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Digitalization as a driver of transformation towards sustainable performance in wine tourism – the Italian case

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Abstract

Purpose – The main aim of this research was to investigate whether and how digitalization affects sustainability and performance in wine tourism.

Design/methodology/approach – Based on the data emerging from the 2019 National Report on Wine Tourism from the National Association of "Wine Cities" in Italy (the most extreme case in the world of wine), three macro-agglomerates were investigated: digitalization, sustainability and performance, adopting descriptive and inferential statistics.

Findings – Although rigorous correlation between adopted digitalization and performed sustainability on one side and performed sustainability and market performance on the other cannot be verified for the 92 wineries under investigation, there is visible evidence that the more digitalized wineries are, the more sustainable they become and the better their performance. Evidence was not found to support the idea that the more sustainable wineries are, the more they are digitalized and the better their performance. Research implications and limitations to theoretical and practical application have been discussed.

Originality/value – Wine tourism, which is naturally associated with rural tourism, is a form of tourism in which sustainability has strong relevance, particularly considering the future needs/desires of post-pandemic tourists. At the same time, digitalization, especially in pandemic and post-pandemic tourism, is credited with developing a huge impact in this business, although wine tourism is most probably conceivable as a meta-market, with a strong cultural essence. In this respect, a digitalization > sustainability > performance approach seems practicable and globally profitable.

Keywords Wine tourism, Italy, Digitalization, Sustainability, Business performance, COVID-19

Paper type Research paper

1. Introduction

Wine tourism has lately become an essential activity that complements and supplements the growth of the wine industry (Festa *et al.*, 2015). Festa *et al.* (2020) have further argued that although born as an ancillary service, wine tourism has evolved into an increasingly profitable business for the global wine offer. This evolution has demanded advanced and

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specified knowledge, competence and expertise for designing, organizing and implementing ever more attractive wine tourism solutions (Popp and McCole, 2016).

This situation is common to the Old, the New and the Third World of Wine (Banks and Overton, 2010), but it is naturally more developed in those countries where the wine sector is crucial for economic affairs by ensuring a stable production and supply chain for decent consumption (Festa *et al.*, 2019). Wine tourism is thus significantly important more specifically for Italy, which is one of the most attractive countries for national and international tourism and where wine tourism in general receives special attention, because of the very relevant role of the country in the wine sector at the international level (Tommasetti and Festa, 2014).

Unfortunately, the COVID-19 pandemic has forced all of the operators in the tourist industry to completely reconsider their overall and individual offerings, because this sector has quite probably been the one that has been most affected by the coronavirus-induced disaster (Gössling *et al.*, 2021), with all of the features of the retailing industry (Kolte *et al.*, 2021) and inevitably requiring a more sustainable approach (Madanaguli *et al.*, 2021), even at the aggregate level (Truant *et al.*, 2021). In the search for a reaction to this health, social and economic crisis, wine tourism can find in digitalization a key driver to guide its sustainable evolution towards survival and development (Sá *et al.*, 2021), leveraging the capability of digitalization, and more specifically, of related data valorization, in assisting product, process and business model innovation (Bresciani *et al.*, 2021; Rialti *et al.*, 2019).

Sustainability has become an essential and strategic issue for every kind of business, almost with an ambidextrous nature (Kolte *et al.*, 2022). Even the wine industry has been hugely affected, perhaps because it includes all of the economic sectors in its functioning – that is, grape production (primary sector), wine transformation (secondary sector) and wine sales, with related connected activities, such as wine tourism (tertiary sector) (Sellitto, 2006). However, with specific reference to wine tourism, although the logical and methodological connection between digitalization and sustainability seems a key topic of interest for research in the field (e.g. Cantino *et al.*, 2019; Rauhut-Kompaniets, 2022; Zamarreño Aramendia *et al.*, 2021), there seem to be very few studies that highlight the direct connection among digitalization, sustainability and performance (see, e.g. Sá *et al.*, 2021).

The remainder of this paper, specifically focusing on understanding if and how digitalization affects sustainability and performance in wine tourism, is organized as follows. After a theoretical background about sustainability in wine tourism as an "intrinsic" critical success factor with respect to other forms of tourism, an integrated model has been proposed, followed by an application to the Italian wine tourism sector, chosen as a sort of extreme case. The results are then discussed, and the implications and limitations have been presented.

2. Theoretical background

Wine tourism traditionally is an example of sustainable tourism, primarily because it can be considered a peculiar form of rural tourism, physiologically connected to nature, country, "green" and so on (Bresciani *et al.*, 2016; Frost *et al.*, 2020; Nave *et al.*, 2021a; Smyczek *et al.*, 2020). However, other profiles that are strictly related to the wine sector enrich the sustainable perspective of wine tourism (Duarte Alonso and Liu, 2012; Poitras and Getz, 2006; Vrontis *et al.*, 2016), including the overall concept of the "terroir" (Marlowe and Sojung, 2018), the social experience of the tasting with the producer (Bruwer *et al.*, 2013) and the awareness of a slow, laborious and pensive world (Foroudi *et al.*, 2019).

Naturally, all of these aspects have evolved over the years in association with ever more inventive solutions for increasing the overall attractiveness of the wine tourism offerings, and technology in general has contributed to innovate the global "packages", using the Internet, social networks and apps for, among other things, finding, commenting on and interacting with the various wine tourism experiences (Canovi and Pucciarelli, 2019; Dimitrovski *et al.*, 2019;

Duarte Alonso *et al.*, 2013; Festa *et al.*, 2015; Kirova, 2021; Martins *et al.*, 2017; Pelet *et al.*, 2019). Nonetheless, as wine in general and wine tourism more specifically are two examples of goods/services that in truth are above all "cultural" (Duarte Alonso *et al.*, 2021; Mitchell *et al.*, 2012; Williams and Kelly, 2001), they constitute perfect examples of digitizable platforms, and many wineries had already begun their evolution towards digitalization – in most cases with little investment, but in the direction that has been highlighted (Scorrano, 2011). Unfortunately, the COVID-19 pandemic has completely changed the situation in the tourism sector (Yeh, 2020). For example, in Italy, which is the most productive country in the world in the wine sector and with other relevant records that set it as most probably the most relevant country in the world concerning wine (D'Amato *et al.*, 2021; Smyczek *et al.*, 2020), the economic expansion of wine tourism was sharply arrested in the more critical COVID-19 period, because of the limitations imposed on movements due to the lockdowns.

Thus, a new, innovative and tremendous digitalization of wine tourism experiences seems essential to drive the sector towards survival and development (Levitskaia *et al.*, 2020); however, as mentioned, although several studies have analysed the contribution of technology to a more sustainable wine tourism experience (Duarte Alonso *et al.*, 2020; Sekhniashvili, 2020), a theoretical gap in the scientific literature on wine tourism seems to exist about the specific connection between digitalization and sustainability, especially in one assumes that digitalization is a potential influencer/moderator in the connection between sustainability and performance.

These aspects seem even more relevant with regard to the COVID-19 pandemic and its dramatic effects on the tourist industry in general and on the wine industry more specifically (Marco-Lajara *et al.*, 2022; Niklas *et al.*, 2022; Santos *et al.*, 2022). From one point of view there is major request for sustainability in general, with an environment of respect that also means safety for the wine tourists (Gastaldello *et al.*, 2022); from another point of view there is the necessity of accurately selecting the investments for profitability, most of all after the economic problems for the businesses derived from the lockdown (Duarte Alonso *et al.*, 2022). This study has been conceived exactly in this vein.

3. Research design

Starting from the considerations that emerged from the literature review, this investigation targeted wineries that are engaged in wine tourism with the following research questions:

RQ1. Does a positive correlation exist between the adoption of digitalization and performed sustainability?

RQ2. Does a positive correlation exist between performed sustainability and market performance?

RQ3. What is the possible interaction between digitalization and sustainability with a conjoint effect on business performance?

This research is characterized by a mixed nature, and it was developed from an exploratory perspective. RQ1 and RQ2 are associated with a more quantitative profile of the investigation to highlight the potential connections among digitalization, sustainability and performance. RQ3 is associated with a more qualitative profile of research, most of all when considering the applied methodology.

The sample under analysis represents all the wineries that have been investigated in the 2019 National Report on Wine Tourism provided by the National Association of the Italian "Wine Cities" (www.cittadelvino.com), the most authoritative entity in Italy on the analysis, governance and development of wine territories (i.e. it is a convenience sample, based on 92 wineries). The data refer to 2019 conditions, and the intention of the research is to highlight potential evidence for responding to the RQs in "normal" conditions, hypothesizing that incoming digital

transformations due to the COVID-19 pandemic will coherently affect the wineries that have been first movers (or followers) concerning the connection between digitalization and sustainability.

4. The data investigation

Several pieces of data that are useful for the current research have been retrieved from the 2019 National Report on Wine Tourism; the data in question have been disaggregated and re-aggregated to analytically construct a theoretical framework that could be in line with the Triple Bottom Line model, which includes people, planet and profit (Elkington, 1998). Thus, we built three macro-agglomerates of the data for every winery under investigation ($92 \times 3 = 276$ in total): the first is called "Digitalization" (constituted at the micro-level by the elements of the National Report that are ascribable to the technology used for wine tourism); the second is called "Sustainability" (constituted at the micro-level by the elements of the National Report that are ascribable at the meso-level to the three traditional sustainable sub-agglomerates: people, planet and profit); and the third is called "Performance" (constituted at the micro-level by the elements of the National Report that are ascribable to the tourism success of the winery).

To better analyse all of these pieces of information in light of the research questions, two separate subsections have been provided, one with reference to descriptive statistics and the other to inferential statistics. The elements of the National Report that can be associated with the macro-agglomerates have been detected from content analysis that was developed using standard software application tools, with further association on a qualitative basis.

4.1 The descriptive statistics

The data under investigation was retrieved from the 2019 National Report on Wine Tourism, and, as secondary data, they have not been engineered for this specific research (i.e. for analysing the potential connection first between digitalization and sustainability, and then, between sustainability and performance directly). It has first been necessary to adopt descriptive statistics to detect, extract, analyse, aggregate and represent the available data from the perspective of the scope of the current research.

The following tables show the results emerging, on average, from the database under consideration to support the construction of the three macro-agglomerates. Table 1 focuses on digitalization, Table 2 on sustainability and Table 3 on performance.

After the analysis of the average data, the subsequent investigation was implemented with reference to the single units of research (i.e. the 92 responding wineries). In the related virtual database, the dependent variable entitled "Performance" was analysed with reference to the potential connection with digitalization and sustainability, using the number of "Yesses" that it was possible to retrieve for the individual wineries regarding the three macro-agglomerates; thus, a single winery can number 5 at most for "digitalization", 18 for

Digitalization (percentage of wineries adopting)	
Corporate website	96.30%
Corporate app	25.92%
Online booking	64.20%
Social networks	95.06%
Presence on tourist portals	51.85%

Source(s): Authors' calculation

Table 1. Digitalization summary for the investigated wineries

Sustainability (percentage of wineries adopting)		
People	Permanent workers	48.58%
	Training courses for the personnel	76.09%
	Accessibility for the disabled (cellar)	80.25%
	Accessibility for the disabled (vineyards)	41.97%
	Accessibility for the disabled (tasting room)	86.42%
	Accessibility for the disabled (restaurant)	19.75%
	Accessibility for the disabled (overnight stay)	11.11%
	Accessibility for the disabled (toilet)	54.32%
	Special cuisine for avoiding allergies/intolerances	22.22%
	Vegetarian/vegan cuisine	23.46%
	Multilingual staff (linguistic mediation)	87.65%
	Access to wi-fi	86.42%
Planet	Energy production	45.19%
	Production certifications	54.81%
	Typical local products	28.39%
	Seasonal products	27.16%
Profit	Wine tourism turnover (average)	€ 132,000.00
	Wineries with an YOY increase (2019/2018)	59.78%

Note(s): YOY – Year on year
Source(s): Authors' calculation

Table 2. Sustainability summary of the investigated wineries

Performance	
Visits (average)	3,700.00
Wineries with a YOY increase in visiting (2019/2018)	54.35%

Note(s): YOY – Year on year
Source(s): Authors' calculation

Table 3. Performance summary of the investigated wineries

"sustainability", and 2 for "performance". After detecting these data, it was possible to extract the different associations between digitalization and sustainability, followed by performance. The related calculations are presented in Table 4 and Table 5 (there are no items with zero values for either digitalization or sustainability).

The evidence emerging from Tables 4 and 5 is clear. From Table 4, the more that wineries are digitalized, the more sustainable are and the better they perform (there is only one limited incongruity concerning the performance results about 1.12 and 1.33); however, from Table 5, it does not appear that the more sustainable wineries are, the more digitalized they are, and there seems to be no relationship with performance. Inferential statistics are thus required to potentially understand in detail the possible connections.

Digitalization (Measure)	Sustainability (Average)	Performance (Average)
5	11.50	2.00
4	11.00	1.61
3	8.91	1.52
2	8.29	1.12
1	8.00	1.33

Source(s): Authors' calculation

Table 4. Digitalization, sustainability and performance of the investigated wineries

Sustainability (Measure)	Digitalization (Average)	Performance (Average)
17	4.50	2.00
16	3.75	2,00
15	2.00	1.00
14	3.50	1.75
13	4.67	2.00
12	3.67	1.83
11	3.78	1.89
10	3.60	1.53
9	3.09	1.45
8	3.50	1.33
7	2.50	1.37
6	2.62	1.12
5	0.00	0.00
4	3.00	1.00
3	2.00	0.50
2	0.00	0.00
1	0.00	0.00

Note(s): There are no wineries with a score of 18
Source(s): Authors' calculation

Table 5. Sustainability, digitalization and performance of the investigated wineries

4.2 Inferential statistics

Notwithstanding the visible evidence emerging from the above-described observations, when applying a multiple regression test to the values under analysis there is a very relevant limit – that is, the limited number of observations. In the digitalization > sustainability > performance approach, only 5 modalities can be extracted, while in the sustainability > digitalization > performance approach there are only 17.

More specifically, when inferring the wineries' performance as a dependent variable from digitalization (first) and sustainability (second) as independent variables, the software calculation generates $R^2 = 0.79$ (robust) and an adjusted $R^2 = 0.58$ (less robust), but most of all, the significance test and the *p*-values are not acceptable, and this is naturally due to the number of observations (i.e. 0.79–0.58 = 0.21). When inferring the wineries' performance as a dependent variable from sustainability (first) and digitalization (second) as independent variables, the software calculation generates $R^2 = 0.95$ (very robust) and an adjusted $R^2 = 0.95$ (also very robust), but unfortunately, while the significance test is acceptable, the *p*-values are acceptable for sustainability but not for digitalization, thus not providing reliable support to the statistical model.

5. Discussion

The 2019 National Report on Wine Tourism of the National Association of "Wine Cities" in Italy has been considered a fundamental source for this study, and it has been investigated to detect all of the possible elements that could be associated with digitalization (5, as in Table 1); sustainability (18, as in Table 2); and performance (2, as in Table 3). While building the three macro-agglomerates – and above all digitalization and sustainability – it was noted that, in general, the level of digitalization is appreciable (see Table 1), while the level of sustainability shows some limits (in the "People" dimension; more particularly, severe concerns emerged with reference to the accessibility needed for disabled people); the evidence has thus been provided for responding to RQ1 and RQ2.

First, the digitalization measure (calculated for each winery) was considered as an independent variable for the sustainability measure (calculated for each winery) as the dependent variable (providing potential response to RQ1). Second, the sustainability measure (calculated for each winery) was then considered as the independent variable for the performance measure (calculated for each winery) as the dependent variable (providing a potential response to RQ2).

Some correlation exists between the adopted level of digitalization and the performed sustainability ($\rho = 0.40$), but the robustness is low ($R^2 = 0.16$ and adjusted $R^2 = 0.15$), so the response to RQ1 (Does a positive correlation exist between the adopted digitalization and the performed sustainability?) is no. Higher correlation values exist between the performed sustainability and business performance ($\rho = 0.45$), but the robustness is again low, although higher ($R^2 = 0.21$ and Adjusted $R^2 = 0.18$); thus the response to RQ2 (Does a positive correlation exist between the performed sustainability and the market performance?) is again no.

Instead, there is concrete evidence concerning the potential response to RQ3 (What is the possible interaction between digitalization and sustainability with a conjoint effect on business performance?), which can be presumed from the analysis shown in Tables 4 and 5; although following inferential statistics did not provide robust confirmation, the data emerging from the descriptive analysis are relevant. The response of the current research to RQ3 is that the more digitalized wineries are, the more sustainable they are, and the better their performance, although the inverse is not true – there does not appear to be a link from sustainability through digitalization to performance.

To close the loop of the logical reasoning of this study, the main evidence emerging from the investigation is that digitalization in wine tourism, at least for the wineries under examination, includes several business capabilities that are useful for generating not only related sustainability, but also adequate performance. Sustainability in wine tourism, however, when not supported by coherent digitalization – at least for the wineries under examination – may provide different outcomes, not always adequate, in terms of related performance.

6. Scientific and managerial implications

From a theoretical point of view, digitalization in wine tourism emerges as a sort of influencing variable in the correlation between sustainability and performance, which is in line with the economic recovery theory (Cheng and Zhang, 2020; Dogru and Bulut, 2018; Wu *et al.*, 2021). Although limited to organization and communication activities, considering the service-based impact of wine tourism, technology makes it easier for sustainability to emerge, with following (moderating?) effect on the economic performance of wine tourism.

From a practical point of view, sustainability can be a lever for the development of wine tourism (Nave *et al.*, 2021a, b; Sun and Drakeman, 2022); however, wine entrepreneurs, managers and professionals must take into careful consideration the connected technology – most of all, as expected, in the current and future coexistence with the COVID-19 pandemic (Khandelwal *et al.*, 2022). Particular attention should probably be paid more specifically to the potential contribution of artificial intelligence to the progress of wine tourism experiences, even in terms of sustainability and naturally related performance – at least for tourist satisfaction, as highlighted by several recent studies in the field (Bhanu and Kumar, 2019; Garner and Kim, 2022; Loureiro, 2022).

7. Conclusion

Wine tourism has become a valuable activity for the wine sector, at the supplementary, complementary or even the "core" level. However, the COVID-19 pandemic has forced

enterprises in general to imagine, design and implement innovative business solutions; this is true for the tourist industry in general and for wine tourism in particular. Tourists in the near and far future will call for safer, healthier and generally more sustainable experiences. Wine tourism has great chances in this respect, with its intrinsic "green" essence while also adopting original experience profiles.

This research has shown a conjoined effect for digitalization and sustainability in the wine tourism sector, with specific reference to the Italian case, considering its leadership position in the wine sector, but only within the digitalization > sustainability > performance approach; digitalization quite likely acts as an influencer (maybe even moderator) in the relationship between sustainability and performance. Most probably, this logical connection will constitute a relevant methodological platform for the innovative development of wine tourism in Italy and in the rest of the world.

8. Research limits and future directions

This investigation is limited to Italy, so the results may not be generalizable. The number of respondents could also be increased, and the micro-elements that represent digitalization, sustainability and performance could be expanded. The survey was also conducted in 2019, before the tremendous impact of the COVID-19 pandemic, so further research is necessary to overcome these limitations and assess the reliability of the hypothesized connection involving the three dimensions in question (digitalization, sustainability and performance) for the development of wine tourism. From a strictly methodological point of view, the most relevant limit of the research is due to the embedded connection with the 2019 National Report on Wine Tourism of the National Association of "Wine Cities" and its related variables/figures. Although the report in question is unanimously considered the most authoritative in the field in Italy, other reports or even specific research about specific indicators of digitalization and sustainability and their connection could provide different (more focused) results.

References

Banks, G. and Overton, J. (2010), "Old world, new world, third world? Reconceptualising the worlds of wine", *Journal of Wine Research*, Vol. 21 No. 1, pp. 57-75.

Bhanu, T.T. and Kumar, P. (2019), "Future vision: acceptability of artificial intelligence personalized services in winery accommodation", *Proceedings of the Asia International Conference on Multidisciplinary Research*, Colombo, Sri Lanka, 10-11 May, Vol. 1, pp. 130-138.

Bresciani, S., Ferraris, A., Santoro, G. and Nilsen, H.R. (2016), "Wine sector: companies' performance and green economy as a means of societal marketing", *Journal of Promotion Management*, Vol. 22 No. 2, pp. 251-267.

Bresciani, S., Huarng, K.H., Malhotra, A. and Ferraris, A. (2021), "Digital transformation as a springboard for product, process and business model innovation", *Journal of Business Research*, Vol. 128 No. 2021, pp. 204-210.

Bruwer, J., Coode, M., Saliba, A. and Herbst, F. (2013), "Wine tourism experience effects of the tasting room on consumer brand loyalty", *Tourism Analysis*, Vol. 18 No. 4, pp. 399-414.

Canovi, M. and Pucciarelli, F. (2019), "Social media marketing in wine tourism: winery owners' perceptions", *Journal of Travel and Tourism Marketing*, Vol. 36 No. 6, pp. 653-664.

Cantino, V., Giacosa, E., Alfiero, S., Shams, S.M.R. and Ferraris, A. (2019), "Introduction: smart tourism businesses (sustainability, measurability, awareness, recognition, and technology)", *Tourism Analysis*, Vol. 24 No. 3, pp. 261-263.

Cheng, L. and Zhang, J. (2020), "Is tourism development a catalyst of economic recovery following natural disaster? An analysis of economic resilience and spatial variability", *Current Issues in Tourism*, Vol. 23 No. 20, pp. 2602-2623.

Dimitrovski, D., Joukes, V., Rachão, S. and Tibério, M.L. (2019), "Wine tourism apps as wine destination branding instruments: content and functionality analysis", *Journal of Hospitality and Tourism Technology*, Vol. 10 No. 2, pp. 136-152.

Dogru, T. and Bulut, U. (2018), "Is tourism an engine for economic recovery? Theory and empirical evidence", *Tourism Management*, Vol. 67 No. 2018, pp. 425-434.

Duarte Alonso, A. and Liu, Y. (2012), "Old wine region, new concept and sustainable development: winery entrepreneurs' perceived benefits from wine tourism on Spain's Canary Islands", *Journal of Sustainable Tourism*, Vol. 20 No. 7, pp. 991-1009.

Duarte Alonso, A., Bressan, A., O'Shea, M. and Krajsic, V. (2013), "Website and social media usage: implications for the further development of wine tourism, hospitality, and the wine sector", *Tourism Planning and Development*, Vol. 10 No. 3, pp. 229-248.

Duarte Alonso, A., Bressan, A., Kok, S.K. and O'Brien, S. (2021), "Filling up the sustainability glass: wineries' initiatives towards sustainable wine tourism", *Tourism Recreation Research*, Vol. 47 Nos 5-6, pp. 1-15.

Duarte Alonso, A., Kok, S. and O'Brien, S. (2020), "Sustainable wine tourism development through the lens of dynamic capabilities and entrepreneurial action: an exploratory four-region perspective", *Tourism Recreation Research*, Vol. 45 No. 3, pp. 401-419.

Duarte Alonso, A., Bressan, A., Santoni, L.J., Kok, S.K. and Vu, O.T.K. (2022), "COVID-19: impacts and implications for hospitality, tourism and community. The case of Mendoza", *Current Issues in Tourism*, Vol. 25 No. 11, pp. 1835-1851.

D'Amato, A., Festa, G., Dhir, A. and Rossi, M. (2021), "Cooperatives' performance relative to investor-owned firms: a non-distorted approach for the wine sector", *British Food Journal*, Vol. 124 No. 13, pp. 35-52.

Elkington, J. (1998), "Accounting for the Triple Bottom line", *Measuring Business Excellence*, Vol. 2 No. 3, pp. 18-22.

Festa, G., Vrontis, D., Thrassou, A. and Ciasullo, M.V. (2015), "A value co-creation model for wine tourism", *International Journal of Management Practice*, Vol. 8 No. 3, pp. 247-267.

Festa, G., Shams, S.M.R., Metallo, G. and Cuomo, M.T. (2019), "Enhancing stakeholder networks in wine tourism – evidence from Italian small municipalities", *EuroMed Journal of Business*, Vol. 15 No. 3, pp. 349-360.

Festa, G., Cuomo, M.T., Foroudi, E. and Metallo, G. (2020), "Wine tourism as a non-core business strategy for small wineries", *International Journal of Managerial and Financial Accounting*, Vol. 12 No. 2, pp. 149-164.

Foroudi, P., Cuomo, M.T., Rossi, M. and Festa, G. (2019), "Country-of-origin effect and millennials' wine preferences—a comparative experiment", *British Food Journal*, Vol. 122 No. 8, pp. 2425-2441.

Frost, W., Frost, J., Strickland, P. and Smith Maguire, J. (2020), "Seeking a competitive advantage in wine tourism: heritage and storytelling at the cellar-door", *International Journal of Hospitality Management*, Vol. 87 No. 2020, pp. 1-9.

Garner, B. and Kim, D. (2022), "Analyzing user-generated content to improve customer satisfaction at local wine tourism destinations: an analysis of Yelp and TripAdvisor reviews", *Consumer Behavior in Tourism and Hospitality*, Vol. 17 No. 4, pp. 413-435.

Gastaldello, G., Livat, F. and Rossetto, L. (2022), "Does Covid scare wine travelers? Evidence from France and Italy", *Wine Economics and Policy*, Vol. 11 No. 1, pp. 89-106.

Gössling, S., Scott, D. and Hall, C.M. (2021), "Pandemics, tourism and global change: a rapid assessment of COVID-19", *Journal of Sustainable Tourism*, Vol. 29 No. 1, pp. 1-20.

Khandelwal, R., Kolte, A. and Rossi, M. (2022), "A study on entrepreneurial opportunities in digital health-care post-Covid-19 from the perspective of developing countries", *Foresight*, Vol. 24 Nos 3/4, pp. 527-544.

Kirova, V. (2021), "Value co-creation and value co-destruction through interactive technology in tourism: the case of 'La Cité du Vin' wine museum, Bordeaux, France", *Current Issues in Tourism*, Vol. 24 No. 5, pp. 637-650.

Kolte, A., Pawar, A., Sangvikar, B. and Sawant, P. (2021), "Financial assessment of the Indian retail sector: understanding the future direction of the industry", *International Journal of Managerial and Financial Accounting*, Vol. 13 No. 2, pp. 133-158.

Kolte, A., Festa, G., Sohag, K. and Rossi, M. (2022), "Ambidextrous positioning of asian IVCs and CVCs from a knowledge-based view", *Journal of Strategic Marketing*, pp. 1-16, doi: 10.1080/0965254X.2022.2138953.

Levitskaia, A., Ianioglo, N. and Curaxina, S. (2020), "Digital marketing strategy approach in wine tourism: tradition versus innovation", *Marketing and Digital Technologies*, Vol. 4 No. 3, pp. 6-12.

Loureiro, S.M.C. (2022), "Virtual wine tourism experiences", in Kumar Dixit, S. (Ed.), *Routledge Handbook of Wine Tourism*, Routledge, London, pp. 1-9.

Madanaguli, A., Srivastava, S., Ferraris, A. and Dhir, A. (2021), "Corporate social responsibility and sustainability in the tourism sector: a systematic literature review and future outlook", *Sustainable Development*, Vol. 30 No. 2, pp. 447-461.

Marco-Lajara, B., Zaragoza-Saez, P., Falcó, J.M. and Sánchez-García, E. (2022), "COVID-19 and wine tourism: a story of heartbreak", in Popescu, C.R.Gh. (Ed.), *Handbook of Research on SDGs for Economic Development, Social Development, and Environmental Protection*, IGI Global, Hershey, PA, pp. 90-112.

Marlowe, B. and Sojung, L. (2018), "Conceptualizing terroir wine tourism", *Tourism Review International*, Vol. 22 No. 2, pp. 143-151.

Martins, J., Gonçalves, R., Branco, F., Barbosa, L., Melo, M. and Bessa, M. (2017), "A multisensory virtual experience model for thematic tourism: a Port wine tourism application proposal", *Journal of Destination Marketing and Management*, Vol. 6 No. 2, pp. 103-109.

Mitchell, R., Charters, S. and Albrecht, J.N. (2012), "Cultural systems and the wine tourism product", *Annals of Tourism Research*, Vol. 39 No. 1, pp. 311-335.

Nave, A., do Paço, A. and Duarte, P. (2021a), "A systematic literature review on sustainability in the wine tourism industry: insights and perspectives", *International Journal of Wine Business Research*, Vol. 33 No. 4, pp. 457-480.

Nave, A., Laurett, R. and do Paço, A. (2021b), "Relation between antecedents, barriers and consequences of sustainable practices in the wine tourism sector", *Journal of Destination Marketing and Management*, Vol. 20 No. 2021, pp. 1-10.

Niklas, B., Guedes, A., Back, R.M., Rebelo, J. and Laurie, V.F. (2022), "How resilient are wine tourism destinations to health-related security threats? A winery perspective", *Journal of Destination Marketing and Management*, Vol. 24 No. 2022, pp. 1-11.

Pelet, J.É., Barton, M. and Chapuis, C. (2019), "Towards the implementation of digital through wifi and IoT in wine tourism: perspectives from professionals of wine and tourism", in Sigala, M. and Robinson, R. (Eds), *Management and Marketing of Wine Tourism Business*, Palgrave Macmillan, Cham, pp. 207-236.

Poitras, L. and Getz, D. (2006), "Sustainable wine tourism: the host community perspective", *Journal of Sustainable Tourism*, Vol. 14 No. 5, pp. 425-448.

Popp, L. and McCole, D. (2016), "Understanding tourists' itineraries in emerging rural tourism regions: the application of paper-based itinerary mapping methodology to a wine tourism region in Michigan", *Current Issues in Tourism*, Vol. 19 No. 10, pp. 988-1004.

Rauhut Kompaniets, O. (2022), "Sustainable competitive advantages for a nascent wine country: an example from southern Sweden", *Competitiveness Review*, Vol. 32 No. 3, pp. 376-390.

Rialti, R., Zollo, L., Ferraris, A. and Alon, I. (2019), "Big data analytics capabilities and performance: evidence from a moderated multi-mediation model", *Technological Forecasting and Social Change*, Vol. 149 No. 2019, 119781, (starting page).

Sá, J., Ferreira, L.P., Dieguez, T., Sá, J.C. and Silva, F.J.G. (2021), "Role of the industry 4.0 in the wine production and enotourism sectors", in de Carvalho, J.V., Rocha, Á., Liberato, P. and Peña, A. (Eds), *Advances in Tourism, Technology and Systems (Proceedings of the "ICOTTS 2020. Smart Innovation, Systems and Technologies*, Vol. 208, Springer, Singapore, pp. 171-180.

Santos, V., Ramos, P., Sousa, B. and Valeri, M. (2022), "Towards a framework for the global wine tourism system", *Journal of Organizational Change Management*, Vol. 35 No. 2, pp. 348-360.

Scorrano, P. (2011), "The 2.0 marketing strategies for wine tourism destinations of excellence", *Chinese Business Review*, Vol. 10 No. 10, pp. 948-960.

Sekhniashvili, G. (2020), "Wine tourism destination competitiveness: the case of Georgia", *Ecocycles*, Vol. 6 No. 1, pp. 39-51.

Sellitto, C. (2006), "Improving winery survey response rates: lessons from the Australian wine industry", *International Journal of Wine Marketing*, Vol. 18 No. 2, pp. 150-152.

Smyczek, S., Festa, G., Rossi, M. and Monge, F. (2020), "Economic sustainability of wine tour-ism services and direct sales performance – emergent profiles from Italy", *British Food Journal*, Vol. 122 No. 5, pp. 1519-1529.

Sun, Y.-Y. and Drakeman, D. (2022), "The double-edged sword of wine tourism: the economic and environmental impacts of wine tourism in Australia", *Journal of Sustainable Tourism*, Vol. 30 No. 4, pp. 932-949.

Tommasetti, A. and Festa, G. (2014), "An analysis of wine tourism in Italy from a strategic service-based perspective", *Service Science*, Vol. 6 No. 2, pp. 122-135.

Truant, E., Broccardo, L. and Kolte, A. (2021), "The role of organic districts in supporting companies' sustainable development", *International Journal of Managerial and Financial Accounting*, Vol. 12 Nos 3-4, pp. 265-283.

Vrontis, D., Bresciani, S. and Giacosa, E. (2016), "Tradition and innovation in Italian wine family businesses", *British Food Journal*, Vol. 118 No. 8, pp. 1883-1897.

Williams, P.W. and Kelly, J. (2001), "Cultural wine tourists: product development considerations for British Columbia's resident wine tourism market", *International Journal of Wine Marketing*, Vol. 13 No. 3, pp. 59-76.

Wu, L.-F., Achyldurdyyeva, J., Jou, W.-P., Foung, W.-T. and Jaw, B.-S. (2021), "Recovery, and revitalization measures for tourism and hospitality industry during covid-19 pandemic: case study from taiwan", *SAGE Open*, Vol. 11 No. 3, pp. 1-16.

Yeh, S.-S. (2020), "Tourism recovery strategy against COVID-19 pandemic", *Tourism Recreation Research*, Vol. 46 No. 2, pp. 188-194.

Zamarreño Aramendia, G., Cruz Ruíz, E. and Hernando Nieto, C. (2021), "Digitalization of the wine tourism experience: a literature review and practical applications", *Doxa Comunicación*, Vol. 33 No. 2021, pp. 1-28.

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