

Wine and Olive Oil in Symbiosis inside Wine Tourism Experience: The case of Douro Wine Region

Vinho e Azeite em simbiose na experiência enoturística: O caso da Região Vitivinícola do Douro

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Abstract | The study examines how wine tourism estates in the Douro region promote the connection between wine and olive oil, within eno-olivotourism, a tourism segment of special interest. The integration of these two products can strengthen destination competitiveness and attract visitors. In fact, the Internet plays a crucial role in tourism promotion, with websites and social media being fundamental for marketing and reputation. Using the Website Evaluation Model (WEM) based on the eMICA methodology, 290 wineries were analysed, of which 146 had an online presence, and only 35 produced both wine and olive oil. The results indicate shortcomings in information quality and stakeholder interaction, as well as gaps in integrated communication and marketing. As a recommendation, managers should enhance their digital presence to positively impact the company's image and achieve financial benefits. To achieve this, they should implement guidelines that cover key functionalities across eight dimensions: organisational, informational, promotional, relational, transactional, interactivity, multimedia and design, and social media. An effective digital presence can indeed improve results in terms of visits and bookings.

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Keywords | food heritage Wine & Olive Oil, eno-olivotourism, website evaluation, Douro wine region

Resumo | O presente estudo analisa o modo como as quintas de enoturismo na região do Douro promovem a união entre vinho e azeite no eno-olivoturismo, um segmento do turismo de interesse especial. A integração desses produtos pode fortalecer a competitividade do destino e atrair visitantes. A Internet desempenha um papel crucial na promoção turística, com websites e redes sociais constituindo fatores essenciais para estratégias de marketing e construção de reputação. Utilizando o Modelo de Avaliação de Websites (WEM) baseado na metodologia eMICA, foram analisadas 290 vinícolas, das quais 146 tinham presença online e apenas 35 produziam tanto vinho como azeite. Os resultados indicam que há falhas na qualidade da informação e na interação com os stakeholders, bem como lacunas na comunicação integrada e no marketing. Como recomendação, os gestores devem melhorar a presença digital para impactar positivamente a imagem da empresa e obter benefícios financeiros. Para isso, devem adotar diretrizes que incluam funcionalidades básicas em oito dimensões: organizacional, informacional, promocional, relacional, transacional, interatividade, multimédia & design e redes sociais. Uma presença digital eficaz pode efetivamente melhorar os resultados em termos de visitas e reservas.

Palavras-chave | património alimentar vinho & azeite, eno-olivoturismo, avaliação de websites, Douro

1. Introduction

Local tourism development is strongly oriented towards policy development based on the combination typical product-territory, in particular extra virgin olive oil (and wine), which assigns value to identity, social capital and indigenous cultural heritage. “[...]” “This could also help promoting a quality tourism in the awareness that local products contribute to the implementation of a multiplicity of local initiatives (such as tourist paths, markets, educational initiatives, community events) able to encourage and support new social relations. (De Salvo, Mogollón, Di Clemente & Calzati, 2013, p.23)

In the context of an increasingly competitive global market, the tourism sector quickly realised that Food Heritage (FH) can also constitute an element of cultural differentiation and be a symbol of a national or regional identity (Hall and Sharples 2003). In this regard, enotourism (or wine tourism) and olivotourism (or olive oil tourism or oleotourism) are emerging as Special Interest Tourism (SIT) linking several General Interest Tourism (GIT) segments of rural, cultural and nature-based tourism, with new ways for experience-escapism (Pulido-Fernandez, Casado-Montilla & Carrillo-Hidalgo, 2019).

To explore this issue more deeply, the authors, in section 2, gathered data through the SCOPUS engine data base, trying to find current insights in published studies on olive oil tourism experiences (OOTE). A total of 85 papers have been found, but the second criterion (which consisted in extracting specific agricultural or biological sciences) reduced the number of documents to 59. After that, all papers were coded according to categories such as author, year, article title, name of journal, perspective (S-supply, D-demand, R-Residents, ST-Stakeholders, T-Territory), main issue, territory, goals, methodology, and results.

We found that the concept of olive oil tourism is very complex and multifaceted. The key findings of this review reveal that no universal set of items, attributes or indicators to measure the OOTE exist (Figure 1). A lack of synergies between wine tourism and olive oil tourism was quite clear.



Figure 1. Literature Review set of thematic items. Source: Own production, based on the above authors.

Section 3, regarding the methodology, details the used technics and processes to conduct the data collection. With the Douro region in northern Portugal serving as a geographical context, a qualitative methodology was adopted, collecting website content data from 290 wine companies where 146 had online presence, but only 35 produced both wine and olive oil. Therefore, the producers of these 35 wine companies became the focus of the study. A “Wine & Olive Oil Tourism website evaluating model” was proposed and the next phase consisted in collecting data from the wine tourism companies’ websites. The results discussion is then accessible in section 4, while in section 5 the conclusions and directions for future research are presented.

2. Literature review

The literature review showed Eno-Olivotourism as a SIT fitting in with several GIT branches, such as rural tourism, nature-based tourism and cultural tourism (Pulido-Fernández et al., 2019). We realised that olive oil tourism encompasses creative experiences, sustainability awareness, the promotion of local culture, the enhancement of the destination’s image and the spreading of prestige. However, the literature review revealed a scarceness of studies addressing the relationship between OOTE and destination image, tourism experience, communities’ integration, as well as synergies between other food heritages (such as wine). This reality has recently caught the attention of researchers in the field of tourism marketing and management (Hernández-Mogollón, Di-Clemente, Folgado-Fernández, & Campón-Cerro, 2019; Alonso & Krajsic, 2013).

Eno-olivotourism, as a subcategory of gastronomic tourism, exposed a huge potential for product-level cross-selling (Alonso, 2010), combining two food heritages - wine and olive oil -, where the first one is anchored “around the culture of wine and vineyards, starting a form of cultural dissemination with a combination of culture, traditions and territories” (Costa, 2020, p.23), and the second is considered “a form of tourism which includes experiences such as: visiting to olive oil production sites and staying at local accommodations, attending culinary courses on olive oil-based, buying olive oil, trekking on olive oil routes” (Manisa, Yerliyurt & Gül, 2013, p.12, 16).

Based on Spain’s best practices, Millán, Pablo-Romero and Sánchez-Rivas (2018, p.101) provided a detailed description of several kinds of olive oil tourism experiences, such as “enjoy landscapes of ancient olive groves and visit its oil mills called almazaras, to learn about its

manufacture and to taste different oil varieties”, which resemble those found in wine tourism. Furthermore, modern tourists tend to increasingly seek authentic and co-creative experiences through the immersion in local cultures (Cayeman, 2014; Richards, 2010), expressing the desire to actively participate in community traditions.

For many tourists, the consumption of the local gastronomy is the most authentic and closest way of acquiring knowledge about local culture and connecting with locals. The gastronomic culture and its culinary practices are the most obvious and the easiest way of contact with the stay in societies and their cultural alterities. As Lucy Long stated:

[...] food seems to provide us with a sense of the ‘realness’ of things. Because of food’s commonality to all cultures, it allows us to experience the diversity within that commonality, providing us with groundedness from which we can embark on adventures into otherness. (Long 2004, p.15)

In this scenario, our leading perspective is anchored on Terry Clark's Integrative Theory (apud Pyo, 2015), which emphasises the direct and indirect influences of national cultures and microcultures on tourists' buying behaviour. De Salvo, Mogollón, Di Clemente & Calzati (2013), along with Thach, Wagner and Olsen (2019) corroborate the previous cross-selling perspective, arguing that the expansion of wine tourism in countries such as France, Spain, Germany, Italy, the United States, South Africa, Australia, New Zealand, Austria and Chile, was due to the combination of activities aimed at gastronomic tourism, rural tourism and ecotourism in wine producing regions.

The same happened with Canada, where wine experiences were intertwined with golf and culinary specialties (Pina, 2010). Additionally, López-Guzmán, Cañero Morales, Moral Cuadra and Orgaz-Agüera (2016, p.57) stated that “given the importance of wine and food tourism in recent years, there is a potential commitment to the development of olive tourism”. Nunes (2014) believes that this kind of synergy boosts business competitiveness, territory development and experience authenticity.

2.1. Wine and Olive Oil Tourism: conceptual evolution

By comparing the authors’ definition for wine and olive oil tourism (as seen in tables 1 and 2) it was found a rather small difference in terms of the developed activities.

Table 1 - Evolution of wine tourism definitions

Johnson (1998)	Wine tourism includes visits to vineyards , wineries, festivals and events for the purpose of leisure.
Getz (2000, p.2)	Wine tourism "are work landscapes, but for many they seem to offer much more at their best, they can be synonymous with civilized pleasure, food, wine, conversation , which often meet together harmoniously", "the visit can be motivated by the grape variety, the attributes of the wine region, "winescape" or the terroir."
Hall et al. (2000, p.247)	Wine tourism involves " visits to vineyards, wineries, wine festivals and wine and grape events in which wine and wine are tasted and/or if we experience the attributes of a wine region that constitute the main motivating factors for visitors".
Falcade (2001, p. 39 -53)	"Wine tourism can be defined as the movement of people, whose motivation is related to the world of grapes and wine ".
Williams & Kelly (2001)	Wine tourism involves more than visiting wineries and buying wine. It is the culmination of a number of unique experiences : the surrounding environment, regional culture and cuisine, the styles and varieties of local wines.
Carmichael (2005, p.186)	Wine tourism is " experiential tourism that takes place in wine regions and that offers a unique experience that includes wine, gastronomy, culture, arts, education and travel".
European Charter on Oenotourism (2006, p.6)	In the European Wine Tourism Charter, the concept is presented as "all activities and resources of tourism, leisure and leisure, related to the cultures, materials and immaterial , wine and indigenous gastronomy of its territories".
Getz & Brown (2006)	The wine tourist's motivations can include factors such as culture, landscape , among others, in addition to work.
Costa (2007)	Wine tourism is an important and innovative tourism product , which makes it possible to disseminate the potential of certain wine regions and their tourist use both in terms of services and in terms of heritage.
Inácio (2007, p. 4-5)	Considered the relationship between the tourism stakeholders and producers. For visitors the experience represents "the journey related to the attractiveness of the wineries and the agricultural field", constituting a form of consumer behaviour; for tourism entities , it represents "a form of niche market" that offers a business opportunity and job creation, contributing to the development of destinations; for destinations , it is a commercial strategy to develop an image and as a way of marketing their attractions related to wine and vineyards; finally, for the wine industry : wineries and producers is a "commercial opportunity to carry out direct sales, advertise and educate their customers about their product".
Simões (2008, p. 270)	Wine tourism is "the set of associated activities (visit to wine enterprises, visit to museums and other establishments linked to the sector), participation in events or centres of wine interests having as main objective, and more frequent, knowledge and tasting of wines from the regions visited".
Pina (2010, p. 23)	Wine tourism is both a "form of consumer behavior, a strategy of developing a destination , a set of attractions and performances related to the production of wines and, finally, a marketing opportunity for producers to promote and sell their products directly to consumers.

Nunes (2014)	Wine tourism is a recent reality and over time its definition has been developed leading to new applications.
Boniface (2017)	The infrastructures, the environment and all the socio-cultural components of the wine region that contribute to enhance the visitor's experience in the region are part of the wine tourism offer.
Carvalho et al, (2020)	Pointed out a joined vision of “ multiple experiences ” linking the architectural, with the culture of authenticity and sustainability.

Source: Own production based on the cited authors

Whereas in Portugal the term used is olive-oil tourism or olivotourism, in Spain the term oleotourism has been adopted, following the Latin prefix of the olive tree "Olea Europaea L." (Fernandez, Montilla & Hidalgo, 2019). Olive oil tourism is defined as a form of tourism based on activities linked to olive groves and olive oil, combining culture, nature, heritage and gastronomy. This concept is relatively new, with several authors having contributed to its evolution (Table 2). They highlight several perspectives for its analysis, including Demand, Supply, Tourism and cultural, Wine tourism, Gastronomy, Industrial and Rural Development. This form of tourism stands out as an alternative to traditional tourism, considered as “a form of tourism that includes activities such as visits to olive oil production sites and accommodation in these places, cooking courses on olive oil-based dishes, purchase of olive oil, trekking and rest on olive oil routes, and information visits that provide information about olive oil culture and production techniques from the past to the present” (Manisa, Yerliyurt & Gül, 2013, p. 12, 16).

Table 2 - Olive Oil Tourism conceptual evolution

Murgado (2013, p.100)	“Oleotourism is a set of activities that revolve around oil. (...) olive oil tourism also includes cultural activities related to nature, which immerse the visitor in local culture of the environment and territory”; “In the case of olive oil, it is necessary to design tourist products based on experiences to enrich the act of product consumption.”
Campón-Cerro et al. (2014, p.70)	“(…) olive oil can be considered a fundamental resource and an effective tool for new initiatives of local development.” (...) The link between olive oil culture and tourism seems to reveal an interesting proposal for the tourism development of the olive grove zones.”
Millán et al. (2014, p.181-184)	“One way to develop oleotourism is to market it, protected by a designation of origin that creates a tourist route that informs about the quality of the oil and its production process, and provides oil tastings” (Millán et al., 2014, p.181); "There are differences and similarities between the profile of enotourists and oleotourists. Their demographic profiles, their way of organizing the trip, their

	behavior in the destination and the determinants of their satisfaction are similar, but not their economic profiles and the expenditure they make in the destination." "Both in wine tourism and in oleotourism tourists complain of the lack of complementary activities." (Millán et al., 2014, p.184).
Pulido-Fernandez et al. (2019, p.5)	"Olive Oil Tourism is part of gastronomic tourism."
Bezerra R., Correia A. I. (2019, p.69)	"To extend olive oil-related experiences to creative tourism, visitors need to have the opportunity to interact more with the local host community, to have more active participation in these activities, while developing their creative potential offering them memorable and engaging experiences."
Parrilla-González et al., (2020, p.3)	"Olive Oil Tourism is an intangible, sustainable element, insofar as tourism linked to agricultural activities is based on sustainability, respect for the environment and awareness about a society with certain values linked to the land"
Hwang Y. H., Quadri-Felitti D. (2021, p.3-13)	<p>"Olive oil tourism can be considered sustainable tourism due to its contribution to the local economy by synchronizing the interests of visitors, the environment, and the local community" (Hwang & Quadri-Felitti, 2021, p.3);</p> <p>"Since vineyards and olive groves share geographical areas (...) olive oil and wine tourism may create a synergistic effect in the local economy" (Hwang & Quadri-Felitti, 2021, p.11);</p> <p>"olive oil tourism and wine tourism managers may need to work closely together." (Hwang & Quadri-Felitti, 2021, p.13).</p>

Source: Own production based on the cited authors

In recent decades, the vineyard/olive grove and wine/olive oil, as cultural landscapes and sustainable products, have become one of the main themes in tourism development. The trinomial "eat, drink, stay" and "play", lead to the integrated vision that wine/olive oil tourism assumes, combining a set of sensory and creative experiences that provide tourists contact with the landscape, communities, traditional food items, gastronomy and cultural heritage.

Wine (and also olive oil) tourism experiences involve "a complex interaction of natural setting, wine, food, cultural, and historical inputs and above all of the people who service them" (Charters, 2006, p. 214). Wine and olive oil tourism offer customers leisure activities, educational opportunities, and novel experiences through visits to wine regions (Charters & Ali-Knight, 2002). For all these reasons, it is possible to affirm that wine and olive oil tourism are similar ecosystems integrated in rural, natural and cultural tourism, encompassing a strong creative dimension and adding a complex interconnectivity between stakeholders, resources, and organisations, which extend across different spatial and sectoral scales.

2.2. Vineyards and Olive groves: twined geographical areas

In Portuguese territory, wine and olive oil have long been in the foundation of local cuisine, valued not only for their health benefits but also for other purposes (Paquete, 2013). As seen in figure 2, vineyards are spread across 14 wine regions, whereas olive groves span 7 regions (Figure 3), with overlapping wine and olive oil producing territories. Olive oil production is more concentrated on the right bank of the Tagus River, towards the south of Portugal (Alentejo region) appearing around villages, and mills were installed close to water courses (Caldas, 1998).

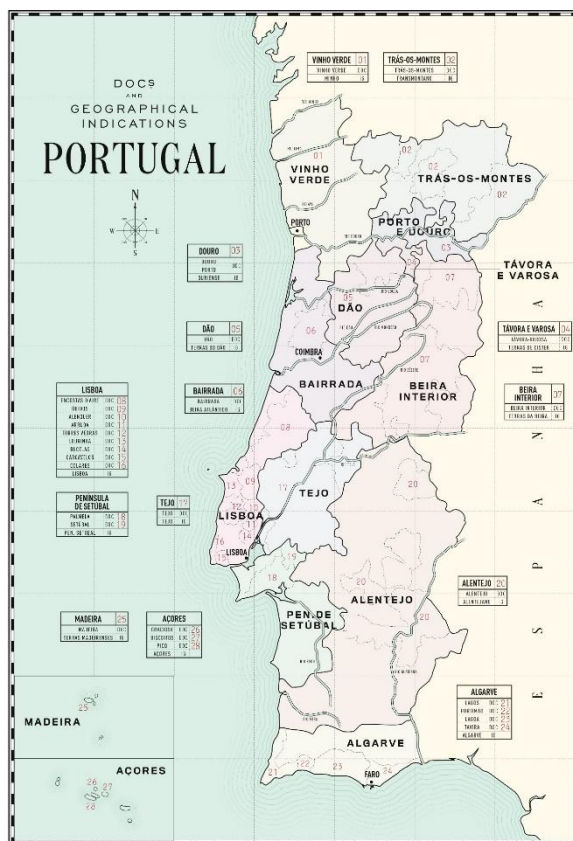


Figure 2: Portugal's Wine territories

Source: Taste of Lisboa (2021)

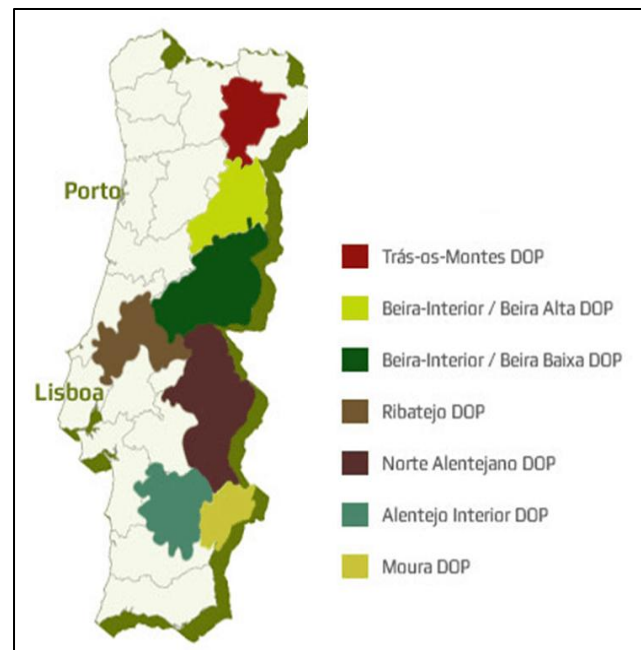


Figure 3: Portugal's olive oil regions

Source: LOA - The Olive World (2022)

According to the International Organisation of Vine and Wine (OIV), in 2020, the three largest wine producing countries were Italy, France and Spain, followed by the United States, Australia, Chile, Argentina and South Africa. The ranking with the ten greatest wine producers continues with Germany and Portugal (Dino, 2023). In terms of olive oil, according to Murgado

(2013), Spain is the largest producer in the world, giving this country a privileged position to exploit this product in the tourism field. The same author considered that on a scientific level, very few studies have highlighted this tourism activity since it is still in the early stages of development. In Portugal, the Alentejo region accounts for 82% of olive oil production (with 82% having been produced in 2021), while the North region contributes with only 9%. According to the National Institute of Statistics (2021), there are 492 mills in Portugal.

Since vineyards and olive groves share geographical areas, pairing wine tourism programs with olive tourism programs might result in synergy in a local economy. So, olive oil tourism and wine tourism managers may need to work closely together. (Hwang & Quadri-Felitti, 2021, p.13)

Table 3 presents the volume of wine and olive oil production (hl- hectolitres) in the different Portugal regions, in 2023, showing that “vineyards and olive groves share geographical areas”, as referred by Hwang & Quadri-Felitti (2021, p.13). In Portugal, the volume of wine and olive oil production (hl- hectolitres) in 2023 reveals Trás-os-Montes accounting with 8% of olive oil and 22% of wine (INE, 2023).

Table 3 – Wine and Olive Oil production in Portugal, 2023

Data reference period	Geographical location (Agrarian region)	Olive oil produced (hl) by Geographic location; Annual	%	Wine production declared in wine (hl) by producers by Winemaking location (Agrarian region) Annual	%
2023	Portugal	1 755 289	100%	7 542 060	100%
	Between Douro and Minho	2 158	0%	925 565	12%
	Trás-os-Montes	144 534	8%	1 686 241	22%
	Beira Litoral	30 470	2%	510 156	7%
	Beira Interior	39 369	2%	244 190	3%
	Ribatejo e Oeste	65 703	4%	2 851 592	38%
	Alentejo	1 466 458	84%	1 261 894	17%
	Algarve	6 598	0%	16 613	0%
	Açores	0	0	8 007	0%
	Madeira	0	0	37 800	1%

Source: Own production based on INE 2023 data for wine and olive oil.

The Douro Demarcated Region, a well-known wine landscape, has been witnessing, in recent decades, various modifications, including the reconversion of old olive groves for the production of extra virgin olive oil. This shift has resulted in positive impacts on tourism and the territory's sustainable development. So, olive groves are considered vital for regional development and contribute to the territory cohesion, with implications for the local economy, generating employment and playing an important role in cultural landscape safeguard and identity (Fleskens et al., 2009).

Wine and olive oil, when assimilated by tourism (Eno-Olivotourism), enable a "(...) series of unique experiences, which include [the] territory, atmosphere, landscape, culture, gastronomy, lifestyles and varieties of local wines" (Williams & Kelly, 2001, p.9), being able to assert themselves as a regional development tool, by integrating the primary (agriculture), secondary (wine industry) and tertiary (tourism) sectors. As a result of the tourism evolution, new types of experiences and stakeholders emerge, integrating olive farming and olive oil production in this business (Alonso, 2010).

Our thesis proposes that the best way to promote both wine and olive oil food heritages in an integrative manner consists in improving an effective online presence of tourism companies, by developing their websites' functionality and interactivity. Palacios-Zamora and Lovelle (2023) see the usability in tourism websites as increasingly important, due to the existing competition and the high demand from customers for an intuitive and efficient user experience, including a group of basic features connected to information, communication, e-commerce and social media dimensions (Cristobal-Fransi et al., 2018).

3. Methodology

3.1. Methodological process

As referred in the Introduction, this work intends to boost olive oil food heritage synergies inside the wine tourism experiences. The growing phenomenon of globalisation, helped by Information and Communications Technology (ICT) and the Internet, made the travel research process easier and more convenient.

Nowadays, the internet is the most widely used and an effective tool for firms/organizations to reach their customers by their websites. Hence, effective design of websites helps firms/organizations to reach their aim. There are lots of design parameters that play an effective role on website design. (Cebi, 2013, p. 1030)

The reason to explore this subject lies in the fact that the Internet is becoming an increasingly important part of daily life and plays a fundamental part in understanding the future. In fact, the Internet is no longer an element or part of what we are or do but a vehicle element that unites everyone and everything. If the internet is not being used, it is rather difficult to reach the consumer. As said by Bill Gates, “If your business is not on the Internet, then your business will be out of business” (Goldsmith, 2005, np).

The rapid growth of the internet presents a new perspective for business and organisations. This important network can easily connect managers and customers providing not only general information about its products or services but also the opportunity for performing interactive business transactions (Hasan & Abuelrub, 2011; Aladwani & Palvia, 2002).

Nielsen and Thair (2002) advocate that a website is a structured collection of web pages, various files and hyperlinks, which can be internal and external, representing an entity (company, organisation, group) or someone (a person). Corporate websites can offer high levels of customer services during and after sales transactions, as they are a useful tool to compare prices, to purchase services and to communicate with the service providers (Camilleri & Kozak, 2023). According Jurado et al. (2021, p.80), “A company website has become a basic tool for interacting with customers, supporting the Direct-To-Consumer (D2C) strategy”. After consulting several companies’ websites we found a set of elements, as: “Menu” with essential links to access the rest of the information on the site (it may not appear on the homepage, but it facilitates the user’s interaction with the site); “E-mail” presented explicitly or implicitly; the responsible party for the site, distinguishing the promoter (or funder) from the webmaster (manages the information) and the web designer (produces the graphics and interaction); “Website creation” and update dates; “Site optimisation” for a given monitor resolution and for a given browser version or browsers; “News” section ordered by dates and/or subjects (small summaries of recent or changed information); “Trusted accountant” (cumulative number of daily users) and “Internal search engine”.

Moreover, a lot of other attributes are required, such as “Frequently answered questions (FAQs)”, (allowing users to search for answers themselves) (Camilleri and Troise, 2022); “Live Chat services” that may be operated by human agents and/or through AI chatbots/dialogue

systems (Adam et al., 2021; Camilleri & Troise, 2022; Thomaz et al., 2020; Tsai, et al., 2021) or even “Software to respond to consumers’ queries” in real time, via social media networks, including Facebook Messenger or WhatsApp, among others (Smutny & Schreiberova, 2020).

In line with the above considerations, corporate websites can offer high levels of customer services during and after sales transactions, as they are a useful tool to compare prices, to purchase services and to communicate with the service providers (Camilleri & Kozak, 2023). Klaus and Zaichkowsky (2020), along with Zaki (2019), advocate that online users are continuously evaluating the attributes and features of electronic commerce websites before committing themselves to a purchase decision. “The Internet is one of the most used information sources for planning tourism trips. However, the level of accessibility of information disseminated by the tourism industry through websites is still very low” (Teixeira, Eusébio & Teixeira, 2021, p.253). Based on the above considerations three goals were defined:

(1) Seek out which enotourism companies have a website and produce wine and also olive oil.

To achieve the first objective, a sample was collected in the Douro region, where 290 companies (according to the list provided by TPNP-Turismo do Porto e Norte de Portugal, in 2018) carries out wine tourism activities. The fieldwork took place between March and April 2023. A web site survey (on 290 Enotourism farms) showed that 146 (50,3%) have online presence, only 35 (12,1%) farms promote online their olive oil business and 11 (3,8%) develop olivotourism activities (Table 4).

The results showed that in 146 wine tourism farms with website (in Douro region), only 35 promote (on websites), their olive oil business and tourism experiences, displaying a fragile and not very interactive online presence. So, digital environments can provide a competitive atmosphere for tourism business improvement and create a vast range of chances to strengthen destinations image (Jurado et al., 2018). Websites can generate symbiotic opportunities between the tourist experiential needs and the socio-economic aspirations of local communities.

Table 4 – Douro farms survey: online presence (wine & Olive oil) and Tourism

County	Nº Farms	Website	Wine	Olive Oil	Wine	Olive Oil
Alijó	45	25	21	9	10	3
Armamar	10	2	2			
Carraceda de Ansiães	12	5	5		1	
Figueira de Castelo Rodrigo	2	1	1			
Freixo de Espada à Cinta	4	2	2		1	
Lamego	36	24	21	6	14	
Mesão Frio	17	10	9	2	6	2
Murça	1					
Peso da Régua	37	15	15	4	7	1
Sabrosa	37	15	13	1	6	
Santa Maria de Penaguião	18	9	7		6	
São João da Pesqueira	29	16	12	5	4	1
Tabuaço	8	5	5	1	5	1
Torre de Moncorvo	13	7	7	3	5	3
Vila Nova de Foz Côa	16	9	8	4	4	
Vila Real	5	1	1		1	
Grand Total	290	146	129	35	70	11
	100%	50%	44%	12%	24%	4%

Source: Own production

(2) Propose a “Eno-Olivotourism Website Evaluation Model”.

In order to help customers find and buy integrated eno-olivotourism experiences, companies need to strengthen their presence on the internet, making their websites more informative, attractive, safe and interactive.

The above considerations justified the chosen a qualitative methodology, anchored on eMICA construct (extended Model of Internet Commerce Adoption), Correia & Dias (2003), Nielsen (2000), Richmond (1996), Tognazzini (1998) e W3C (1999), composed by eight domains (organisational, informational, Promotional, Relational, Transactional, Interactivity, Multimedia & Design and social media) .

(3) Identify and evaluate the most relevant attributes in each 8 domains.

The third goal was achieved via Google Forms® tool to summarise websites data content. The results were measured (in absolute and relative frequencies) on a binary scale: “0” absence of the attribute and “1” presence of the attribute (as in a similar Platania, et al., 2016 work). The

Microsoft Excel tool was used to perform descriptive statistics, in order to interpret the resulting information.

3.2. Eno-Olivotourism Experience “Website Evaluation Model”: a proposal

After exploring general information about websites main elements, we studied their quality valuation model. The extended Model of Internet Commerce Adoption (eMICA) was our main guidance model, consisting of an excellent starting benchmark for the wine tourism sector, proven by the authors Doolin, Burgess and Cooper (2002), who used it to study three websites of regional tourism organisations. For the travel industry, Ting et al. (2013, p.54) summarised other important elements (in table 5).

Table 5 – Main Travel industry Website attributes

Website inputs	Detail elements
Interactivity	Online availability, offline reservation, worldwide reservation phone number, special request forms, general description/history, map, transport information, travel guides, awards, the latest news, address, fax, phone, e-mail, conduct or feedback form, guest book, tips, chat or discussion forum, newsletter, press releases, facility for interactive brokering, RSS, FAQ, privacy policy;
Navigation	Organisational e-mail hyperlink, sitemap, tourism search engine, keyword search;
Functionality	Organisation contacts, currency converter, flash animation, membership system, download facilities;
Marketing	Prices or cost of products and services, packages and promotions, dining, bars, photos or photo album, video, itineraries information, awards, special offers, e-brochure;
Service	Check-in and check-out time, hotel rooms and suites, activities and entertainment, dining, bars, conference and meeting facilities, online purchase or gift store, map, itineraries information, e-brochure;
Innovation	Digital signature and encryption, view or cancel reservation, virtual tours, travel schedules and plans, Web 2.0 tools
Online processing	Online availability, online reservation, currency converter, view or cancel reservation, payment options, special request forms, online purchase or gift store, weather, local time, Multilanguage support, travel schedules and plans, membership system, chat or discussion forum, press releases, facility for interactive brokering, RSS, Web 2.0 tools.

Source: Own production based on Ting et al. (2013, p.54)

Based on all these contributions, our Eno-Olivotourism website evaluation model (table 6) illustrates eight domains/stages: Organisational (Stage A) informational (Stage B), Promotional (Stage C), Relational (Stage D), Transactional (Stage E), Interactivity (Stage F), Multimedia and Design (Stage G) and social media (Stage H) and involves 146 questions hosted on a Google Forms inquiry.

As stated by Kabassi (2019, p. 544), “(companies) websites play an important role in attracting visitors, both physically and online. Therefore, these websites must be evaluated to ensure that their goals are met. However, the evaluation of a website is complex and is often omitted during the website’s life cycle, despite its importance”.

In the opinion of Qi (2022, p.797), “over the last two decades, website evaluation methods and research priorities have changed: early website evaluation studies focused more on features, functions, and the content of the traditional provider website, and recent studies have focused more on the richness of website content and interaction with users or compare the content of different types of websites”.

Scholars have shown that these technologies contribute to performance in terms of better productivity, profitability, process development, market value and sustainability (Dedrick et al., 2003; Can & Alatas, 2017). Kaplan and Haenlein (2010) suggest the use of ICT in an efficient manner. In each website, a content analysis was conducted, looking for evidence (references) of each one dimension, following Jurado’s eMICA strategy (Jurado, 2018, p.4), such as: “each layer consists of items that take the value 1 (indicating presence) or 0 (indicating absence)”.

Table 6 – Website Evaluation Model dimension’s

Stages	Domains typologies
Stage 0	A-Characterisation of the Wine Tourism Farm
	A1-Counties of Douro
	A2-Developed Activities
	A3-Olivotourism and/or Wine Tourism Activities
	A4-Offering Experiences in collaboration with partners
	A5-Shop: sell products / services on NET
Stage 1	B-Information Area on the website
	B1-Vision and Mission
	B2-Location of the wine tourism farm

	B3-GPS Location
	B4-Organisational Image Communication
	B5-Advertising Campaigns
	B6-Communicates Accomplishments or Events
Stage 2	C-Promotional Area
	C1- Information Policy
	C2-Presents a list of Products / Services
	C3-Refer Partners' links
Stage 3	D-Relational Area
	D1-Products, Services & Experiences using conditions
	D2-Accessibility conditions information (for citizens with special needs)
	D3-Regional amenities & other customer information
Stage 4	E- Product/Services & Experiences Transaction
	E1-Online booking
	E2-Online payment
	E3-Booking/purchase tracking
Stage 5	F-Interactivity Area
	F1-Stakeholders' Relationships (community)
	F2- Promote customers and visitors ideas exchange
	F3-Interactivity in real time
Stage 6	G-Multimedia and Design Area
	G1-Audio Information
	G2-Video Information
	G3-Augmented Reality
Stage 7	H-Co-Creation Area
	H1-Social Networks Presence
	H2-Places ads/promotions on social media
	H3-FAQs
	H4-Structured Online Surveys
Total	

Source: Own production based on eMICA construct (extended Model of Internet Commerce Adoption) and also on Correia & Dias (2003), Nielsen (2000), Richmond (1996), Tognazzini (1998) e W3C (1999)

4. Results and discussion

The eight stages/dimensions of Douro's Wine & Olive Oil Tourism Websites Model were studied in detailed according to their characteristics, and the results are as followed.

The importance given to wine experiences and less to those related to olive oil is notorious. Companies are aware of natural and cultural heritage attributes, integrating them into tourism experiences and also promoting their products, services and experiences on the Internet. All dimensions results are detailed in Table 7.

Stage 0: A - Organisational Area

The characterisation of the Wine Tourism Farms showed that municipalities with the highest number of enotourism estates are Alijó (25%), Peso da Régua (21%) and Lamego (17%). They produce mainly wines [still wines (22%), Port wine (20%)] and olive oils (30%).

The most popular activities are related with wine tourism (14%) and wine-olive oil tourism (12%). In terms of other own resources available, 10% possess accommodation and 5% restaurants. They offer various experiences, such as: tasting [wine (13%), olive oil (6%)]; guiding tours to [wineries (8%), mills (3%), vineyards (9%) and Olive groves (5%)]; events [gastronomic (5%) and workshops (2%)]; experiences with other partners [related to food heritage (25%), natural resources (22%), local customs/traditions (17%)], and 58% of farms have their own physical and online store.

The website "Home page" generally contains relevant information like: the company Logo (44%), Team (26%), Company History (30%), Location on Google (65%) and Georeferencing (31%). In terms of static communication, we found Message from the CEO (42%), company mission and values (both 8%), Business Partners and Links (25%) and Team Information (17%).

With regard to advertising campaigns, wine tourism farms publish articles in the press (10%), advocates causes (social, ecological, environmental) (17%), announce their Trademarks (17%), and diffuse Newsletters (21%). However, a large amount (34%) do not explore this potential on their websites.

Table 7 –Wine & Olive Oil Tourism Websites content evaluation

Wine Tourism farms with olive oil production				Reference						References	
S t a g e 2	A- Wine Tourism Farms characterization			Nº	%	C-Promotional Area					
	A1-Counties of Douro			24		C1- Information Policy			27		
	ALIJO			6	25%	Has opportunity to register (1);			6	22%	
	LAMEGO			4	17%	Has possibility to insert/remove from a mailing list (2)			3	11%	
	MESÃO FRIO			1	4%	Has personal Information Policy (3)			7	26%	
	PESO DA RÉGUA			5	21%	No promotional policy (4)			11	41%	
	RESENDE			1	4%	C2-Presents a list of Products / Services			87		
	SABROSA			2	8%	Shows the Wine Catalog (1);			12	14%	
	SÃO JOÃO DA PESQUEIRA			3	13%	Shows Olive Oil Catalog (2)			11	13%	
	VILA NOVA DE FOZ COA			2	8%	Shows price list of products available online (3);			11	13%	
	A2-Developed Activities			69		Indicates Availability of products/services (P&S) (4);			7	8%	
	Port Wine Producer (1)			14	20%	Has the restaurant menu online (5)			2	2%	
	Producer still wines (2)			15	22%	Has the restaurant's wine list online (6)			1	1%	
	Sparkling wine producer (3)			1	1%	Has Product Data Sheet (7)			9	10%	
	Olive Oil Producer (4)			21	30%	Suggests harmonization with products (8)			3	3%	
	Producer of other agricultural products (5)			5	7%	Promotes the region's food heritage(9);			2	2%	
	Wine tourism (6)			5	7%	Shows Image of traditional dishes (10);			1	1%	
	Olivotourism (7)			0	0%	Indicates that it uses regional products (11);			3	3%	
	(Both) Eno Olivotourism (8)			8	12%	Gives Information on wine varieties (12);			10	11%	
	S t a g e 3	A3-Olivotourism and/or Wine Tourism Activities			111		Gives Information on the varieties of olives (13);			3	3%
Has wine tourism (0)			16	14%	Provides wine care/conservation information (14);			4	5%		
Has Olivotourism (1)			8	7%	Announces wine launches (15);			1	1%		
Has a restaurant (2)			5	5%	Announces launches of Olive Oils (16);			1	1%		
Has accommodation (3)			11	10%	Sells products/services from partners (17)			1	1%		
Has guided tours of the winery (4)			9	8%	Adopts circular economy principles (18)			0	0%		
There are guided tours of the Lagar (5)			3	3%	Another option... (19)			5	6%		
Has guided tours of the vineyard (6)			10	9%	C3-Refer Partners' links			24			
There are guided tours of the olive grove (7)			5	5%	Yes			20	83%		
Has SPA (8)			1	1%	No			4	17%		
Has SPA with wine based products (9)			0	0%	Total Stage 2			138			
Has SPA with olive oil based products (10)			0	0%							
Has a museum space (11)			0	0%	D-Relational Area						
Has own products store (wine, olive oil ...) (12)			9	8%	D1-Products, Services & Experiences using conditions			24			
Holds gastronomic events (13)			6	5%	yes			7	29%		
Conducts wine tastings (14)			14	13%	No			17	71%		
Conducts olive oil tastings (15)			7	6%	D2-Accessibility informations (citizens special needs)			24			
Conducts workshops related to wine/olive oil(16)			2	2%	yes			0	0%		
No Information available (17)			5	5%	no			24	100%		
S t a g e 4		A4-Offering Experiences in collaboration with partners			36		D3-Regional amenities & other customer information			29	
	Integrate regional's natural heritage (0)			8	22%	How to get there (1);			11	38%	
	Offer local heritage guided tours (1)			3	8%	What do you can visit in the region (2)			3	10%	
	Organize olive oil/wine tasting courses (2)			3	8%	Partners where you can stay/eat(3)			0	0%	
	Holds cultural events with the community (3)			0	0%	Frequently Asked Questions (FAQ) (4);			2	7%	
	Include local customs/traditions in offer (4)			6	17%	Forum discussions on products and services (5).			0	0%	
	Promote the region's food heritage (5)			9	25%	No information (6)			13	45%	
	Promotes local crafts (6)			0	0%	Total Stage 3			77		
	No Information			7	19%						
	A5-Shop: sell products / services on NET			24		E-Transactional Area					
	Yes			14	58%	E1-Online booking			8		
	No			10	42%	Online booking (1);			8	100%	
	Total Stage 1					E2-Online payment			16		
						Online payment (2);			9	56%	
						Confirmation before payment (3);			5	31%	
						Voucher Printing (4);			2	13%	
						E3-Booking/purchase tracking			12		
						Booking/purchase tracking (5);			0	0%	
						No information (6)			12	100%	
						Total Stage 4			36		
S t a g e 5	References					F-Interactivity Area					
	B- Informational Area					F1-Stakeholders' Relationships (community)			33		
	B1-Vision and Mission			54		It does not mention that it uses local resources (0);			11	33%	
	Has company logo (1);			24	44%	Purchase local food products (1);			2	6%	
	Has "Who are we" (2);			14	26%	Acquire Local Crafts (2);			0	0%	
	Has company history (3);			16	30%	Recruit local Human Resources(3);			0	0%	
	B2-Location of the wine tourism farm			26		Promote traditional flavors (4);			5	15%	
	Has Location on Google map(1);			17	65%	Promote traditional music/dance/art (5)			1	3%	
	Has Georeferencing (2);			8	31%	Organize workshops on arts, traditional knowledge (6)			2	6%	
	Has 360º Vision (3)			0	0%	Organize tours (nature and cultural) (7)			4	12%	
	Has Farm address			1	4%	Promote immersive experiences (8)			2	6%	
	B3-GPS Location			28		No information (9)			6	18%	
	Latitude			14	50%	F2-Promote customers and visitors ideas exchange			24		
	Longitude			14	50%	yes			3	13%	
	B4-Organizational Image Communication			12		no			21	88%	
	Has Message from the CEO (1);			5	42%	F3-Interactivity in real time			25		
	Has Mission (2);			1	8%	Allow to make online reservations (1);			10	40%	
	Has Values (3);			1	8%	allow real-time communication with customers (2)			5	20%	
	He is a Member of Associations (4);			0	0%	No information (3)			10	40%	
	Reveals Business Partners and Links (5);			3	25%	Total Stage 5			82		
Team Information (6)			2	17%							
S t a g e 6	B5-Advertising Campaigns			29		H-Social Media Area					
	Has articles in the press (1);			3	10%	H1-Social Networks Presence			41		
	Advocates Causes (2);			5	17%	Not present in social networks (0);			1	2%	
	Identifies the Trademarks of products (3);			5	17%	Has Facebook (1);			21	51%	
	Has News Letter (4);			6	21%	Has LinkedIn (2);			2	5%	
	No Information (5)			10	34%	Has Instagram (3)			14	34%	
	B6-Communicates Accomplishments or Events			26		Youtube + Twitter (4)			3	7%	
	Has an area of accomplishments/Events (1);			4	15%	H2-Places ads/promotions on Social Media			39		
	Show Customer Testimonials (2);			5	19%	Place ads in the RS (1);			13	33%	
	Reveal Awards or distinctions (3);			7	27%	Put in the SR promotions (2);			4	10%	
	Has Certifications [Quality, Environment, others](4);			6	23%	Put in the SR general information about the products			12	31%	
	Biological certification (5)			4	15%	Launches challenges in RS (4)			1	3%	
	Total Stage 1			175		Promotes discussion forums (5)			1	3%	
						No information (6)			8	21%	
						H3-FAQs			24		
						yes			1	4%	
						no			23	96%	
						H4-Structured Online Surveys			24		
						Yes			0	0%	
						No			24	100%	
					Total Stage 7			128			

Source: Own production based on website's data collection

Stage 1: B - Informational Area

Companies are very proud of their achievements, displaying events communication (15%), customer testimonials (19%), awards (27%), certifications [Quality, Food Safety, Environment, Health and Safety at Work] (23%) and biological Certification (15%).

Stage 2: C - Promotional Area

The promotional area involves personal information policies (26%), revealing a concern for the issue, or allowing the user to register (22%) and remove the website link (11%). But a large number of cases showed an absence of promotional policy (41%). The importance given to the website as a showcase for products and services is clear in this case study, particularly as to: Wine Portfolio (14%), Olive Oil Portfolio (13%), Product price list (13%), Information on wine varieties (11%). The website promotional area is only used as a product catalogue.

Stage 3: D - Relational Area

It would be crucial to invest in the promotion of regional products, food heritage and stakeholders' relationships. By providing online transaction services, companies can present promotions and discounts that cater to target consumers. Furthermore, organisations can analyse the habits of their consumers when making digital transactions to create appropriate promotions.

This section emphasises customer support and community engagement, with only 29% focusing on the conditions necessary for the proper use of products. There is a noticeable gap in information related to regional amenities, accessibility for customers with special needs, discussion forums, and partnerships with accommodations and restaurants. To mitigate this difficulty, it is recommended to foster stronger relations with municipalities by incorporating links to their websites.

Stage 4: E - Transactional Area

Online transactions have become more common in the digital age. The development of commercial websites highlights a weakness in this area, like online booking (only 8 companies have this facility) as well as online payment and voucher printing. In tourism it is important to provide a practical payment system, because online transactions provide convenience for both consumers and business owners. By presenting online transaction services, consumers will not be limited to those in the proximity of a physical store. For companies, instant verification

processes will certainly reduce the need for human resources. For customers, a trusted online transaction system will give a sense of security when making payments.

Stage 5: F - Interactivity Area

The interactivity area focuses on a close connection with several stakeholders' or local communities, customers and the possibility of providing information in real time. In the wine tourism website sample, 33% do not mention local resources, while 15% promote traditional food and 12% enhance cultural heritage. Sharing ideas with customers is undervalued, with a percentage of only 13%. In terms of real time interactivity, 40% allow to make online reservations and 20% agree with real time communication with customers. This important task to interact with customers on emerging channels must be improved through, for example, self-service resources, messaging apps, social engagement, live chats, chatbots, SMS.

Stage 6: G - Multimedia and Design Area

There is little maturity regarding the Multimedia and Design Area, in audio, video and augmented reality fields of information. The exponential increase in access to smart devices opens the door to a much more practical, secure shopping experience for customers and differentiated tourism experience.

Stage 7: H - Social Media Area

Connectivity is among the most significant benefits of social media. Social media for business is no longer optional, being an essential way to reach a large range of customers, gain valuable insights, and grow companies' brand. Therefore, "in the online environment, the positive network externalities, generated by ICTs make these platforms more attractive as the number of users present on them, increases" (Kaplan & Haenlein, 2010, apud Jurado et al. 2021, p.83), linking countless users at any time, everywhere. Also, information could be spread globally through social media and its connectedness, making it simple for customers to interact with organisations and other customers. As reported here, there is a presence of 51% of social networks, with emphasis on Facebook. Of these, 33% use social media to place advertisements and 31% to spread information about products. As for FAQs and online surveys, these attributes are not valued. Social media, when used intelligently, can contribute to companies' success, since it is the best form of direct contact with the target audience. So, in the wine tourism sector it is crucial to have direct contact with target customers, in order to promote wine and olive oil experiences, as well as benefit businesses through the engagement of influencers. The results

provide strategic guidelines for private and public decision makers to follow if they wish, in order to exploit the full potential of ICT.

5. Conclusions

This paper conveys the Eno-olivotourism websites evaluation in the Douro region, under the supply-side lens, aiming to provide one of the first responses of the scientific literature regarding the wine tourism synergies in terms of olivotourism experiences. Olivotourism, as well as Enotourism, have huge potential to involve communities, develop territories, and build co-creative experiences.

Murgado-Armenteros, Parrilla-González and Medina-Viruel (2021) suggested a wide variety of experiences in rural areas, such as: oil mill visits, olive oil spa, olive oil tasting, purchase olive oil, enjoy olive routes, discover ancient olive trees, gastronomy, oil museums, speciality shops, popular festivals, fairs, and landscapes. These experiences range from the most traditional ones to the more creative and immersive ones. However, to be successful, an online communication and promotion strategy will be necessary.

The assessments of the wine tourism websites' attributes displayed absence of content attractiveness and interactivity with stakeholders, claiming for more investment in several domains, considering a multi-product point of view: identity, content, services, interactivity, usability, functionality, navigation, reliability, innovativeness and efficiency.

This reality is in line with the conclusions of Carlisle et al. (2023), in the study carried out in five tourism sectors (accommodation establishments, tour operators and travel agents, food and beverage, visitor attractions and destination management organisations) in eight European countries (UK, Italy, Ireland, Spain, Hungary, Germany, the Netherlands and Bulgaria). Their findings showed the “most important future digital skills, including online marketing and communication skills, social media skills, MS Office skills, operating systems use skills and skills to monitor online reviews. The largest gaps between the current and the future skill levels were identified for artificial intelligence and robotics skills and augmented reality and virtual reality skills, but these skills, together with computer programming skills, were considered also as the least important digital skills” (Carlisle, et al., 2023, p.240).

The Eno-Olivotourism Website Model exhibited a powerful Stage 1B-Informational Area with 39% references, followed by the Stage 2 C-Promotional Area with 27%, a medium website

strength in Stage 7 H-social media Area with 16%, and a fragile quality related with Stage 5 F- Interactivity Area (7%) and also both Stage 3 D-Relational Area and Stage 4 E- Transactional Area accounting 5%. The weakest Stage is G-Multimedia and Design Area with only 1%. Numerous companies answered “no available information” in several dimensions: Advertising Campaigns (34%), Promotional Policies (41%), Using Conditions (Products, Services & Experiences) (71%), Accessibility information (citizens special needs) (100%), Regional amenities & other customer information (45%), Online booking and purchasing tracking (100%), Interactivity in real time (40%), Multimedia and Design Area (Audio Information, 100%; Video Information, 92%; Augmented Reality, 96%) and they do not use Structured Online Surveys (100%) to get customers information.

Our results are in line with the website research of Teixeira, Eusébio and Teixeira (2021, p. 253) (where a set of 40 papers was obtained from relevant scientific databases), considering that “Low levels of diversity of Web accessibility were found in the different tourism activities analysed. The majority of studies published in this field are relatively recent and both manual and automated methods were employed. Web accessibility failures were mainly related to lack of connectivity with assistive technologies, complex layout, and navigation difficulties”.

The survey’s results also confirm Bezerra and Correia’s (2018, p.64) research for other Portuguese regions, as they suggest “to modernise and improve the offer of tourist accommodation, focusing on the design and projects remodelling that incorporate clearly differentiated aspects in terms of contemporary design/architecture; with an emphasis on new hotel concepts, linked to the territory's strategic assets (wine, olive oil, cork); and be adapted to market preferences (families, seniors, multicultural travellers)”. In this regard, some municipalities bet on mills recovery, transforming them into museums, experiences promotion spaces (for education and events organisation), and reinforcing the gastronomy connected to olive oil.

In fact, the success of websites depends on their accessibility, Search Engine Optimisation (SEO), performance and usability. Identifying the impact of website quality on users’ behavioral intention is therefore crucial to tell managers about how users (stakeholders) experience the level of website quality offered by companies.

Regarding management implications, we recommend that eno-olivotourism companies pay more attention to the website and offer composite experiences (wine and olive oil), in order to create additional value for their visitors by empowering interactivity relationships with them.

Some authors (Ballantyne & Varey, 2006; Payne, Storbacka & Frow, 2008), emphasised co-creation strategies, while others (Mozas, Bernal-Jurado, Fernandez & Medina, 2016; Rogers, 2010, apud Bernal-Jurado, 2021, p.80) suggest a series of supplementary investments in, for instance, training, reengineering and designing business processes.

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