [10].

C. Who Is the Wine Tourist and What Do They Aspire to?

The definition of the wine tourist is rather complex. The common stereotype of the wine tourist is middle aged (30-50 years old), highly educated (college or postgraduate), professional or managerial, in the moderate to high income bracket, and living in close proximity to the wine region [27], [22]. However, some authors maintained that there is no single stereotypical wine tourist [21] and there are significant differences in wine tourists between regions and countries

[21], [6]. For example, the study by Carmichael [11] found most Canadian wine tourists to be affluent, mature and senior couples, as well as affluent young singles, couples and families. Tassiopolous et al. [28] concluded that wine tourists in South Africa are younger, 25-40 years old and single professional females with no children.

Wine tourists are regular consumers of wine and have a sound knowledge of wine [19], [29]. People who travel to wine regions tend to be almost always accompanied by others [6], [11], [19] confirming the strong social context of wine tourism behavior.

Hall et al. [19] sustained that the demand for wine tourism is driven by the motivations, perceptions, previous experiences and expectations of the wine tourist. A diversity of studies analyzed the motivations that drive visitors to engage in wine tourism [7], [6], [17], [19]. These studies confirmed the primary driver motivation of wine tourists is considered to be to taste and to buy wine. There are also secondary motivations for wine tourism, such as socializing, learning more about wine and wine making, meeting the vineyard, eating at the winery, festivals or events, being entertained, travelling in a rural setting scenery, relaxation, having a day out, winery tours and hospitality.

Getz and Brown [2] identified three critical aspects that influence the attraction of the wine tourism destination: the wine product, the appeal of the destination and the cultural product. In fact, wine tourism involves more than just visiting wineries, tasting and purchasing wine. The rural landscape is an integral part of the wine tourism experience and could be at the root of the motives of wine tourists to satisfy their needs. Moreover, the cultural meaning of a rural lifestyle originates a memorable tourism image [17].

D. The Wine Tourism Experience

There are a variety of motivations suggested as factors driving visitors to engage in wine tourism that are of utmost importance to understand the dimensions of the overall wine tourism experience. Indeed, wine tourism was defined as an experiential tourism held in a specific wine region, which offers a unique experience for tourists joining wine, gastronomy, culture, the arts, education, travel and the landscape [12]. Some authors [30], [11], [31] highlighted additional elements that reflect the visitors' perspective and experience, as the relaxation, being entertained, socializing with family/friends, learning about wine, and hospitality. Collectively, these aspects directly related to the supply side (wineries and regions) and the demand side (visitors). The study of [32] develops a three dimensional framework to synthesize the mentioned wine tourist motives for engaging in wine tourists: the wine; the wine region; and the visit dynamic.

For Getz and Brown [2], four elements should be considered for a proper understanding the wine tourism offer and to properly promote the wine region. The first dimension includes the wine quality, the regional gastronomy and the service provided to tourists. The second dimension is linked with the wine destination appeal, encompassing a variety of cultural opportunities, as festivals and events, an

accommodation with regional character, the architecture and heritage. The third one relates to a friendly staff and good service. The last dimension addresses the development and the marketing of the wine region offer following an integrative perspective. Unique attributes of the wine region could be promoted through the establishment of wine routes, roads and trails. The study by Grybovyč et al. [22] maintains that the wine tourists are often drawn by the whole local experience package. The synergy between all the elements will enhance travelers' experience [33]. Therefore, successful wine destinations provide a broad range of wine tourism experiences that go beyond tasting and buying wine [34]. The above framework is important to determine the key attributes of the wine tourism experience. Wine tourism offers a complex sensory experience [34], where tourists can experience the pleasures of taste, smell, touch, sight and sound. Collectively, they emphasized the importance of the natural environment in which this experience takes place. The wine tourism experience occurs in the context that is known as the winescape [19] or the wine *terroir* [35].

III. METHODOLOGY

A. The Douro Region

The research was conducted in a Portuguese Demarcated wine region (Douro). The Douro is a Portuguese wine region located in the northeast part of Portugal. Douro is one of the most mountainous wine regions of Portugal, cut through in deep twists and turns by the River Douro. It encompasses a property of 24,600ha of outstanding beauty, 90km up-river from the city of Porto. The cultural landscape of the Douro is an example of a traditional European wine-producing region, recognized as a UNESCO World Heritage Site. The components of the landscape - terraces, *quintas* (wine-producing farm complexes), villages, chapels and roads - illustrate a long tradition of viticulture. Indeed, since the 18th century, Douro has been world famous for its main product, the Port wine. Five grapes have been declared the top choice for port: *TintaRoriz*, *Touriga Franca*, *TourigaNacional*, *TintaBarroca* and *Tinto Cão*. Yet, the Douro also produces non-fortified wines, both red and white. Douro has two official wine routes.

B. Qualitative Study Design

This study follows the guidelines of scale development procedures proposed by Churchill [38]. For this purpose, and consistent with accepted practice in the marketing and service quality research, both qualitative and quantitative studies were performed. In order to gain an understanding of the dimensions of consumer's wine tourism experience and to generate a preliminary item pool the literature review was complemented with five in-depth interviews with the winery managers. Considering the qualitative study, a website search was performed in order to identify wineries and hotels which are integrated in the region and offer wine tourism experiences. From the 22 wineries that were asked to participate, 5 accepted to take part of the personal interview.

The interview guide comprised questions regarding the identification of (i) the wine tourism offer, emphasizing the range of service offered and the factors of differentiation of each winery; (ii) the most important elements that may have an impact on the visitors' experience; and (iii) the role of the region and the wine to the visitor's experience. All the wineries reported offering winery visitation, wine tasting, wine pairings, gastronomic meals, audi-tours and lodging.

According to the managers, some factors could act as differentiation elements, as follows: service quality, making customers feel at home, education about Port wine and region, the reception, and sense of exclusivity. They also pointed out the preference for small groups of tourists to allow a more profound experience.

Regarding the weakness of the offer, several issues came out: (i) "No synergic activities between tourism services and wineries"; (ii) "Lack of hospitality of the regional aspects - wrong message"; (iii) "Badly planned work on accessibilities"; (iv) "Work always in progress and never definitive"; (v) "Lack of information, tourist offices, knowledge about region and website to promote"; (vi) "Lack of cleanness on the region, and environmental aspects like garbage management"; (vii) "Bad accessibilities of the region, bad signing and transportation system".

A content analysis of the interviews revealed that several dimensions must be considered in order to assess the overall wine tourism experience, as follows: winery service and staff, winery facilities, winery service, wine product, wine region's environment, wine region accessibilities, wine region offerings, and wine region and winery reputation. These dimensions are in accordance with the performed literature review regarding the wine tourism network and wine tourism experience. Therefore, we believe that the obtained battery of items will have content validity. Afterwards, based on the previous scales published on the literature related to services in general [36], related to wine [15], [11], [2] related to the wine cellar door [10], [12], [31] and rural tourism [36]-[40] and on the content analysis of the interviews, a battery of items for each dimension was developed and pre-tested by 7 wine visitors using a focus group format. A set of 43 items were adapted from previous studies and 3 items added after the focus group. Next table presents the number of items by dimensions and the respective source.

TABLE I
WINE TOURISM EXPERIENCE: DIMENSIONS AND ITEMS

Dimension	No. of Items	Source
winery staff	8	[2], [11], [12], [15], [36]
winery facilities	6	[5], [10], [11], [36]
winery service	5	[11], [36]
wine product	6	[11], [36]
wine region's environment	7	[2], [12], [31], [39]
wine region accessibilities	5	[2], [12]
wine region offerings	5	[2], [10], [32], [40]
wine region and winery reputation	4	[12]

C. Quantitative Study Design

This was subsequently followed by a quantitative survey. This was conducted to assess the wine tourism experience by a sample of wine visitors during the high season (July to September). These five wineries also agreed to participate in the second part of the research. The main survey was then performed at cellar door, including an incentive offered by the wineries. The incentive was a wine tasting, a wine offering or a glass of wine depending on the winery agreement. Moreover, a winery survey kiosk was placed at each winery (according to winery indication) to capture the visitor attention and to explain the research objectives.

The final survey comprised four main parts. The first section comprises questions regarding to the visitors wine involvement and trip characteristics. In the second part visitors were asked to rate their satisfaction on a set of items using a five-point scale anchored from strongly disagree (1) to strongly agree (5). Next, in order to evaluate the outcomes of the experience on wine tourism in the region, visitors were asked about their potential post-purchase behavior (buying wine, revisit the region, recommend the region). Finally, respondents were asked to provide their personal data. Both a Portuguese and an English version of the survey were developed through a parallel translation procedure to ensure measurement equivalence. The next figure summarizes the main steps of this research.

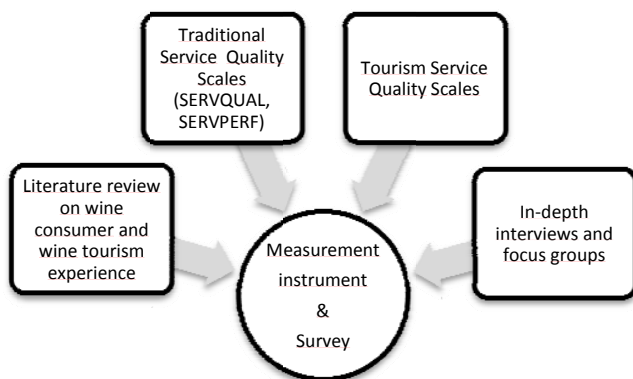


Fig. 1 Research Design

IV. RESULTS

A. Demographics and Socioeconomic Characteristics

A total of 114 visitors participated in the survey. Table II shows a summary of the sample demographic and socioeconomic profile. From the sample, 54.1% of the respondents were male and the remaining 45.9% female. Regarding age groups, 28% of the respondents were between 35 and 44 years old. The age groups from 25 to 34 years old and 55 or older both represented 26% of the sample. The majority (69%) of the winery visitors was married or lives together. Portugal, with 35 respondents, was the most representative of all the countries (30.7%), followed by the United States of America (18.4%) and Brazil (11.4%). The respondents were highly educated, owing 92% at least

graduation degree. The majority of respondents were employed (92%), and the remaining (8%) retired. Thirty three respondents reported an income higher than 5.000€ (34.4%) and 27 of them had an income between 1501 and 3000€ (28.1%). The profile of the wine tourists in the Douro region is in accordance with the archetype identified in previous studies [27], [22]. However, several respondents were foreign tourists. Despite previous studies reported that wine tourists live in the proximity of the region [23], [22] the Douro region revealed to attract tourists from abroad too.

TABLE II
DEMOGRAPHIC AND SOCIOECONOMIC PROFILE

Variable	Categories	Frequency		Mode
		Absolute	Relative	
Gender	Male	60	54%	X
	Female	51	46%	
	18-24	1	1%	
Age	25-34	29	26%	X
	35-44	31	28%	
	45-54	20	18%	
	> 55	29	26%	
	Married/living together	76	69%	X
Marital status	Single	22	20%	
	Divorced/separated	10	9%	
	Widowed	2	2%	
Origin	Europe (including Portugal)	74	68%	X
	North America	22	20%	
	South America	13	12%	
Education degree	Postgraduate/Master/PhD	50	23%	X
	University degree	52	24%	
	High school	9	4%	
Work status	Currently employed	91	41%	X
	Retired	13	6%	
	Own job	5	2%	
Income Level	Inferior to 1500€	13	14%	X
	Between 1501 and 3000€	27	28%	
	Between 3001 and 5000€	23	24%	
	Superior to 5001€	33	34%	

Note: Some questions have missing values (absolute frequencies do not always sum 114)

B. Wine Involvement

The majority of respondents considered themselves to be knowledgeable or highly knowledgeable about wine (52%), and to be interested or highly interested in this product (87%). They consider themselves as frequent consumers, as 23% drink wine once a day and 48% a few times a week. This is an expected result, as the literature pointed reported that the major motivations of wine tourism are product related [7], [6], [17], [9].

TABLE III
WINE INVOLVEMENT

Variable	Categories	Frequency		Mode
		Absolute	Relative	
Personal Knowledge about Wine	No Knowledge	8	7%	X
	Limited Knowledge	47	41%	
	Knowledgeable	49	43%	
	Highly Knowledgeable	10	9%	
Personal Interest in Wine	Almost no interest	2	2%	X
	Limited interest	13	11%	
	Interested	58	51%	
	Highly interested	41	36%	
Drinking frequency	Once a day	26	23%	X
	A few times a week	54	48%	
	Once a week	17	15%	
	Once every 2 weeks	7	6%	
	Occasionally	9	8%	

Note: Some questions have missing values (absolute frequencies do not always sum 114)

TABLE IV
TRIP CHARACTERISTICS

Variable	Categories	Frequency		Mode
		Absolute	Relative	
Mean to arrive at Douro Region	Car	46	40.4%	X
	Bus	6	5.3%	
	Train	2	1.8%	
	Boat	3	2.6%	
	Rental Car	57	50%	
Time at Douro	1 night	25	22.7%	X
	2 nights	29	26.4%	
	3 nights	25	22.7%	
	4 nights	13	11.8%	
	More than 5 nights	18	16.4%	
Company for the visit	Alone	3	2.7%	X
	Wife/husband	55	49.5%	
	Friends	14	12.6%	
	Boyfriend/girl friend	14	12.6%	
	Family	25	22.5%	
Ever visit a winery before?	Yes	86	78.2%	X
	No	24	21.8%	
Have you ever visited the Douro region before?	Yes	48	43.6%	X
	No	62	56.4%	
Have you ever visited other wine region?	Yes	95	86.4%	X
	No	15	13.6%	
Is the Douro region the purpose of your visit?	Yes	81	73.6%	X
	No	29	26.4%	
Have you ever visited this winery before	Yes	11	10.2%	X
	No	97	89.8%	
Have you ever tasted wines from Douro before?	Yes	94	86.2%	X
	No	15	13.8%	
Is the winery the purpose of your visit?	Yes	65	60.2%	X
	No	43	39.8%	

Note: Some questions have missing values (absolute frequencies do not always sum 114)

C. Trip Characteristics

The respondents reached the region mainly by using a rented car (50.0%) or their own car (40.4%). The respondents

were at the region for two nights (26.4%) and 71.8% of the respondents were staying at the region for less than three nights. They went to the region mainly in couples of husband and wife (49.5%) or with the family (22.5%). Previous studies have also reported that those that engage in wine tourism tend to be accompanied, confirming the intense social context of this activity [6], [11], [19].

V. WINE TOURISM OVERALL EXPERIENCE ASSESSMENT

This section provides the descriptive statistics for each item, organized by the dimensions of the overall wine tourism experience.

Regarding the evaluation of the winery and the staff, visitors considered that the staff was knowledgeable to answer questions ($M=4.71$; $SD=0.51$), made visitors safe ($M=4.69$; $SD=0.52$) and was able to tell when services were performed ($M=4.62$; $SD=0.56$). The statements 'the winery made me feel special' ($M=4.47$; $SD=0.77$) and 'staff understood my specific needs' ($M=4.49$; $SD=0.66$) received the lowest evaluations in this group.

TABLE V
WINERY AND STAFF EVALUATIONS

About the winery and staff...	Mean	Median	SD	Min	Max
The staff was interested in solving customer problems	4.60	5.00	.57	3.00	5.00
The winery got things right first time	4.55	5.00	.71	2.00	5.00
The staff was able to tell when services performed	4.62	5.00	.56	3.00	5.00
I felt secure in dealing with winery staff	4.69	5.00	.52	3.00	5.00
The staff was knowledgeable to answer questions	4.71	5.00	.51	3.00	5.00
The winery made me feel special	4.47	5.00	.77	1.00	5.00
The winery had best interests at heart	4.55	5.00	.68	1.00	5.00
The staff understood my specific needs	4.49	5.00	.66	3.00	5.00

Concerning the facilities, visitors agreed that the winery is located in a place of great natural beauty ($M=4.77$; $SD=0.44$) and the architecture of the winery showed to be integrated with the region's style ($M=4.75$; $SD=0.50$). The lower average rate came from the item related to the appealing of the brochures and signposting ($M=4.25$; $SD=1.03$). This dimension captures the tangible features of the service provided.

TABLE VI
WINE FACILITY EVALUATION

About the winery facility...	Mean	Median	SD	Min	Max
The winery has good facilities to serve visitors	4.53	5.00	.77	1.00	5.00
The décor of the winery is visually appealing	4.64	5.00	.66	1.00	5.00
The winery staff appears neat	4.74	5.00	.46	3.00	5.00
The winery architecture has the region's style	4.75	5.00	.50	3.00	5.00
The winery is located in an area of great natural beauty	4.77	5.00	.44	3.00	5.00
The brochures and signposting were appealing	4.25	5.00	1.03	1.00	5.00

In general, staff provided a good perceived service to visitors. In this group of questions, the waiting time had the lowest average rate ($M=4.48$; $SD=0.79$).

TABLE VII
WINERY SERVICE EVALUATIONS

About the service...	Mean	Median	SD	Min	Max
I did not have to wait excessively	4.48	5.00	.79	1.00	5.00
The staff was always willing to help guests	4.77	5.00	.42	4.00	5.00
The staff never busy to respond to guests	4.63	5.00	.64	1.00	5.00
The behavior of the staff instills confidence	4.71	5.00	.53	3.00	5.00
The staff was consistently courteous	4.81	5.00	.40	4.00	5.00

The wines tasted were considered to be enjoyable by visitors ($M=4.60$; $SD=0.60$) and they were of consistent quality and well served ($M=4.58$; $SD=0.63$). Only the range of wines was rated lower ($M=4.26$; $SD=0.70$), which is expectable since usually the wines are served only those from the winery visited.

TABLE VIII
WINE EVALUATIONS

About the wines...	Mean	Median	SD	Min	Max
The wines of this winery are of consistent quality	4.58	5.00	.57	3.00	5.00
The wines from this winery have a taste that I enjoy	4.60	5.00	.60	3.00	5.00
The wines produced from this winery are reasonably priced	4.35	4.00	.71	2.00	5.00
The wines produced from this winery offer value for money	4.45	5.00	.66	3.00	5.00
There is a broad range of wines available	4.26	4.00	.70	3.00	5.00
The wine was consistently served in an appropriate fashion	4.58	5.00	.63	3.00	5.00

Concerning the destination, tourists considered that the Douro region has a beautiful and attractive scenery ($M=4.81$; $SD=0.5$) and the environment was considered of good quality ($M=4.70$; $SD=0.62$). Visitors evaluated the easiness to obtain tourist info about the Douro region with an average rate lower to 4 ($M=3.98$; $SD=1.11$). Respondents didn't feel also to be fully integrated in the region's rural lifestyle ($M=4.17$; $SD=0.86$).

TABLE IX
DOURO REGION EVALUATIONS

About the wines...	Mean	Median	SD	Min	Max
The wines of this winery are of consistent quality	4.58	5.00	.57	3.00	5.00
The wines from this winery have a taste that I enjoy	4.60	5.00	.60	3.00	5.00
The wines produced from this winery are reasonably priced	4.35	4.00	.71	2.00	5.00
The wines produced from this winery offer value for money	4.45	5.00	.66	3.00	5.00
There is a broad range of wines available	4.26	4.00	.70	3.00	5.00
The wine was consistently served in an appropriate fashion	4.58	5.00	.63	3.00	5.00

Concerning the accessibilities, respondents presented less agreement with the closeness of the region both to a large city ($M=3.68$; $SD=1.12$) and to transportation facilities like airports, ports, and train or bus stations ($M=3.71$; $SD=1.15$). The median of responses in all aspects related to the accessibilities were about 4 and on all items and there were responses of 1 (strongly disagree). This indicates that this dimension was considered to be the least satisfying for visitors. However, one must keep in mind that accessibilities play an important role in facilitating the movement of tourists, since they do not only consume tourism resources.

TABLE X
ACCESSIBILITIES EVALUATIONS

About the accessibilities...	Mean	Median	SD	Min	Max
The wine routes or trails are well signposted	3.82	4.00	1.01	1.00	5.00
It's easy to reach the region	3.94	4.00	1.12	1.00	5.00
The Douro region is close to large cities	3.68	4.00	1.12	1.00	5.00
Access to the accommodation is easy	4.01	4.00	.90	1.00	5.00
There is an international airport/port/train station/bus station nearby	3.71	4.00	1.15	1.00	5.00

Considering the offering in the region, it was considered that there is a low offering in terms of cultural, recreational and/or sport activities in the region ($M=3.57$; $SD=0.89$). Also access to unique menus from the restaurants of the region had a lower average rate ($M=3.90$; $SD=0.90$). This last aspect was mentioned to be an important factor for visitor's satisfaction from the perspective of the managers of the wineries. It is then an aspect to improve.

TABLE XI
OFFERING IN THE REGION EVALUATIONS

About the offering of the region...	Mean	Median	SD	Min	Max
The Douro region has restaurants with unique menus	3.90	4.00	.95	1.00	5.00
The access to cultural, recreational and/or sport activities is facilitated	3.57	4.00	.89	2.00	5.00
Typical gastronomy of the region is available	4.06	4.00	.85	2.00	5.00
The foods of the region are well presented and tasteful	4.17	4.00	.80	2.00	5.00
There is a lot to see and do in the Douro region	4.27	4.00	.78	2.00	5.00

The image and reputation of Douro were considered to be strong as a wine region ($M=4.61$; $SD=0.64$). Also the wines of the region were considered to be famous ($M=4.59$; $SD=0.78$) which might be related to the influence of Port wine.

TABLE XII
DOURO IMAGE AND REPUTATION EVALUATIONS

About the reputation...	Mean	Median	SD	Min	Max
The Douro region has a strong reputation as wine growth region	4.61	5.00	0.64	2.00	5.00
The Douro region is famous as a wine tourism destination	4.44	5.00	0.86	1.00	5.00
The winery is famous as a wine producer	4.42	5.00	0.85	2.00	5.00
The Douro region wines are famous	4.59	5.00	0.78	2.00	5.00

A. Post-Purchase Behaviors

Respondents mentioned that they were likely to recommend the wine tourism experience at Douro and also the winery visited. Only the probability of returning at Douro and the intention to revisit the winery rated lower than the other aspects. This gives more importance to the satisfaction of visitors since there could be a unique opportunity to satisfy customers and possibly expect future purchase behavior, whether it is as buying wine from the region/winery or give positive word of mouth.

The results regarding the positive word of mouth ($M=4.70$) are of utmost importance. Indeed, word-of-mouth communication is considered as the most important source of information for wine tourists [2], known for reducing the perceived risk about the choice of a wine tourism destination and a winery.

TABLE XIII
POST-PURCHASE BEHAVIORS

Overall experience evaluations	Mean	Median	SD	Min	Max
The probability that I'll have another wine tourism experience at the Douro region again is (1-very low; 5-very high)	4.2	5.0	0.97	1.0	5.0
The likelihood that I would recommend the wine tourism experience at the Douro region is (1-very low; 5-very high)	4.7	5.0	0.65	1.0	5.0
If I had to do it over again, the probability I would make the same choice is (1-very low; 5-very high)	4.5	5.0	0.64	2.0	5.0
My intention to revisit this winery is (1-very low; 5-very high)	4.2	4.0	0.92	1.0	5.0
My intention to recommend this winery is (1-very low; 5-very high)	4.7	5.0	0.48	3.0	5.0
My interest in buying wines from the Douro region is (1-very low; 5-very high)	4.6	5.0	0.61	3.0	5.0
My interest in buying wines from this winery is (1-very low; 5-very high)	4.5	5.0	0.67	2.0	5.0

VI. CONCLUSIONS

Wine tourism experiences are a complex phenomenon. Nevertheless, it is important for wineries and wine regions to increase their knowledge of wine tourists, namely the evaluation of the overall tourism experience. This information will certainly guide them to look for new ways to enhance the visitor's experience.

This research intended to develop a battery of items for the evaluation the wine tourism experience considering the theoretical conceptualizations of this concept. Based on the content analysis of 5 interviews with managers responsible for wineries located in the Douro region, eight dimensions came out, as follows: winery service and staff, winery facilities, wine product, wine region's environment, wine region accessibilities and offerings, wine region gastronomy and activities and wine region and winery reputation. These dimensions are in accordance to the previous conceptualizations of the wine tourism experience. A bundle of natural, tangible and intangible attributes, that are strongly

connected with the wine region are represented in this conceptualization. A set of 46 items was assigned to the eight dimensions that attempt to represent the experiences that engage a wine tourist. As these items were based on previous measurement instruments and evaluated by wine tourism consumers, we believe that they possess content validity.

Then, a survey was conducted in 5 wineries, resulting on 114 valid responses. The demographic profile of the wine tourists in our sample falls within the common stereotype of wine tourists: 30-50 years old, moderate to high income and a sound knowledge of wine. They also traveled accompanied, confirming the intense social context of wine tourism [19], [6], [11].

The survey method illustrates the usefulness of the derived battery of items for identifying the overall tourism experience. Therefore, wineries could measure their own performance and identify potential improvements on their offer to delight wine tourists. Other stakeholders (public entities, tourism agencies, among others) will be able to assess the influence of their actions regarding the wine tourist experience.

In general, visitors considered that they got a pleasant and rich experience at the winery and the Douro region. Indeed, items included into the winery service and staff ranged from 4.47 and 4.71; items regarding the winery facilities ranged from 4.25 to 4.75; winery service from 4.48 to 4.81, wine service from 4.26 and 4.60; wine region's environment from 3.98 to 4.81; wine region accessibilities and offerings from 3.68 to 4.01; wine region's gastronomy and activities from 3.57 to 4.27 and wine region and winery reputation from 4.42 to 4.52. Therefore, it is possible to conclude that in order to enhance the wine tourist experience wine region gastronomy and activities and wine region accessibilities and offerings could be improved.

Managers mentioned in the interviews that the region accessibilities were one of the flaws of the Douro region, and the visitors' evaluations confirmed that perception. As most of the respondents reach the Douro region by car, this is an important issue. Wine routs and trails should be carefully managed.

Respondents also rated with lower average values (compared with the average) the items 'The Douro region has restaurants with unique menus' and 'The access to cultural, recreational activities is facilitated'. Therefore, it is important to properly pair the wine and food, and offering typical gastronomy from the region. Cultural activities are also important to achieve a sense of belonging and integration into the cultural lifestyle of the Douro region.

Therefore, to be able to enhance the experience at the Douro Region it is necessary to coordinate the efforts of both the public and the private sector (hospitality, wineries).

Visitors also presented favorable post-purchase behaviors, as the intention to return to the winery and the Douro region, to recommend them, and to purchase wines from this viticulture area. These are important results that revealed that the positive impact of the wine tourism experience could be maintained into the long term.

Despite the given contribute by this work, some of its limitations should be pointed out. One of the main limitations of the present study relates to the sample size. Using a large sample, future research could use scale development and more advanced statistical techniques (exploratory and confirmatory factor analysis, reliability analysis) to test the measurement capabilities of the proposed battery of items. Second, the present results are only valid for regional tourism. Nevertheless, this study could be viewed as an initial step towards a more in depth analysis. Future studies could also investigate the predictive validity of the proposed battery of items, by addressing the relationship between the dimensions of the wine tourism experience and post-purchase behaviors.

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