Digital Winescape and Online Wine Tourism: Comparative Insights from Crete and Santorini

Maria Alebaki 1,*, Maria Psimouli 2, Stella Kladou 3 and Foivos Anastasiadis 4

Abstract: In the pursuit of sustainability and competitiveness, digital aspects of the tourism experience become increasingly more significant and wine tourism is no exception to this. Still, studies building on established concepts and sustainable practices in the corporate environment often prioritize physical attributes. One such example refers to winescape frameworks, which are yet to explicitly incorporate the digital experience, despite the growing importance of the digital servicescape. This study contributes to this area by commenting on available data on winery websites and adopting the winescape concept to analyze social media activity during the first year of the COVID-19 pandemic. The population of the study includes 53 wineries, located in two well-known Greek wine tourism destinations, namely Crete and Santorini. The results identify the most common winescape components that wineries emphasize, revealing similarities and differences across the two destinations. Implications highlight the winescape dimensions that (should) matter the most when considering digital experiences, and provide insights for wine tourism scholars and businesses alike towards a more sustainable wine supply chain.

Keywords: wine tourism; wineries; digital marketing; COVID-19; Facebook; communication strategies; wine supply chain; Greece

1. Introduction

The outbreak of COVID-19 had an unprecedented impact on every aspect of human mobility across the globe [1]. Lockdown policies, travel restrictions, social distancing and self-isolation created shocks on both the supply and demand of almost all goods and services [2], including the wine sector, as well as the tourism industry [3]. Likewise, wine and alcohol consumption are affected during recession and boom [4], given the elasticity of demand for these goods [5]. Empirical data [6] reveal the uneven effects of the pandemic on Old and New World wineries’ turnover, wine tourism revenues (Specifically, over 83% of the surveyed wineries have seen their turnover negatively impacted, with 53% of them loosing 50% or more of their income in 2020 compared to 2019 [6]) and investments, and the challenge posed on the survival of, particularly, small–medium wineries. Taking their dependency on the physical environment and physical presence, guided tours, wine tastings and special events were the most affected experiences [7].

In order to cope with COVID-19 challenges and remain in contact with their consumers, several wineries relied on digital tools [8]. Amongst the latter, social media seems to play an increasingly vital role in building wine customer loyalty and long-term relationships [9] that can boost sustainable tourism rural development. A recent report from the Great Wine Capitals network highlights “the importance of the digital”, ascertaining that “virtual...
campaigns have been promoting...regions and experiences while maintaining their presence on social
networks to engage with their actual followers and new ones” [10]. To a certain extent, the disruption
has identified a shift toward more innovative and sustainable practices, while several (wine)
tourism operators have adopted alternative operating models [11].

Since 2020, scholars have been examining key strategies in hospitality businesses,
including wineries, in their attempt to cope with the COVID-19 crisis [3,9,12], and develop
more sustainable practices in the aftermath of the pandemic. Garibaldi and Pozzi [13],
for instance, addressed the opportunities offered by technology in the field of gastronomy
tourism. Nevertheless, few studies have focused on the digital environment as a platform
allowing the wine tourism industry to respond to the pandemic. Notable exceptions explore
the trend of online wine tastings during lockdowns [14] and the impact of virtual wine
tours on consumers’ purchase decisions [15]. Quite recently, Szlonoki et al. (2022) explored
whether the aforementioned interventions could lead to sustainable structural change [16].
To the best of our knowledge, there is still insufficient empirical evidence to facilitate the
benchmarking of online wine tourism strategies in the post-pandemic era.

Contributing to this area, this paper considers the presence of wineries on social
media and their website content. In particular, this study aims to address the following
research questions:

**RQ1:** Which components of the winescape do wineries’ post-COVID Facebook communication
strategies emphasize?

Using the methodological approach suggested by Alebaki et al. [17], the study high-
lights the winescape components that wineries post on social media platforms during
(and in response to) the pandemic crisis. Furthermore, by analyzing data from wineries
operating in two popular wine tourism destinations in the Mediterranean, the study seeks
to provide a framework for comparisons between wine tourism destinations.

**RQ2:** Do extant typologies stand across destinations and different wine tourism orientations and,
thus, help classify the information that wineries provide on their websites?

Drawing from the typology proposed by Marzo Navvaro and Pedraja Iglesias [18],
Cretan and Santorini wineries are classified into distinct categories, according to the specific
orientation of their websites. For a more holistic understanding of their digital strategies,
the degree of their engagement on social media is also investigated.

2. Theoretical Foundation
2.1. The Concept of Winescape in Wine Tourism Literature

The most common definition of Wine Tourism was given by Hall et al. [19], describing this
activity from a consumer’s perspective (i.e., “visitation to vineyards, wineries, wine festivals and
wine shows for which grape wine tasting and/or experiencing the attributes of a grape wine region are
the prime motivating factors for visitors”, p. 3). According to Quintal et al. [20], the winescape
was firstly introduced by Myerscough-Walker [21], who addressed the relationship of the
concept with “how guests are associated with guesthouses, hotels, restaurants, and clubs”
(p. 3). In one of the pioneer publications implicitly on the subject, Hall et al. [19] stated
that the attributes of the grape wine region have been captured by the term ‘winescape’ or
‘wine tourism terroir’, coined by Peters [22], and Hall and Mitchell [23], respectively. In
fact, the notion has been explored in various regions, i.e., America [22], New Zealand [24]
and France [25]. Similarly, other authors refer to the ‘cultural landscape of viticulture’,
which is regarded as “…the scenery of civilization, the impress of which extends beyond
vine rows and terraces…” [26] p. 113), as well as “…an expression of transformations and
interactions in the economic, social, political and ideological structures of particular people
at a specific place” [27] (pp. 2–3). More recently, a number of scholars [28–30] have used
the terms ‘regional destination imagery’ and ‘winescape’ alternatively, in order to describe
the context in which the complete wine tourism experience takes place.
Despite the importance of wine tourism for sustainable tourism and rural development, and the growing number of relevant publications, descriptors and definitions of the winescape remain “few and far between” [28] (p. 160). Table 1, below, reflects the scarcity of relevant theoretical studies. All approaches summarized in Table 1 seem to imply the common understanding that the winescape is part of the experiencescape, and, as such, they are “places in which the local and the global are entwined and where power relations are played out, political interests are materialized, cultural identities contested and dreams redefined” ([31], p. 18; [32,33]). In short, and despite the multiplicity of perspectives, the theoretical attempts made so far to conceptualize the winescape prioritize the wine region rather than the wine tourism business, as Quintal et al. [20] also noticed. This confirms Bruwer and Joy’s work [34], who argued that the macro/regional approach has dominated the extant literature, as well as Terziyska and Damianova [35], who stressed the vagueness of the concept per se.

Table 1. A review of definitions for the winescape.

<table>
<thead>
<tr>
<th>Author (s)</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peters [22] (p. 4)</td>
<td>“the attributes of a grape wine region”</td>
</tr>
<tr>
<td>Hall et al. [29] (p. 4)</td>
<td>“a set of aesthetic and regional attributes that does appear to be attractive to visitors in its own right”</td>
</tr>
<tr>
<td>Patriquin [36] (p. 1), cited in Bruwer &amp; Gross [28] (p. 499)</td>
<td>“the unique combination of the physical, cultural and natural environment that gives each region its distinctive appeal”</td>
</tr>
<tr>
<td>Virtuani &amp; Zucchela [37] (p. 5)</td>
<td>“a spatial realm that integrates winemaking and wine tourism within a vinicultural setting”</td>
</tr>
<tr>
<td>Alebaki &amp; Iakovidou [38] (p. 123)</td>
<td>“… the whole region and its attributes”</td>
</tr>
<tr>
<td>Bruwer &amp; Lesschaeve [39] (pp. 614–615)</td>
<td>“the wine region as a tourist destination within a context-specific service environment”</td>
</tr>
<tr>
<td>Terziyska &amp; Damanova [35]</td>
<td>“the space where the wine tourism experience occurs”</td>
</tr>
</tbody>
</table>

Source: Authors’ compilation.

As Table 1 reveals, the winescape is a concept that incorporates physical, cultural, natural or aesthetic attributes. These attributes are context specific, inextricably interwoven with the wine tourism experience and can be either regional or business related, and might, therefore, link to both tourism/rural sustainability and sustainable business practices. Their unique combination forms unique selling propositions based on the attractiveness of each distinct destination. Next to the definitions, later research sought to assess the specific components that create the winescape. Stemming from Bitner’s [40] theory on the servicescape, several studies have been performed to investigate what exact attributes formulate the construct. Table 2 summarizes the key structural features identified.

The review presented in Table 2 suggests that the winescape reflects an amalgam of both tangible and intangible components, which represent core wine product aspects; features of the manmade environment; ambient factors; and destination details. In a broader view, Johnson and Bruwer [30] embedded the winescape into the wine branding theory. As Bruwer and Joy [34] (p. 369) stress, “the winescape translates into the destination region’s identity and eventually into its brand image…” . From a systems perspective, Santos et al. [45] associated the winescape with e-story telling, considering them both as dimensions of the wine tourism experience, next to sensory factors, involvement and emotions.
Table 2. Key components that constitute the winescape.

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Components</th>
</tr>
</thead>
</table>
| de Blij [26] (p. 113) | “beyond vine rows and terraces, it extends to... the homes and buildings of the winegrowers, the artifacts of industry, even the lifestyles of those who create the wines”.
| Peters [22] (p. 8) | “(1) the grapes and their needs, (2) the natural environments that best meet those needs and (3) the viticulturists and winemakers who determine everything from the varieties of grapes, spacing of the vines, and trellising systems to the final product that enters the bottle”; “all of these elements come together... only within the context of cultural practices and economic viability”.
| Telfer (2001) [41] | vineyards; wine production and wineries
| Douglas, Douglas & Derett [42] (p. 313) | “physical, social and cultural dimensions of the winescape”
| Johnson & Bruwer [30] (p. 277) | “...vineyards; wineries and other physical structures; wines; natural landscape and setting; people; and heritage, town(s) and buildings and their architecture and artefacts within, and more”.
| Thomas, Quintal & Phau [43] | Setting; atmospherics; wine quality; wine value; complementary product; signage; and service staff
| Bruwer & Gross [28]; Bruwer & Joy [34] Bruwer, Gross & Lee [29]; Bruwer, Pratt & Hirche [44] | Destination features (natural environment, climate and weather; wineries and vineyards, heritage-related elements and cultural resources; area’s reputation); products; signage and layout (spatial functionality, proximity); ambient factors (atmosphere, tranquillity); fun (tourism infrastructure); people (service staff and local residents)
| Terziyska & Damianova [35] | Elements that constitute winescape from the perspective of wine tour participants: tour guide; core wine product; tour planning and logistics; complementary activities; food and dining; nature and scenery

Source: Authors’ compilation.

2.2. The Digital Winescape in the Post-Pandemic Era

Despite the centrality of the notion in wine tourism research [46], the relevant literature is still fragmented, since both the definition and the particular components that constitute the winescape remain controversial [47]. Moreover, as Cambourne et al. [48] (p. 318) pointed out, the winescape is “...a particular set of social, environmental and economic relationships that adapt and change over time according to both internal and external factors”. Therefore, any changes to the aforementioned aspects of the winescape may substantially affect the wine tourism potential of a destination [48] (p. 312), as well as the sustainability of wine tourism development.

The COVID-19 outbreak constitutes a significant change, which influences both internal and external factors relevant to all destinations in general, but also wine tourism in particular [7,49]. The staged or offered experience has now largely moved to the digital environment. Therefore, the winescape and the efficiency of spaces need to be assessed in terms of the staging experience [31], both physically and digitally. Adapting to the ‘new normal’, which COVID-19 has brought about, suggests that the digital strategies and tactics should not serve purely promotional purposes if the wineries wish to survive the pandemic, and thrive in a future where digital experiences might be core. The question thereby arising is how the winescape literature could feed into current contemporary challenges, and help identify what winescape components are successfully reflected on the digital efforts of the wineries and thereby, facilitate wine tourism destinations effectively and sustainably rebooting from the pandemic crisis.

Although small and medium enterprises have low budgets and limited expertise, some researchers consider social media strategies as the most appropriate for such businesses [50], provided that certain managerial characteristics (e.g., young age and college education) are there to shape a favorable environment towards innovation [51,52]. Especially for wineries, where (1) reputation among potential customers and (2) information sharing...
play a key role for purchasing decisions as part of the consumer experience [53], social media can have major implications [54]. Deriving from the fields of communication science and sociology [55], social media has shifted consumers’ role from passive receivers to active shapers of the brand message [56], while the global wine industry has found itself in the middle of global online conversations [57]. Despite the characteristics of the wine industry that call for development on social media platforms (e.g., the importance of word-of-mouth [58] and information sharing [59]), wineries around the world demonstrate various levels of engagement with social media. In fact, the wine industry, in general, is characterized by a low pace of adoption of such marketing tactics, mainly due to lack of know-how: wineries engage on social media but cannot necessarily connect such efforts to financial sustainability/brand return nor view social media as part of integrated marketing strategies [57].

Constantinides [60] underlined that social media marketing should not be implemented ad hoc, but as part of a holistic strategic effort. The efficiency and effectiveness of marketing campaigns through social media [61] bring along new challenges, increasing the level of complexity and requiring marketing capabilities [62]. Simeon and Sayeed [63] (p. 25) define online wine tourism as “the activity of visiting web sites to find out information about wine related products, services, culinary or leisure activities of wine regions or wineries”. Within the COVID-19 pandemic context, information and communication technologies have been assigned a prevailing role in everyday life [64]. Online wine tourism thereby links to the flexibility [65] of SMEs, which also boosts the financial sustainability of SMEs in times of uncertainty [66]. The website serves informational or transactional objectives and prioritizes interactive communication or integration [18,67–69]. In order to successfully develop wine tourism with the use of online tools, four types of orientation are equally significant (for details, see Table 3 and [18]). To be specific, available websites should provide information about the winery and its wines, include contact information, the possibility for interactive communication, as well as the option to book or purchase available products and experiences. Considering the importance of digital responses to mark success to the pandemic challenges, it is necessary to identify the different degrees of orientation towards wine tourism in winery websites.

<table>
<thead>
<tr>
<th>Kind of Orientation</th>
<th>Description of the Winery’s Website</th>
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<tbody>
<tr>
<td>Informational</td>
<td>Containing information only on the following: winery; wines, awards and recognitions; distribution channels; business location; and contact details</td>
</tr>
<tr>
<td>Interactive communication</td>
<td>Informational, but further providing interactive communicational tools (i.e., the possibility for a direct dialogue with the consumer, information about retailers/other specialized websites); yet not allowing for online sales</td>
</tr>
<tr>
<td>Transactional</td>
<td>Informational and interactive, including the option of online transactions</td>
</tr>
<tr>
<td>Integration (internal or external)</td>
<td>Internal: “a company expands its own offer to meet a greater variety of customer needs”, i.e., offering peripheral products beyond digital wine sales External: establishing links with companies to improve business opportunities and customer service (for instance, offering accommodation or catering in hotels or restaurants)</td>
</tr>
</tbody>
</table>

Source: Adapted from Marzo-Navvaro and Pedraja Iglesias (p. 1755) [18].

The above discussion illustrates that the winescape literature remains a growing field, which embraces a variety of constructs, depending on the research focus and specific case study investigated. Moreover, studies on winery digital strategies seek to examine
and interpret winery tactics. Still, there appears to be no consensus on the winescape components that wineries (should) prioritize, in terms of either the conventional or the digital winescape. Studies on digital practices may, for instance, further develop new typologies, classifying wineries based on their website orientation (e.g., Marzo Navvaro and Pedraja Iglesias [18]), which may not necessarily be valid in other locations.

This paper attempts to address two main gaps, both relevant to the importance of digital marketing in the aftermath of the pandemic. Firstly, the study identifies a need to bridge the gap between conventional and digital business theory. Thus, this work builds on extant winescape frameworks to (1) identify those winescape components that are important for social media marketing purposes, and (2) classify wineries based on the strategic orientation of their websites. Secondly, the study acknowledges the differences that may occur in practice, because of how destination and place characteristics influence winery strategies. In order to allow for comparisons between wine regions, this research focuses on two popular wine tourism destinations in the Mediterranean.

2.3. Data and Research Design

The present research seeks to (1) offer a benchmark reflecting the components of the online winescape environment and (2) examine the adequacy of extant typologies across destinations and different wine tourism orientations. In order to respond to the first challenge, analysis hereby views the winescape as the spatial environment, which stages the wine tourism experience, integrates winemaking and wine tourism, and has a differentiated ‘design’ in different regions due to the diversified role of people, their wineries and the designed natural environment (adjusted from Patriquin [36], Virtuani and Zucchela [37] and Terziyska and Damanova [35]). The literature reveals that the key components that constitute the winescape build upon earlier classifications (namely those of Thomas et al. [43], Bruwer and Gross [28], Bruwer and Joy [34], Bruwer et al. [29,44] and Terziyska and Damianova [35], presented earlier in Table 1). However, given that the study focus on the winery rather than the regional setting, the a priori identified themes reflect setting, atmospherics, wine product, wine quality, complementary products, complementary activities, signage, service staff, ambient factors, fun and (virtual) tour guide [28,29,34,43,44]. Similarly, extant typologies, which help address the second objective, investigate integrated marketing strategies as reflected on the orientation of winery websites (Marzo-Navvaro and Pedraja Iglesias [18]), yet provide insights from the wine destination rather than the winery perspective. As a result, the exploratory character of both objectives suggest qualitative methodologies are more adequate.

This study seeks to contribute to the discussion on sustainable rural and tourism development; therefore, we purposefully chose to focus on wine regions where the wine (tourism) industry is central in the economic and socio-cultural life of locals. Greek wineries and their digital marketing practices during the pandemic crisis provide the setting for this study. In an attempt to offer a framework for comparisons amongst wine regions, the study explores two popular Greek destinations, Crete and Santorini, and embraces those wineries, which, in ‘normal’ (i.e., pre-/post-pandemic) times, are open to visitors. At the time of the data collection, the population includes 18 such wineries in Santorini and 33 across the island of Crete (see Figure 1).
In 2006, Cretan wineries created the ‘Wines of Crete’ brand, in order to pursue a dual objective: the development of wine tourism and support for local wine production [70]. Although such a coordinated effort is still non-existent in Santorini, similarities among the two islands are evident: both regions have significant pulling power as destinations, as revealed by statistics focusing on international arrivals [71,72]. Moreover, local wineries develop corporate websites, use social media and trust digital tools for marketing purposes [73].

Analysis includes winery websites and Facebook pages, as the latter emerge as a popular social media platform for Greek wineries [73]. Preliminary assessment points out that the majority of Cretan wineries have a website (26 out of 33) and even more (30 out of 33) have a corporate Facebook page; these wineries constitute the population of this study in Crete (Figure 1). (One of these wineries operates facilities across Greece and its digital presence refers to all its premises in Greece. As a result, including this winery in this study means analyzing its website and corporate Facebook page in relation to posts and social media efforts relevant both to the case of Crete and Santorini. Thus, this winery is included in both the Cretan and Santorini sample. In fact, the total number of wine producers in Santorini reaches 21: apart from the 18 mentioned above, there are two companies, which, while being based on the island, use other local wineries’ facilities to produce and bottle their wines. One more winery is about to be established within the initial infrastructure of a larger winery already located in Baxes, Oia. However, it will not enter the market before the spring of 2022 [74].) Of the 18 wineries operating in Santorini, 5 are excluded from the social media analysis because 1 did not make any post on Facebook after 1 February 2019 and the rest are either not open to the public or do not have a corporate Facebook page. The vast majority of the Santorini wineries (16 out of 18) have developed a corporate website and are, therefore, examined in relation to the first objective of this study (Figure 1).

Aligning with research ethics, wineries were anonymized and coded in a way that reflects their location (i.e., whether the focal winery operates in Crete or Santorini). Website analysis builds on the winery presence as this was available online in July 2021. Data incorporate Facebook activity between 1 March 2020 and 31 March 2021, thereby reflecting the social media marketing of the wineries during the first year of the pandemic (i.e., the first lockdown in Greece, which implemented on 13 March 2020).
In response to the first objective, Marzo-Navarro and Pedraja Iglesias’s [18] methodology was deemed to be appropriate; the content analysis of each winery website allowed for insights into the orientation of the winery. Specifically, in July 2021, we examined whether the website serves informational or transactional objectives and prioritizes interactive communication or integration [18,67–69]. In response to the second research objective, assessment of Facebook engagement was built on the methodology of Alebaki et al. [17]. Thematic analysis of the posts includes quantitative information (e.g., how many times does a post relate to each specific winescape element, if applicable), thus, providing an additional basis for comparison, which reveals the main focus of a Cretan winery compared to the focus of a winery in Santorini. Descriptive analysis for both the content and the thematic analysis addressing the first and second objective, respectively, includes frequencies and, when adequate, mean values. Descriptive statistics further enrich and support the study findings and feed into implications for scholars and practitioners.

3. Findings and Discussions

3.1. Information Provided on Wineries’ Websites: Typologies across Destinations

On the basis of Marzo-Navarro and Pedraja Iglesias’ [18] classification, we summarized the types of information provided by the websites of Crete and Santorini wineries (see Table A1 in Appendix A) as informational, interactive communication, transactional, and integration related. Taking Alebaki et al.’s [75] indicators and metrics for wine tourism benchmarking, the transaction category also includes the option of “booking a winery visit”.

Drawing from the respective findings, the wineries of Crete and Santorini seem to have both similarities and differences. Starting with the informational category, we notice that, though general information is rather widely provided, more detailed information is somewhat undermined in wineries from both destinations. More specifically, general informational elements, such as the range of wine products offered, the landscape and the location of the winery, score very highly (above 80.0%), in wineries from both destinations, more detailed information, such as product awards and wineries’ facilities, demonstrate moderate scores (50–70.0%), while even more detailed ones (e.g., referring to instructions to access the winery and entrance fees) score much lower (15–40.0%). Excluding such information seems strange considering that wineries wish to address external audiences (see [70]) who are likely unfamiliar with the area and relevant expected costs.

Further, it seems that interrelated types of information are not very well balanced in terms of the frequency of the respective posts. For example, in several cases, history and people sections overlap, due to the family-business nature of most wineries, reflecting a rather different weighting within their communication strategies. Findings reveal an overall tendency of wineries to offer rather general information, emphasizing their product range and history. However, there seems to be a lack of focus on more detailed pieces of information that could shape the basis for sustainable competitive advantages beyond wine product characteristics. Basic wine tourism information is missing, thereby suggesting that wine tourism has still not fully utilized the potential of digital capabilities, in both destinations.

Interactive types of communication for wineries in both destinations seem to be very similar, as the respective scores are very high (76.9–92.3%); however, a potential ‘missing opportunity’ is revealed, as the percentages of wineries offering their audience the opportunity to register to a wine club are very low (3.8% in Crete and 0.0% in Santorini). Initiatives, such as wine clubs, could offer many benefits to the wineries. Indicatively, they could enhance communication between wineries and their audiences, allowing for a deeper knowledge of the wine consumers’ profiles and shape a loyalty-oriented relationship for the long term. On the other hand, such activities would require a more advanced level of marketing knowledge that is not necessarily needed for the creation of a wine club but mostly for its effective management. Another clear difference between Cretan and Santorini wineries is their approach to transactional communication. Wineries in Santorini
demonstrate a moderate to high orientation towards online sales and booking reservation systems, while the percentages for Cretan wineries are low to moderate.

Lastly, integration types of communication seem to be rather limited for wineries on both islands, except for the information regarding the wine destination that scores moderately for Crete (46.1%) and high for Santorini (81.3%). As both islands are well-known tourism destinations around the globe, this parameter could be of crucial importance for the sustainable development of wine tourism, bridging the gap between micro and macro levels of tourism activity. However, there seems to be a long way forward towards capitalizing its full potential, as the links to other points of interest, companies and sources of information still score very low in both destinations.

The last element analyzed on wineries’ websites refers to the language used to communicate the information. Table 4 reveals that almost one out of three wineries in both destinations have a website that is available only in Greek. The range of languages supported by the website could be considered an indicator of the internationalization level of each winery, or at least its intention to engage with international audiences. Furthermore, apart from the extroversion aspect, language options reveal an intention to customize communication to the wineries’ audiences, as, although English is widely spoken and understood, communication is much more effective in one’s mother tongue. On the other hand, if wine tourism is a priority in the pursuit of financial sustainability for wineries, then it is problematic to realize that 28.6% of the wineries (i.e., 7/26 in Crete in and 5/16 in Santorini) only develop their website in Greek.

Table 4. Number of languages supported on wineries’ websites—a comparative view.

<table>
<thead>
<tr>
<th>Number of Languages</th>
<th>Crete</th>
<th>Santorini</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency (N = 26)</td>
<td></td>
<td>%</td>
</tr>
<tr>
<td>1 (English &amp; Greek)</td>
<td>15/26</td>
<td>57.7</td>
</tr>
<tr>
<td>2 (Greek only)</td>
<td>7/26</td>
<td>26.9</td>
</tr>
<tr>
<td>3 (English, Greek &amp; one more)</td>
<td>3/26</td>
<td>11.5</td>
</tr>
<tr>
<td>4 (English, Greek &amp; two more)</td>
<td>1/26</td>
<td>3.8</td>
</tr>
<tr>
<td>5 (English, Greek &amp; three more)</td>
<td>0/26</td>
<td>0.0</td>
</tr>
<tr>
<td>%</td>
<td></td>
<td>%</td>
</tr>
<tr>
<td>10/16</td>
<td>62.5</td>
<td></td>
</tr>
<tr>
<td>5/16</td>
<td>31.25</td>
<td></td>
</tr>
<tr>
<td>0/16</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>0/16</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>1/16</td>
<td>6.25</td>
<td></td>
</tr>
</tbody>
</table>

Source: Authors’ compilation.

3.2. Wineries’ Post-COVID Facebook Communication Strategies and the Digital Winescape

Prior to addressing the second research question, the overall presence of wineries on social media was assessed. As Table 5 exhibits, Facebook is the most popular social network platform (100.0%), with Instagram following suit (53.8% and 75.0% in Crete and Santorini, respectively). Interestingly, and with significant implications for their sustainability potential, unlike wineries elsewhere, Greek wineries do not intensively try to benefit from TripAdvisor or other social media platforms that may be less important for their (most commonly) Greek owners, but popular in their targeted wine tourism markets [76].

Cretan wineries have established their Facebook presence more recently (mean = 2.41 years) compared to those in Santorini (mean = 7.38 years). This probably results in a lower average number of followers (mean = 4316 against 7339 in the case of Santorini). Only one Cretan winery (#8) developed its Facebook page after the outbreak of the pandemic, while wineries in both destinations seemed to have a similar attitude towards posting between 1 March 2022 and 31 March 2022: the total number of posts per annum was slightly higher in Santorini wineries (mean = 76) than that in Cretan ones (mean = 61).

A comparative view of the average ratio of references to each dimension is presented in Table 6.
### Table 5. Types of social media used by wineries—a comparative view.

<table>
<thead>
<tr>
<th>Website Information</th>
<th>Crete (Frequency (N = 26), %)</th>
<th>Santorini (Frequency (N = 16), %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facebook</td>
<td>26/26 100.0</td>
<td>16/16 100.0</td>
</tr>
<tr>
<td>Instagram</td>
<td>14/26 53.8</td>
<td>12/16 75.0</td>
</tr>
<tr>
<td>Twitter</td>
<td>6/26 23.1</td>
<td>4/16 25.0</td>
</tr>
<tr>
<td>YouTube</td>
<td>5/26 19.2</td>
<td>2/16 12.5</td>
</tr>
<tr>
<td>TripAdvisor</td>
<td>5/26 19.2</td>
<td>3/16 18.8</td>
</tr>
</tbody>
</table>

Source: Authors’ compilation; 1 as indicated in Section 2.3 Data and Research Design, the population of 26 wineries (N = 26) refers to those wineries that have an active website. Yet, additional search online revealed that four more Cretan wineries have no active website but develop active corporate Facebook pages. Therefore, subsequent analysis on Facebook data includes input from 30 rather than 26 wineries (N = 30, e.g., see Table 6).

### Table 6. Winescape Environment—Average Ratio (Means) of Reference on Facebook per Winescape Dimension.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Crete (N = 30)</th>
<th>Santorini (N = 16)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wine Product</td>
<td>50.0%</td>
<td>52.0%</td>
</tr>
<tr>
<td>Setting</td>
<td>28.0%</td>
<td>31.0%</td>
</tr>
<tr>
<td>Complementary Activities</td>
<td>18.0%</td>
<td>16.0%</td>
</tr>
<tr>
<td>Wine Quality</td>
<td>13.0%</td>
<td>25.0%</td>
</tr>
<tr>
<td>People</td>
<td>12.0%</td>
<td>14.0%</td>
</tr>
<tr>
<td>Atmospherics</td>
<td>10.0%</td>
<td>16.0%</td>
</tr>
<tr>
<td>Complementary Product</td>
<td>10.0%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Signage</td>
<td>3.0%</td>
<td>6.0%</td>
</tr>
<tr>
<td>Fun</td>
<td>3.0%</td>
<td>0.4%</td>
</tr>
<tr>
<td>Virtual Tour Guide</td>
<td>2.0%</td>
<td>4.0%</td>
</tr>
</tbody>
</table>

Source: Empirical data, enriched from Alebaki et al. [15].

Aspects of the wine product are core in the digital winescape environment of both Cretan and Santorini wineries (50.0% and 52.0%, respectively). These are reflected in photos showing wine bottles, wine glasses, grapes or specific references to indigenous varieties. Settings (i.e., views) of the viticultural landscape follow (28.0% and 31.0%, respectively). One differentiation between the two regions concerns the dimension of “Wine Quality”, which is more dominant on Facebook pages of Santorini wineries (25.0% as opposed to 13.0% in the case of Cretan wineries). This finding reflects the life cycle differences between the two regions, as the wine industry and wine tourism are both at more mature phases in Santorini [77,78]. Thus, despite the significant steps the Cretan wine sector has taken during the last two decades, product awards as a digital marketing tool are still not salient in marketing strategies.

Most digital winescape components are usually communicated on a weekly basis. “Complementary Activities” (i.e., Facebook competitions and giveaway campaigns, special season wishes and gift proposals) represent the only exception (18.0% and 16.0% relevant posts per annum for Cretan and Santorini wineries, respectively). This result supports previous research, which highlights the effectiveness of such options in increasing consumer engagement and brand awareness [79,80].

It is important to point out that the human aspect of the winescape environment (i.e., winery owners, family members, staff, visitors or people from the wine region), ambient factors (i.e., posts reflecting atmosphere or tranquility), signage, fun and virtual tours are underrepresented, both in Cretan and Santorini digital winescapes. This aligns with the approach reflected on websites, which prioritizes the history of the winery to its people, although actually, they are both inextricably linked due to the family nature of most wine businesses.
The attempt to transfer the winescape components to an online environment is very challenging, since it would be rather simplistic to claim that photos can transfer the feeling of actually being in the vineyard. Yet, communicating viticultural landscapes would be a step closer to building holistic sensory digital marketing. Augmented reality/virtual reality could further complement the (memorable) experience, especially when real-time travel is difficult to organize, as was the case during the pandemic. However, findings reveal the most common winescape elements incorporated in wineries’ communication with consumers, attempting to offer useful insights for both academics and practitioners in the post-pandemic world.

Future research could further explore all the means and online platforms available to digitalize winescape components, as well as the different approaches adopted by wineries across the globe in this direction.

4. Conclusions

Wine tourism has been acknowledged as a sustainable form of leisure travel, given its inextricable links with “nature, know-how and economic activity” [81]. Recognizing its potential in promoting destination heritage, preserving natural resources and generating income, along with social benefits (especially for less-privileged regions), UNWTO (2016) [82] declared wine tourism to be a crucial component of gastronomy tourism, which can play a multifaceted role in sustainable rural development. Thus, the Georgia Declaration on Wine Tourism [82] stresses the necessity of responding to “consumers’ evolving needs and expectations” [82] (p. 3), and calls for advanced research “to boost competitiveness of destinations through innovative product development within and beyond wine tourism activities” [82] (p. 3).

Moreover, the pandemic crisis brought tourism to a standstill, changing both the face of the wine industry and tourist demand particularities. In the post-COVID era, companies and destinations are expected to redefine themselves in order to adjust to the “new normal”. Amongst other strategies, exploring their digital presence provides wine tourism stakeholders with insights on how to remain competitive and address wine tourists appropriately.

Considering this background, the present study attempts to add to the current efforts on evaluating the online experience of wine tourism (i.e., [14,17,18,63,83]) by exploring the digital winescape concept through the analysis of online data (i.e., wineries websites and social media). The results confirm previous studies that demonstrate the popularity of social media usage among wineries in their effort to communicate with their customers [57,84]. Furthermore, the investigation identified the essential winescape components for social media/digital marketing, responding this way to RQ1. Two popular wine tourism destinations in Greece, Crete and Santorini, were used to exemplify this approach by providing both case-specific insights and managerial implications. Concerning the informational component, findings reveal an overall tendency of wineries to offer rather general information, emphasizing their product range and history. However, there could be more focus on detailed information, resulting in sustainable competitive advantages beyond the product characteristics of the wines produced. In terms of the interactive types of communication, both destinations have high performance, but still, this is not fully capitalized on. A suggestion here could be the adoption of a wine club, which offers a bundle of benefits, particularly for family-owned wineries, including inter alia, direct-to-consumer marketing and promotional innovations [9]. In terms of transactional communication, the wineries of Santorini show a better occurrence towards online sales and booking reservation systems compared to those of Crete. Nevertheless, there is room for improvement in both destinations, since online sales indicate an active response in the pandemic era. Last but not least, the integration types of communication show low performance, except for the information on the wine destination.

The current work adds value to the existing research by offering a better understanding of wine tourism via the digital winescape approach. Extant typologies stand across destinations and different wine tourism orientations, as illustrated above, and thereby help classify the information provided on wineries’ websites (RQ2). However, despite the
significant steps that both Cretan and Santorini wineries have taken in the last few decades, the absence of detailed digital wine tourism information suggests that winery operators in these destinations have not extensively utilized the available online tools. The many challenges from the reoccurring global crises (financial, pandemic, war) require a more effective response to enhance the Greek wine industry. Based on the holistic approach that perceives the wine supply chain (or industry) as a system [85], strengthening the digital winescape eventually improves the resilience of the wine industry.

Acknowledging the importance of digital information sharing creates opportunities to communicate sustainability initiatives and practices throughout the entire wine supply chain (i.e., production methods, recycling in packaging and so on), enhancing sustainable consumption. Especially for the millennial generation, the power of social media to increase sustainability awareness is significant [86], with digital winescape holding a vital role in that direction. Promoting digitally sustainable development activities could affect the choice of wine businesses and regions—towards the more sustainable. Another example is communicating sustainable initiatives, such as wineries offsetting programs, that could provide an incentive towards more sustainable choices of transportation, enhancing the same sustainable development goal. Thus, the results of this paper could offer a framework for benchmarking wineries and destinations in terms of their digital winescape and overall online presence.

Finally, a limitation of the study, which also serves as a recommendation for further research, concerns correlating the type of information posted with certain characteristics of the wineries. Future studies could, for instance, examine the significance of the winery’s size versus different types of information posted.


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**Data Availability Statement:** Not applicable.

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**Appendix A**

**Table A1.** Type of information provided in wineries’ websites—a comparative view.

<table>
<thead>
<tr>
<th></th>
<th>Crete</th>
<th>%</th>
<th>Santorini</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Informational</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Postal address</td>
<td>26/26</td>
<td>100.0</td>
<td>16/16</td>
<td>100.0</td>
</tr>
<tr>
<td>Description of the winery’s products</td>
<td>26/26</td>
<td>100.0</td>
<td>16/16</td>
<td>100.0</td>
</tr>
<tr>
<td>Phone number</td>
<td>25/26</td>
<td>96.2</td>
<td>14/16</td>
<td>87.5</td>
</tr>
<tr>
<td>E-mail</td>
<td>25/26</td>
<td>96.2</td>
<td>14/16</td>
<td>87.5</td>
</tr>
<tr>
<td>History of the winery</td>
<td>24/26</td>
<td>92.3</td>
<td>16/16</td>
<td>100.0</td>
</tr>
<tr>
<td>Regional map</td>
<td>22/26</td>
<td>84.6</td>
<td>16/16</td>
<td>100.0</td>
</tr>
<tr>
<td>Photos showing the landscape</td>
<td>22/26</td>
<td>84.6</td>
<td>16/16</td>
<td>100.0</td>
</tr>
<tr>
<td>Information about product awards/distinctions</td>
<td>18/26</td>
<td>69.2</td>
<td>9/16</td>
<td>56.3</td>
</tr>
<tr>
<td>People of the winery</td>
<td>15/26</td>
<td>57.7</td>
<td>10/16</td>
<td>62.6</td>
</tr>
<tr>
<td>Visiting hours</td>
<td>14/26</td>
<td>53.8</td>
<td>13/16</td>
<td>81.3</td>
</tr>
<tr>
<td>Photos showing the winery’s facilities</td>
<td>13/26</td>
<td>50.0</td>
<td>11/16</td>
<td>68.8</td>
</tr>
<tr>
<td>Website Information</td>
<td>Crete</td>
<td>Santorini</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>-------</td>
<td>-----------</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Informational</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Price range of wine tourism packages</td>
<td>12/26</td>
<td>13/16</td>
<td>46.1</td>
<td>81.3</td>
</tr>
<tr>
<td>Recommended duration of the visit</td>
<td>10/26</td>
<td>3/16</td>
<td>38.5</td>
<td>18.8</td>
</tr>
<tr>
<td>Photos showing wine tourism activities</td>
<td>10/26</td>
<td>5/16</td>
<td>38.5</td>
<td>31.25</td>
</tr>
<tr>
<td>Wine tourism packages/entrance fee</td>
<td>6/26</td>
<td>5/16</td>
<td>23.1</td>
<td>31.25</td>
</tr>
<tr>
<td>Newsletter</td>
<td>5/26</td>
<td>5/16</td>
<td>19.2</td>
<td>31.25</td>
</tr>
<tr>
<td>Instructions for access to the winery</td>
<td>4/26</td>
<td>4/16</td>
<td>15.4</td>
<td>25.0</td>
</tr>
<tr>
<td>Opportunity to provide customized wine tourism experiences</td>
<td>1/26</td>
<td>1/16</td>
<td>3.8</td>
<td>6.3</td>
</tr>
<tr>
<td><strong>Interactive communication</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Links to the company’s social media</td>
<td>24/26</td>
<td>13/16</td>
<td>92.3</td>
<td>81.3</td>
</tr>
<tr>
<td>Contact form</td>
<td>20/26</td>
<td>13/16</td>
<td>76.9</td>
<td>81.3</td>
</tr>
<tr>
<td>Opportunity to register in a wine club</td>
<td>1/26</td>
<td>0/16</td>
<td>3.8</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>Transactional</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Booking reservation system</td>
<td>11/26</td>
<td>11/16</td>
<td>42.3</td>
<td>68.8</td>
</tr>
<tr>
<td>Online sales</td>
<td>2/26</td>
<td>7/16</td>
<td>7.6</td>
<td>43.75</td>
</tr>
<tr>
<td><strong>Integration</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information about the wine destination</td>
<td>12/26</td>
<td>13/16</td>
<td>46.1</td>
<td>81.3</td>
</tr>
<tr>
<td>Links to other points of tourism interest</td>
<td>4/26</td>
<td>3/16</td>
<td>15.4</td>
<td>18.8</td>
</tr>
<tr>
<td>Links to other sources of information</td>
<td>3/26</td>
<td>2/16</td>
<td>11.5</td>
<td>12.5</td>
</tr>
<tr>
<td>Offering peripheral products beyond digital wine sales</td>
<td>1/26</td>
<td>2/16</td>
<td>3.8</td>
<td>12.6</td>
</tr>
<tr>
<td>Establishing links with companies</td>
<td>1/26</td>
<td>1/16</td>
<td>3.8</td>
<td>6.3</td>
</tr>
</tbody>
</table>

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