Wine Economics and Policy

Firenze University Press
www.fupress.com/wep

Citation: Giulia Gastaldello, Florine Livat, Luca Rossetto (2022) Does Covid scare wine travelers? Evidence from France and Italy. *Wine Economics and Policy* 11(1): 89-106. doi: 10.36253/wep-11550

Data Availability Statement: All relevant data are within the paper and its Supporting Information files.

Competing Interests: The Author(s) declare(s) no conflict of interest.

Does Covid scare wine travelers? Evidence from France and Italy

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Abstract. Tourism is sensitive to shocks, and the Covid pandemic has profoundly changed sector dynamics. Although wine tourism is primarily a form of proximity tourism, the pandemic may have affected wine travellers behaviour and intention to go on a wine holiday. This exploratory study proposes a comprehensive analysis of the impact of Covid-related fear and anxiety on wine tourism intentions after the first lockdown while jointly considering the effects of solidarity, situational and personal involvement with wine. An online survey was delivered to a sample of 553 wine tourists from Italy and France, two major wine tourism destinations. Results highlight changes in wine travel patterns after the pandemic, which boosted post-lockdown wine tourism intentions. Indeed, the latter are poorly impacted by fear of contagion while it is enhanced by dedicating time to wine in lockdown (i.e., situational involvement) and by willingness to support local wine producers. Implications for sectors stakeholders are suggested.

Keywords: Covid-19, Wine tourism, travel intentions, Covid phobia, involvement with wine, structural equation modelling, solidarity.

1. INTRODUCTION

As past studies highlighted, tourism is vulnerable to shocks. Natural disasters like tsunamis [1], earthquakes [2] and floods [3] have an inevitable impact on tourism flow. In addition, the industry is affected by terrorism like 9/11 in the U.S. [4], [5] or the increased frequency of terrorist attacks in France from 2010 to 2017 [6], [7] and by war [8]. A global economic crisis as the Covid-19 pandemic can also impact on tourism [9]. The latter has indeed highlighted the susceptibility of tourism to measures implemented to counteract the circulation of the virus, mainly restricted mobility and social distancing [10]. Being wine tourism a tourism branch, the present article aims at offering a first comprehensive analysis how the pandemic influences wine tourism intentions in a post-crisis context.

According to the United Nations World Tourism Organization (UNWTO), international arrivals in Europe dropped by 68% between Janu-

ary and August 2020 compared to 2019, leading to the worst negative peak since the 1950s. In the past, research has shown that international tourism has been damaged by other health emergencies such as the Avian flu, with more significant damage on local (i.e. Asian) tourism [11]. Kuo et al. [12] show that the local number of cases has affected international tourists' arrival in SARS -affected countries but not in Avian flu-affected countries. A similar result was obtained by McAleer et al. [13]. Tourism in developing economies is subject to the epidemic crisis because of induced effects due to their geographical or physical proximity to the outbreak's source (e.g., 14 in the case of Ebola). Nevertheless, different tourist populations can react differently to epidemics. For instance, pregnant women or travellers of reproductive age travelled significantly less to Zika-affected regions after the Zika-birth defects association became well known [15]. Lastly, eradicating infectious disease risk associated with Malaria, Dengue, Yellow Fever, and Ebola could increase international tourism demand and increase tourism expenditure [16].

Due to its strong vulnerability, the tourism industry has become more flexible and increasingly resilient to crises. Some shocks are transitory, even if returning to pre-disaster levels can take years. The speed of recovery depends on the extent of the damage caused by the disaster, on the ability of tourism stakeholders to rebuild facilities and infrastructures, and on effective communication stating clearly that the destination is safe [17]. This is the case of Malaysia (a developing country and second destination in Asia), subjected to the Asian financial crisis, the outbreak of Avian flu and SARS, Asian tsunami, and threat of terrorism [18]. In Taiwan, visitors' arrivals had not fully recovered 11 months after an earthquake [19]. Cultural differences play a role in the recovery of disaster-hit destinations [20]. In the path toward recovery, the destination's attribute can also change and attract some dark tourism [21]. Shocks can lead tourists to substitute destinations [22]. However, with the Covid-19 crisis, the tourism industry faces a pandemic, i.e., a global crisis in which substituting destinations is not feasible because of mobility restrictions. Lastly, tourism can respond to shocks and become an engine for economic recovery [23, 24].

In such contexts, wine tourism can be seen as local tourism substituting non-local (i.e., international) tourism, and it can be favoured in a context of restricted mobility and fear of contagion due to uncertainty and fear of travelling abroad. Moreover, with an economic downturn, tourists might privilege short breaks instead of more extended stays. Proximity has been identified as a critical factor for the success of wine tourism [25]. Wine tourism has also been acknowledged as a substitute for urban tourism, as it is perceived as safer in the case of a terrorist threat [6]. Moreover, as tourism stakeholders make a claim for more sustainable practices and for the need to question the volume growth of the international tourism industry in a climate change context [10], wine tourism could be a possible answer. Following the pandemic, clusters of wineries relying mostly on foreign tourism like those identified in Conegliano Valdobbiadene area [26] can strongly benefit of these behaviours. In this respect, it is worth understanding post-lockdown domestic wine tourism intentions.

To the best of our knowledge, though, the impact of the Covid-19 pandemic on wine tourism has not yet been analysed. Therefore, the present work aims at exploring how the Covid-19 pandemic impacted wine tourism intentions both after the lockdown (ALWTINT) and in the long-run (LRWTINT), starting from the main antecedents identified by the sector's literature such as involvement with wine (WI) while considering new negative and positive contingency factors, such as the effect of fear and anxiety towards the virus – further referred to as Covid Phobia (CPH) –, solidarity towards national winemakers (SUPLOCW) and acquired interest in wine during the lockdown (AQWINT), reflecting situational involvement. Changes in wine tourism travel patterns following the pandemic are also explored. Notably, we focus on two major wine tourism players, Italy and France, hosting the highest number of wine tourists in Europe (14 [27] and 10 million a year, respectively). Figure 1 shows the number of overnight stays in hotels per month in both countries, which has dramatically fallen in 2020 and 2021 compared with 2019, despite a temporary recovery during summer. Indeed, although the 2020-2021 overnight stays trend is positive (+19% and +7% in 9 months for Italy and France, respectively), 2021 records are still remarkably lower than in 2019 (-44% in the first 9 months of 2021 for both Italy and France).

The relevance of this exploratory analysis lies in its contribution to shed light on how the Covid-shock impacted on wine tourists' travel intentions, which is key to predicting future demand developments and drafting appropriate recovery strategies. The present study is indeed among the first to assess the impact of Covid and of the lockdown on wine tourism while modelling positive and negative drivers together. In light of the uncertainty around the evolution of the current pandemic as well as of its severe consequences on tourism sector, this information is strategic to tourism operators and especially to wineries for understanding how the virus impacted wine tourists' behaviour and effectively

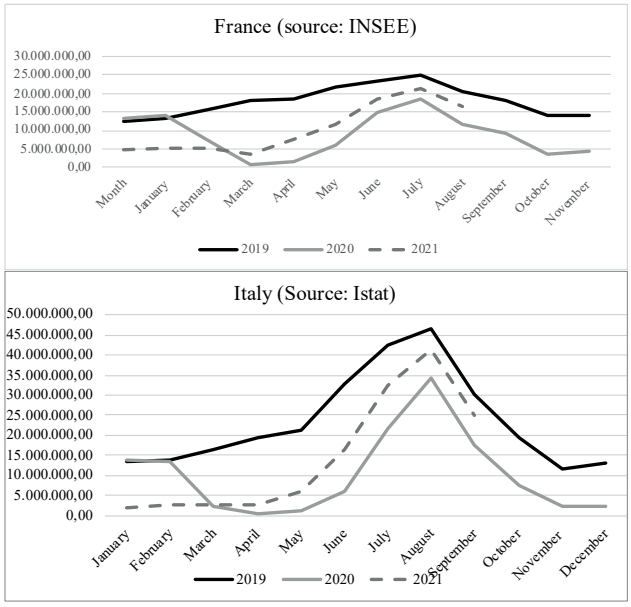

Figure 1. Monthly overnight stays in hotels.

plan a recovery strategy. Certainly, wine tourism is an important tool for building and strengthening brand reputation [28], boosting both awareness and demand of a product [29]. Findings also provide useful information for planning communication and marketing activities in the pandemic context.

The following section (section 2) provides an overview on the main acknowledged antecedents of wine tourism intentions, as well as on context-related factors that can impact on the latter. Section 3 describes materials and methods, including a description of the sample, while section 4 presents the results obtained. Finally, section 5 discusses the key findings and related implications for the wine tourism sector.

2. LITERATURE REVIEW

To date, an extensive literature has developed on the antecedents of wine tourism intentions [30, 31, 32]. A key element characterising wine tourism research is involvement with wine (WI), which is identified as a vital driver of the intention to partake in wine tourism [30, 33] affecting wine tourists experiential priorities [30]. The advent of an extraordinary event like the Covid-19 pandemic, though, has caused radical changes in people's known normality on multiple levels, consequently impacting on their behaviour. Particularly, tourism has been among the hardest-hit sectors due both to the strict limitations to mobility imposed by governments and to the high risk of infection connected to travelling as a social activity. In his respect, people may have developed fear and anxiety toward the virus that may negatively impact travel intentions. On the other hand, the several prolonged lockdowns imposed in most countries forced people to slow down and have potentially more free time to explore their interests [34]. The following sections will provide an overview of the main antecedents of wine tourists behavioural intentions identified by the sector's literature and fear and anxiety towards the novel Coronavirus.

2.1 Fear of Covid-19 and Corona-phobia

Due to its disrupting effects on worldwide economies, to its ease of transmission and the life threatening nature of the Sars-CoV-2 illness, the Covid-19 outbreak prompted the diffusion of fear and anxiety in human society [35, 36, 37]. The literature defines fear as an emotion caused by danger, pain or harm [35], [38], representing the awareness of danger [35]. Anxiety, instead, is a psychological response to fear [39]. Differently from psychological discomforts deriving from other extreme events such as natural disasters [40], [41], or accidents [42], those induced by human-to-human transmissible diseases like Covid-19 are extensive and long-standing [43].

Therefore, a prolonged and amplified state of fear and anxiety towards a major catastrophic situation such as the current pandemic may trigger anxiety disorders defined as phobias [44]. In this respect, Arpaci et al. [44] developed a psychometric, self-report tool – the Covid Phobia Scale (C19P-S) – to diagnose what they classify as corona phobia. Particularly, high values recorded by the scale detect the presence of a state of great fear and anxiety towards the virus. The C19P-S is originally composed of 4 dimensions – economic, psychological, psychosomatic and social – representing the four main domains affected by the pandemic. The social dimension is particularly relevant when dealing with (wine) tourism activities since Covid-19 is an airborne disease, spread through small liquid particles, called droplets, emitted when talking, coughing or sneezing [45]. In this regard, travelling is potentially connected with a great risk of infection implying uncontrolled contact with thousands of individuals. Although the global scale of this health crisis may have levelled out the perceived risk of infection when traveling to other destinations [35], fear and anxiety towards the virus can lead to identifying travelling as a dangerous activity and to avoid it. Consequently, subjects manifesting greater levels of Covid phobia may show weaker post-lockdown wine tourism intentions (ALWTINT).

Hence, we postulate the following hypotheses:

H1. Covid phobia (CPH) impacts negatively on post-lockdown wine tourism intentions (ALWTINT).

H2. Covid phobia (CPH) mediates the effect of long-run wine tourism intentions (LRWTINT) on post-lockdown wine tourism intentions (ALWTINT).

2.2 Involvement with wine

The key role of involvement in marketing is widely recognized among scholars [46] as it is acknowledged to affect consumer decision-making processes and behaviour [47, 48]. The literature distinguishes among three types of involvement: *enduring* or *personal*, connected to the presence of a long-term personal relevance [50], [51], *physical*, arising from specific product characteristics, and *situational*, which is short-term and results from temporary changes in a consumer's environment [49]. Personal product involvement is the most commonly adopted and it is defined as a subject's perceived relevance of an object based on his/her inherent needs, values, and interests [49, p.342] Considering the hedonic nature of wine and wine tourism consumption, it is not surprising to find extensive sector research embodying the concept of involvement [52, 53, 54]. Hedonic products, indeed, tend to create higher involvement [55]. Particularly, findings reveal that product involvement can significantly affect wine consumers when choosing which wine to purchase [53], impacts on wine tourists' behavioural intentions [30], motivations [32] and travel patterns [33]. However, the extent of its effect may change based on socio-demographics such as age [54], [56]. Since wine tourism falls into the category of leisure travel activities, the most appropriate type of involvement to be considered according to the literature is personal involvement, also referred to as ego-involvement. Recently, Bruwer and Huang [56, p.463] defined the concept of personal involvement in the field of wine research as "a motivational state of mind of a person with wine or wine-related activity…which reflects the extent of personal relevance of the wine-related decision to the individual in terms of one's basic values, goals, and self-concept."

In this respect, Brown, Havitz & Getz [33] conceptualized a tool to capture ego-involvement with wine in the wine tourism context – the Wine Involvement Scale (WIS) – by extending Laurent & Kapferer's [57] widely applied Consumer Involvement Profile (CIP) scale. Indeed, the CIP scale has been adopted by several tourism studies in different cultural contexts which contributed to proving its consistency [58]. Notably, the WIS developed by the authors includes three dimensions: expertise, enjoyment, and symbolic centrality. By segmenting a sample of fine wine consumers based on the wine involvement construct, the authors found that different involvement segments show significantly different intention to visit a wine region in the near future, highlighting the central role of involvement in predicting wine tourism. Sparks [30] further underlined the critical role that ego-involvement (i.e., personal involvement) can play as a motivator in wine tourism. The following hypotheses are accordingly proposed:

H3. (Personal) involvement with wine (WI) positively affects post-lockdown wine tourism intentions (ALWTINT)

H4. (Personal) involvement with wine (WI) positively affects long-run wine tourism intentions (LRWTINT)

2.3 Acquired interest in wine and solidarity during the first lockdown

As mentioned above, the high infection rate of Covid-19 [35] forced entire countries into lockdowns during which only first necessity industries (e.g., food and pharmaceutical industries) were allowed to operate. Obliged to slow down, people found more free time on their hands which could be dedicated to exploring their interests and to leisure activities [34]. Interest is defined as the degree of enjoyment a subject gets from engaging in specific activities [59]. Based on the literature, it can be affirmed that wine tourism is driven by an underlying interest, at various levels, in wine [33], [60]. Therefore, wine tourists have plausibly employed part of their free time engaging in wine-related activities, as some people did with cooking [60], thus reinforcing their interest in wine.

Interest in wine, in its turn, is connected to the degree of involvement with the topic – i.e., to its subjective relevance for the individual – [49]. Consequently, the new normality of the lockdown may have fostered a situational involvement with wine, boosting the effect of enduring involvement with the product as an antecedent of leisure tourism intentions [62]. As involvement is an antecedent of the decision to partake in wine tourism, it is reasonable to hypothesize that also situational involvement (i.e., an increased interest in wine following the lockdown) reinforces both long-term and short-term wine tourism intentions. Indeed, interests can drive intentions [59]. Moreover, it can amplify the predictive power of personal involvement with wine on the intention to visit a wine region.

H5. Acquired interest in wine (AQWINT) mediates the effect of involvement with wine (WI) on post-lockdown wine tourism intentions (ALWTINT).

H6. Acquired interest in wine (AQWINT) mediates the effect of involvement with wine (WI) on future wine tourism intentions (LRWTINT).

H7. Acquired interest in wine (AQWINT) positively affects post-lockdown wine tourism intentions (ALWTINT).

H8. Acquired interest in wine (AQWINT) positively affects long-run wine tourism intentions (ALWTINT).

As pointed out by other academics [63], a crisis of the proportions of Covid-19 encouraged the population to prioritize society's problems over personal needs, pushing them to support national winemakers in their struggle to survive by purchasing their products. This sentiment is even more plausible considering that, already before the Covid-19 outbreak, the literature was stressing the relevance of wine tourism as a tool for sustainable rural development [64, 65], and the strong association between direct sales of local producers and the desire to support to local communities [66]. Accordingly, direct sales are one of the pillars around which the wine tourism industry is built [67, 25, 28]. As a result, solidarity with national wineries is expected to be a positive antecedent of wine tourism intentions and to increase the willingness to go on a wine holiday after the lockdown.

H9. Willingness to support local wineries (SUPLOCW) positively affects post-lockdown wine tourism intentions (ALWTINT).

H10. Willingness to support local wineries (SUPLOCW) positively affects long-run wine tourism intentions (LRWTINT).

3. MATERIALS AND METHODS

3.1 Data collection and survey

The population of interest for the study is Italian and French wine consumers having an interest in wine and wine tourism. Given the pandemic circumstances, an online survey was launched and diffused via e-mail and Facebook groups dealing with travel and oenogastronomy. Specifically, over 40 Facebook groups and wine stakeholders were involved, and shared the survey with their online communities. Data collection lasted two months, June and July 2020. Alike Villacé-Molinero, Fernández-Muñoz et al. [68], snowball sampling is deemed an appropriate sampling technique to explore travel intentions considering the urge to collect data on a rapidly evolving phenomenon under unprecedented circumstances. This technique has been previously adopted in tourism and social science research [e.g., 69, 70], allowing to shrink time and monetary costs of data collection and to recruit hard to reach communities [71] while accounting for multiple eligibility requirements [72]. The main disadvantages of snowball sampling are self-selection bias and over-representation of subgroups having similar characteristics [72]. These limitations were addressed by collecting a large sample and by trying to diversify it socio-demographically.

The questionnaire included 7 main sections investigating the following dimensions: socio-demographics, ego-involvement with wine (WI), Covid phobia (CPH), acquired interest in wine during the pandemic (AQWINT), previous wine tourism experience, wine tourism intentions (LRWTINT, ALWTINT), and financial difficulties caused by the pandemic.

Specifically, the socio-demographic section captured age, gender, education, country of residence, household composition, marital status, household income before the pandemic.

Household income is captured through 4 descriptive statements adapted from Istat annual survey on life conditions. For example, A sufficient economic situation is described as follows: "*My monthly household income was usually just sufficient to cover expenses and I/we could hardly save part of it*."

Potential economic constraints to travel are captured through one statement measuring family income variations following the pandemic, ranging from 1=much worse, to 5=much improved (Table 1).

Wine tourists are identified through one statement assessing if the respondent visited a wine producing region and/or participated in a wine festival in the last 3 years [33].

Involvement with wine (WI) is captured through Brown et al.'s [33] wine involvement scale (WIS), which is deemed the most appropriate for the present study due to its solid theoretical foundation and its specific application to wine tourism studies. The original WIS includes 15 items measured on a 7-point Likert scale, where 1 = totally disagree and 7= totally agree.

Fear and anxiety towards Covid (CPH) are captured by adapting Arpaci et al. [44] Covid-19 phobia scale (C19P-S). In the present study, the C19P-S is preferred to similar scales [e.g., 37] due to its capability to embody the effects of both Covid-related fear and anxiety. Considering the aim of the study, which is not diagnostic but rather to highlight potential negative effects of Covid-19 on wine tourism intentions, the adapted C19P-S scale (further referred to as CPH scale in the text) includes the psychological and social dimension measured through 7 items selected based on loading scores.

Like the wine involvement construct (WI), items are measured on a 7-point Likert scale, where 1 = totally

disagree and 7= totally agree.

Five items measured on a 7-point Likert scale (1 = totally disagree to 7= totally agree) are introduced specifically for the present study to capture the effect of the lockdown, and particularly of having more free time because of it, on interest in wine (AQWINT).

Long-run wine tourism intentions (LRWTINT) are captured through a single item adapted from Sparks [30] and measuring the willingness to take a wine trip in a future holiday on a 7-point Likert scale (1 = totally disagree and 7= totally agree).

An additional item captures the short-term intention to go on a wine trip after lifting Covid-related mobility restrictions (ALWTINT) – i.e., at the end of the first lockdown – measured on a 7-point Likert scale.

Finally, one item captures willingness to support local wineries by purchasing locally produced wines (SUPLOCW) on a 7-point Likert scale (1 = totally disagree, 7= totally agree). The item is formulated as follows: "*After the COVID-19 pandemic, I think it is important to support Italian winemakers by purchasing wines produced locally*".

A detailed description of the items adopted for each scale and construct is provided in Table 2.

3.2 Sample description

A total of 751 questionnaires was collected. Incomplete surveys were excluded, and the final sample was reduced to 713 valid questionnaires. For the sake of the analysis, only people having previous wine tourism experience were considered (n=553), 412 of whom from Italy and 141 from France. Table 1 summarizes the socio-demographic profile of the sample by Country of residence of the respondents. The socio-demographic characteristics of the sample are in line with the profile of wine tourists reported by the literature, which identifies them as highly educated tourists aged from 30 to 50, with typically woman travelling with their partner, with a high income [61, 73, 74, 75].

Notably, both samples present similar shares of males and females while highlighting a slight prevalence of females (53.2% in Italy; 53.9% in France). Compared to France, Italy records a higher share of singles (50.5%) and a lower average education level (17.5% of post-graduates against the 56.0% observed for France). In both samples, most respondents enjoy either a sufficient or good economic situation before Covid-19 that did not change following the pandemic (65.0% in Italy, 66.7% in France). Nevertheless, a remarkable share of interviewees from both countries declares that his/her family income has worsened after Covid-19 (31.8% Italy; 27.0% France).

3.3. Data Analysis

A preliminary descriptive analysis is conducted through SPSS software to explore wine tourism travel patterns before the pandemic, as well as wine tourism intentions after mobility bans are lifted (ALWTINT), and long-term tourism intentions (LRWTINT), among Italian and French wine tourists. AMOS software is used to further perform Structural Equation Modelling (SEM). SEM is widely applied in many fields of study dealing with human-based data, particularly in consumer behaviour studies, tourism included [32, 76, 77). Indeed, this methodology allows path modelling and the simultaneous estimation of measurements through multiple equations. Differently from similar techniques such as Partial Least Square (PLS), SEM estimation accounts for error variance. This represents a considerable advantage for behavioural studies, where complex theoretical concepts (such as the fear of the novel Coronavirus) cannot be measured directly through a single item. Still, instead, they are captured by multi-item latent constructs [78]. By accounting for the measurement error associated with the use of latent constructs and correcting for it, SEM can provide higher robustness for elaborations made on data collected from human individuals, which are often not normally distributed [78]. SEM consists of two main steps: Step 1 is the evaluation of the measurement model (MM), and step 2 is the analysis of the causal relationships between constructs, i.e., the structural model (SM) analysis. To proceed with step 1, exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) are run on the 3 constructs included in the MM – i.e., Covid phobia (CPH), involvement with wine (WI) and acquired interest in wine during the lockdown (AQWINT).

First, the factor analysis (EFA) with principal component as the extraction method and oblique rotation is run. Like in other studies [30], oblique rotation is chosen as a correlation among the items expected. The EFA confirms the 3 constructs load on different factors, 4 of the 6 items referring to symbolic centrality of WI scale load on a different factor showed no consistency with the rest of the scale. This is in line with past research highlighting potential inconsistencies of the symbolic centrality dimension of involvement as the context changes [58]. Therefore, the symbolic centrality dimension is dropped, contributing to maintain an adequate sample-size/parameters ratio for SEM analysis [78]. Based on Cronbach's alpha, other items are trimmed from both CPH and WI scales. The final WI scale includes 7 items, while CPH comprise 5 items. No items are removed from AQWINT scale (5 items).

Table 1. Socio-demographic profile of respondents by country.

		Italy (n=412)		France (n=141)	
		Frequency	%	Frequency	%
Gender	Male	193	46.8	65	46.1
	Females	219	53.2	76	53.9
Age	18-29	76	18.4	24	17.0
	30-40	121	29.4	36	25.5
	41-50	103	25.0	38	27.0
	51-60	82	19.9	26	18.4
	60+	30	7.3	17	12.1
Education	High school or lower	13	3.1	0	0.0
	College	129	31.3	13	9.2
	University	198	48.1	49	34.8
	Post-Graduate	72	17.5	79	56.0
Marital Status	Couple	204	49.5	106	75.2
	Single	208	50.5	35	24.8
Has children	No	329	79.9	99	70.2
	Yes	83	20.1	42	29.8
Income Before Covid	Insufficient	3	0.7	4	2.8
	Just sufficient	35	8.5	17	12.1
	Sufficient	194	47.1	71	50.3
	Good	180	43.7	49	34.8
Income Variation	Much worse	12	2.9	6	4.2
After Covid	Worse	119	28.9	32	22.7
	Unchanged	268	65.0	94	66.7
	Improved	12	2.9	9	6.4
	Much Improved	1	0.2	0	0.0

N=355
Source: own elaboration.

Secondly, we proceed with the confirmatory factor analysis (CFA) of the measurement model (MM), the results of which are presented in Table 2. To evaluate MM's Goodness-of-fit (GOF), Root Mean Square Error of Approximation (RMSEA) and Standardized Root Mean Residual (SRMR) are considered as indices of absolute fit. At the same time, Tucker Lewis Index (TLI) and Comparative Fit Index (CFI) are reported for incremental fit. Thresholds for the GOF indices are considered based on sample size (n) and on the number of observed variables in the model (m) according to Hair et al.'s guidelines [78]. Overall GOF of the measurement model (MM) on the whole sample is satisfactory ($\chi2$ (553) = 441.13; df = 112; $p < .001$; $\chi2/df = 3.94$; RMSEA = .07; CFI = .96; TLI = .95; SRMR = .04). Although some researchers argue that $\chi2$ should not be significant [e.g.., 30], this statistic tends to penalize larger samples and models with a higher number of observed variables [78]. According to sample size (n = 553) and number of observed variables (m = 17) of the MM applied, significant p-values for $\chi2$ are expected [78]. Construct Reliability (CR) and Average Variance Extracted (AVE) are above the recommended thresholds for all latent constructs (CR > .7; AVE > .5) [78], and all standardized factor loadings are significant and above the ideal threshold (.7) providing evidence of convergent validity for all scales [78]. Discriminant validity is also supported by AVE exceeding inter-construct correlations [78].

For step 2, i.e., the analysis of the causal relationships between constructs, the same GOF indices used for the MM are considered. Mediation effects (H2; H5; H6) are explored in addition to direct effects and are estimated through bootstrapping (500 bootstrapping intervals) with bias-corrected confidence intervals (C.I. = 95%). This technique is reported to be a reliable tool to test for indirect effects, providing intervals for estimates without relying on distribution [79].

Lastly, cross-cultural differences between France and Italy are further explored through a multigroup analysis (MGA). Before path differences between the two

Table 2. Factor loadings and reliability of the measurement model.

	Item description	Factor loading[a]	Average Variance extracted (%)[b]	Construct Reliability[c]
			AVE	CR
Covid Phobia (CPH)				
CPH1	The fear of coming down with coronavirus makes me very anxious.	0.91	67.9	.91
CPH2	I am extremely afraid that by traveling me/ my family might become infected by the coronavirus.	0.81		
CPH3	News about coronavirus-related deaths causes me great anxiety.	0.88		
CPH4	After the coronavirus pandemic, I feel extremely anxious when I see people coughing.	0.76		
CPH5	The idea of traveling with big groups of peolpe (e.g., by train or plane) makes me anxious	0.78		
Involvement with wine (WI)				
WI1	My interest in wine makes me want to visit wine regions	0.80	73.9	.95
WI2	My interest in wine has been very rewarding	0.86		
WI3	Wine represents a central life interest for me	0.84		
WI4	Wine represents a central life interest for me	0.92		
WI5	I have invested a great deal in my interest in wine	0.92		
WI6	Much of my leisure time is devoted to wine-related activities	0.90		
WI7	People come to me for advice about wine	0.78		
Acquired Wine Interest in lockdown (AQWINT)				
AQWI1	During the lockdown, I learnt more about wine and winemaking	0.82	69.6	.92
AQWI2	During the lockdown, I became more passionate about wine	0.81		
AQWI3	During the lockdown, I watched and/or read on-line content (e.g., youtube videos, blogs) and/ or documentaries about wine	0.87		
AQWI4	Since the beginning of the lockdown, I started following profiles of wineries/wine experts on social media	0.87		
AQWI5	Since the beginning of the lockdown, I started looking for more information about the wines I want to purchase	0.80		

n=553.
a. Based on standardized regression weights from AMOS.
b. AVE was computed based on the formula from Hair et al. [78] as an indicator of convergent validity.
c. CR was computed based on Hair et al. [78].

countries are tested, a preliminary multigroup confirmatory factor analysis (MCFA) is required to test for the measurement model to be consistent between the two groups. To do so, the fitting of the MM is first tested on the French and Italian samples separately to assess configural invariance. The latter condition is confirmed by the MM showing acceptable fitting for both groups (Italy $\chi2$ (412) = 361.77; df=112; $p < .001$; $\chi2/df = 3.23$; RMSEA = .07; CFI = .96; TLI = .95; SRMR = .04; France $\chi2$ (141) = 242.99; df=112; $p < .001$; $\chi2/df = 2.17$; RMSEA = .09; CFI = .94; TLI = .93; SRMR = .05). Moreover, the totally free multiple group model (TF) reveals acceptable fit ($\chi2$ (553) = 605.10; df=224; $\chi2/df = 2.70$; $p < .001$; RMSEA = .05; CFI = .96; TLI = .95; SRMR = .04). All standardized factor loadings are significant at $p < .001$ with values of .7 or above in both groups [78], supporting configural invariance. Subsequently, we test the model for metric invariance by comparing the fit of the constrained model (M1), where all factor loadings are imposed to be equal between the groups, and of the unconstrained model (M0), through a likelihood ratio test (LR). LR test compares the model with and without constraints by estimating them as nested models. The output produces a chi-square $\chi2$ statistic estimated according to equation 1 [79]:

$$\chi^2 = -2log\left[\frac{L(M_1)}{L(M_0)}\right] = \{-2log[L(M_1)]\} - \{-2\log[L(M_0)]\} \quad (1)$$

This step brings statistical evidence that the measurement model (MM) measures the same constructs in both the groups considered: if the $\chi 2$ statistic between the two models is significant, it means model estimates differ between the groups. I our study, model's metric invariance is supported ($\chi 2$ test p= .625), confirming the equivalence of psychometric properties of the MM across groups [78]. Therefore, it is appropriate to proceed with multi-group comparisons. Single paths are further tested to identify which effects are significantly different between groups. In light of the size difference between the two groups, estimations have been weighted over groups numerosity.

4. RESULTS

4.1 Wine tourism travel paths before Covid and post-lockdown travel intentions.

Descriptive statistics of the samples are presented in Table 3. Before the pandemic, most Italian and French wine tourists travelled to wine regions close to their area of residence and/or located in different regions, and a remarkable share visited wine regions in other EU countries (34.2% in Italy; 34.8% in France). The average length of stay is slightly higher for French wine tourists, who tend to travel with their partner (59.6%), with friends (41.1%) or their family (29.8%), prefer private lodgings (41.1%) or hotels (34.4%) as accommodation, and declare a higher average budget compared to Italian tourists. However, this budget difference is not significant (F (1, 508) = 2.26, p = .13). Instead, Italian wine tourists tend to prefer shorter trips (the 43.4 visits to a wine region no longer than 1 day), and usually stay at bed & breakfasts (38.4%) or hotels (29.3%). Similarly to French wine tourists, most Italians usually travel with their partner (55.8%) or friends (54.4%), but a considerably higher share travels with other wine lovers (28.9% in Italy; 17.0% in France).

With respect to wine holidays after mobility restrictions, the great majority of both French and Italian wine tourists plans wine travel in a different region and to stay

Table 3. Wine tourism travel patterns before and after Covid-19.

		Before Covid				After Covid*			
		Italy		France		Italy		France	
		freq.	%	freq.	%	freq.	%	freq.	%
Visited wine regions in:									
The same region where I live	Yes	306	74.3	88	62.4	133	41.0	29	33.3
A different region in my country	Yes	292	70.9	106	75.2	241	74.4	54	62.1
Another E.U. country	Yes	141	34.2	49	34.8	95	29.3	32	36.8
An Extra E.U. country	Yes	34	8.3	24	17.0	20	6.2	6	6.9
Length of stay	1 day or less	178	43.4	43	30.9	75	23.1	16	18.4
	2-3 days	156	38.0	57	41.0	145	44.8	29	33.3
	4-7 days	65	15.9	24	17.3	62	19.1	28	32.2
	≥ 7 days	11	2.7	15	10.8	25	7.7	14	16.1
Preferred accommodation	Hotel	68	29.3	33	34.7	43	18.5	22	31.0
	Bed & Breakfast	89	38.4	13	13.7	89	38.4	6	8.5
	Private lodging	39	16.8	39	41.1	39	16.8	37	52.1
	Camping/village	9	3.9	5	5.3	8	3.4	3	4.2
	Agritourism	27	11.6	5	5.3	53	22.8	3	4.2
Traveling with partner	Yes	230	55.8	84	59.6	193	59.6	50	57.5
Traveling with friends	Yes	224	54.4	58	41.1	157	48.5	30	34.5
Traveling with family	Yes	75	18.2	42	29.8	51	15.7	24	27.6
Traveling with wine lovers	Yes	118	28.6	24	17.0	57	17.6	10	11.5
Traveling alone	Yes	33	8.0	13	9.2	24	7.4	8	9.2
Budget	(€)	431.0		513.0		539.9		622.3	

N=553: Italy n=412; France n=141.

*After Covid wine travel statistics refer solely to wine tourists who are most likely to have a wine holiday after the end of mobility restrictions (ALWTINT ≥ 4; France n = 87; Italy n = 324).

Table 4. Long-term and short-term wine tourism intentions.

		1	2	3	4	5	6	7	Mean	St.Dev.	Anova F	Anova p
Would like to visit a wine region in a future holiday (LRWTINT)	Italy	0.7	1.7	1.9	6.8	9.0	16.0	63.8	6.3	1.25	85.98[A]	0.00
	France	7.1	7.8	11.3	14.9	23.4	12.1	23.4	4.7	1.85		
Plans to visit a wine region after mobility bans are lifted (ALWTINT)	Italy	5.8	7.3	8.3	6.6	14.1	15.8	42.2	5.3	1.93	29.23	0.00
	France	12.8	11.3	14.2	12.1	17.0	11.3	21,3	4.3	2.02		

n=553. 1=strongly disagree; 7=strongly agree.
[A] The assumption of Homogeneity of Variance is violated, Welch Anova is used.

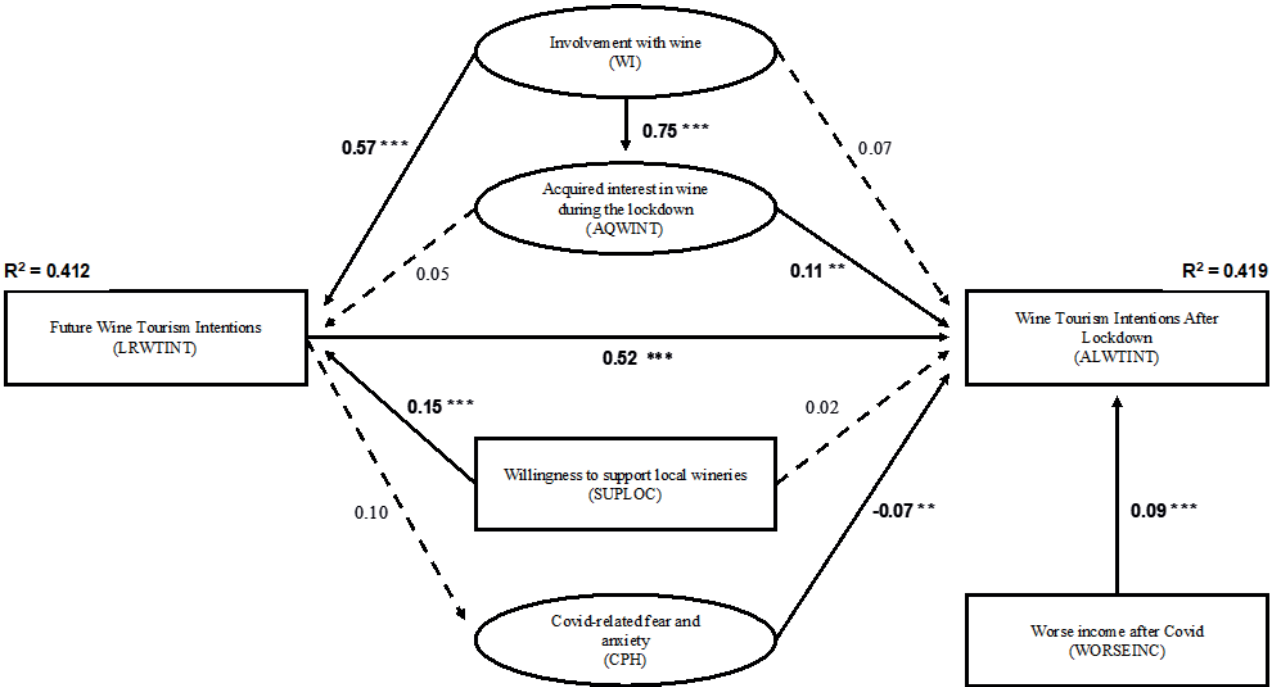

Figure 2. Path diagram with standardized regression coefficients: SEM results on the whole sample. Note: n = 553; ***p < .01; **p < .05; *. Significant paths are represented with a continuous line and the related structural weights are reported in bold.

longer than one day (44.8% 2-3 days in Italy; 65.5% % 2-7 days in France). Among Italian respondents, the interest in hotels dropped by 58% in favour of an *agriturismo* (+97 %; Table 3), which are typically family run farms with a limited number of rooms. This variation does not seem to be related to fear and anxiety towards Covid as no significant difference in CPH emerged for wine tourists preferring an *agriturismo* (F (1, 322) = 1.5, p = .22) or a hotel (F (1, 322) = 1.7, p = .20) for a post-lockdown wine holiday. Most French tourists still prefer private lodgings (+27%) and are interested in hotels (31.0%). Generally, the Italian sample shows a significantly higher intention to go on a wine holiday both on the long-term and after the lifting of mobility bans (Table 4).

4.2 Structural model results

The structural model (SM) is first tested on the whole sample (Figure 2). Goodness-of-fit statistics reveal a satisfactory fit to the data ($\chi 2$ (553) = 605.81; df = 175; p < .001; $\chi 2$/df = 3.46; RMSEA = .07; CFI = .95; TLI = .95; SRMR = .04). The model shows a remarkable predictive power, explaining 41% and 42% of LRWTINT and ALWTINT variance respectively. Involvement with wine is a significant antecedent of long-term wine tourism intentions (WI -> LRWTINT; β = .57; p < .001), which is the main predictor, followed by willingness to support national wineries (SUPLOCW -> LRWTINT; β = .15; p < .001). As regards the willing-

Table 5. Summary of hypotheses tested and related outcomes.

Hypothesis	Outcome
H1. Covid phobia impacts negatively on post-lockdown wine tourism intentions.	Partially supported
H2. Covid phobia mediates the effect of future wine tourism intentions on post-lockdown wine tourism intentions.	Not supported
H3. Involvement with wine positively affects post-lockdown wine tourism intentions.	Not supported
H4. Involvement with wine positively affects future wine tourism intentions.	Supported
H5. Acquired interest in wine mediates the effect of involvement with wine on post-lockdown wine tourism intentions.	Supported
H6. Acquired interest in wine mediates the effect of involvement with wine on future wine tourism intentions.	Not supported
H7. Acquired interest in wine positively affects post-lockdown wine tourism intentions.	Supported
H8. Acquired interest in wine positively affects long-run wine tourism intentions.	Not supported
H9. Willingness to support local wineries positively affects post-lockdown wine tourism intentions.	Not supported
H10. Willingness to support local wineries positively affects long-run wine tourism intentions.	Supported

Note: n=553.

Table 6. Correlations and descriptive statistics.

	AQWINT	CPH	WI	ALWTINT	LRWTINT	WORSEINC	SUPLOCW
Acquired interest in wine during the lockdown (AQWINT)	3.5 (1.77)						
Covid-related fear and anxiety (CPH)	0.058	3.5 (1.63)					
Involvement with wine (WI)	0.662***	0.058	5.2 (1.35)				
Wine tourism intentions after lockdown (ALWTINT)	0.404***	0.004	0.494***	5.1 (2.02)			
Future wine tourism intentions (LRWTINT)	0.466***	0.102***	0.640***	0.624***	5.9 (1.58)		
Worse income after Covid (WORSEINC)	0.109***	0.106***	0.149***	0.171***	0.131***	0.3 (0.46)	
Willingness to support local wineries (SUPLOCW)	0.129***	0.041	0.123***	0.139***	0.194***	0.050	6.0 (1.35)

Note: Mean (Std. Dev.) on the diagonal. *** $p < .01$ ** $p < .05$.

ness to go on a wine holiday after the lifting of mobility restrictions (ALWTINT), it is significantly predicted by both LRWTINT ($\beta = .52$; $p < .001$), and by AQWINT ($\beta = .11$; $p = .04$). A worse family income following the pandemic (WORSEINC) positively affects ALWTINT as well, although to a lesser extent ($\beta = .09$; $p = .01$). Interestingly, neither WI nor SUPLOCW are predictors of ALWTINT. Covid-related fear and anxiety (CPH) have a limited negative impact on post-lockdown wine tourism intentions (CPH -> ALWTINT $\beta = -.07$; $p = .05$) but no significant effect on LRWTINT. Finally, as expected, WI is a significant antecedent of AQWINT in lockdown ($\beta = .75$; $p < .001$).

While the relationship between WI and LRWTINT is not significantly mediated by AQWINT, the effect of WI on ALWTINT is fully mediated by the construct (direct effect $\beta = .07$; $p = .28$; indirect effect $\beta = .09$; $p = .04$). Regarding mediation of CPH among LRWTINT and ALWTINT, a significant indirect effect was found ($\beta = -.01$; $p = .04$), although having a limited size. Table 5 summarizes the results obtained from the SEM analysis for all the hypotheses postulated while correlations, mean, and standard deviation of the variables included in the path diagram are proposed in Table 6.

Multigroup comparisons between French and Italian wine tourists are conducted to check for cross-cultural differences in single paths of the model. Table 7 summarizes the key descriptive statistics of the two sub-samples compared through the multigroup analysis (i.e., France and Italy).

The effect of AQWINT on ALWTINT is found to differ significantly between France and Italy ($\chi2$ (351, 553) = 8.01, $p < .001$). In particular, the effect for Italian respondents is positive and significant ($\beta = .20$; $p < .001$), while it is negative and non-significant for the French sub-sample ($\beta = -.18$; $p = .13$). Slightly significant differences are found also for the effect of CPH and of WORSEINC on ALWTINT ($\chi2$ CPH (351, 553) = -.22, $p = .07$; $\chi2$ WORSEINC (351, 553) = 2.65, $p = .09$). Similarly to the former effect, the two paths are not significant in the

Table 7. Mean and standard deviation of the variables included in the SEM by group.

	France (n=141)		Italy (n=412)	
	Mean	St.Dev	Mean	St.Dev
Involvement with wine (WI)	4.9	1.36	5.4	1.32
Acquired interest in wine during the lockdown (AQWINT)	3.0	1.79	3.6	1.73
Covid-related fear and anxiety (CPH)	3.4	1.46	3.7	1.54
Wine tourism intentions after lockdown (ALWTINT)	4.3	2.06	5.3	1.93
Future wine tourism intentions (LRWTINT)	4.7	1.85	6.3	1.25
Willingness to support local wineries (SUPLOCW)	6.1	1.24	5.9	1.39

Note: n=553; Italy n=412; France n=141.

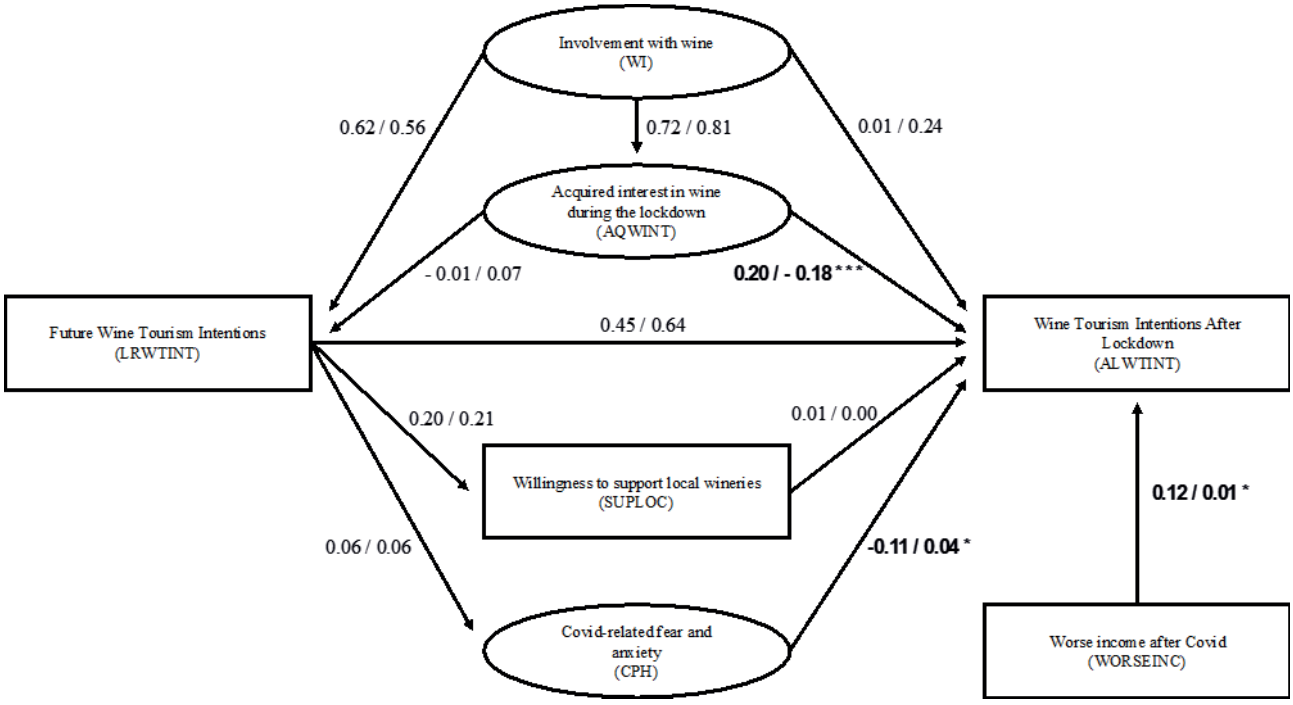

Figure 3. Multigroup comparisons between Italy and France. Note: n = 553; ***p < 0.01; **p < 0.05; *p < 0.1. The first result refers to Italy, the second to France. Significant results are reported in bold.

French sub-sample (CPH -> ALWTINT France β = .04; p = .48; WORSEINC -> ALWTINT France β = - .05; p= .86) but they are for the Italian one. Particularly, CPH has a significant negative impact on ALWTINT (CPH -> ALWTINT Italy β = - .11; p < .001) while a worse income (WORSEINC) positively predicts short-term wine tourism intentions (WORSEINC -> ALWTINT Italy β = .51; p < .001). Results of multigroup comparisons are summarized in Figure 3.

Country-moderated mediation effects have been further explored. No significant differences emerged for CPH mediation between the two groups (χ2 (352, 553) = 3.42, p = .18). Similarly, the mediation of AQWINT on the effect of WI on LRWTINT is not significantly different between France and Italy (χ2 (352, 553) = 3.80, p = .15). A significant difference exists for the mediation of AQWTINT on WI and ALWTINT (χ2 (352, 553) = 11.39, p = .003). Particularly, the indirect effect of WI on ALWTINT is positive for Italian respondents while it is negative for French wine tourists, despite poorly significant (Italy β = .15; p < .004; France β = -.15; p =.092).

5. DISCUSSION AND CONCLUSION

The present study is among the first to provide a comprehensive overview on how an unprecedented event like the pandemic affected wine tourists' behavioural intentions considering both positive and negative factors. To do so, we focus on two major wine tourism actors which have been severely hit by Covid-19: Italy and France.

Generally, this analysis suggests the pandemic boosted wine tourism intentions rather than limiting them. Particularly, a greater share of wine tourists from both countries is willing to travel outside their region of residence after the lockdown, either to a different region or to another European country. Diversely, the share of tourists willing to travel to a neighbouring wine region is significantly smaller. Both the average length of stay in the wine region and the planned budget for a wine holiday record an increase compared to pre-Covid, despite a considerable share of respondents declaring a worse economic situation following the pandemic. This observation is consistent with the overnight stays peak recorded between July and August 2020 in both countries, when most Covid limitations were lifted. For the future wine tourism research agenda, it would be interesting to evaluate whether the pandemic encouraged wine holidays instead of other trips among (wine) tourists.

A switch from hotels to *agriturismo* emerged in the Italian sample, which does not appear to be connected to fear of contagion. National tourism statistics support this tendency since, compared to 2019, overnight stays in accommodations other than hotels (e.g., *agriturismo*, camping) recorded a lower decrease (-45%) than hotel ones (-56%) in 2020. Moreover, they grew more than hotel stays in 2021 (+27%, compared to +19% for hotels), and are therefore recovering faster from the 2020/2019 drop: while the 2021/2019 variation for hotels is still above -40%, other accommodations raised to -28%. Further research is needed to verify the extent of such behavioural changes and to explore their drivers.

In our study, Covid-induced fear and anxiety (CPH) only shows a minor and poorly significant negative effect on wine tourism intentions after the lockdown (ALWTINT). This is despite the data collection timeframe, i.e. after the first wave of infection, when information on the virus and potential treatments was still scarce. Moreover, CPH does not mediate the relationship between future wine tourism intentions (LRWTINT) and intention to go on a post-lockdown wine holiday. The mild negative impact of CPH may be explained by the fact that wine tourists tend to be older than regular tourists, and the Covid-mortality rate is greater for the elderly [81]. Nevertheless, in line with existing studies [e.g., 35], CPH does not constitute a substantial deterrent to wine holidays. Although more research is required, we can reasonably connect this outcome to a higher perceived safety of rural destinations (like wine regions) compared to city ones [6]. This hypothesis is reinforced by recent findings showing how the threat of Covid intensifies consumers' tendency to avoid crowding [82], which is easier in rural area.

It should be noted that the impact of CPH is remarkably higher for the Italian sample, where its direct effect on wine tourism intentions after the lockdown is negative and significant (β - .11, $p < .01$). At the same time, it is non-significant for French respondents. Trust in official communications may have played a role in determining this country difference since, as Villacé-Molinero et al. [68] highlighted, they impact on the likelihood to stick to travel plans. Therefore, this is an essential factor to be considered by future research on the topic.

The fact that AQWINT in lockdown significantly affects post-lockdown wine tourism intentions (ALWTINT) suggests that the proper communication strategy can help attracting wine tourists ahead of time. The prolonged duration of the Covid pandemic enhances the relevance of this finding, drawing attention on the strategic role played by virtual wine content and social-media marketing in reaching a wider audience and retain existing consumers during infection peaks. By fostering an increase of online content use, Covid has also boosted their long-term marketing potential in reducing the time and financial investment for wine tourists approaching unknown wineries and wine regions.

The effect of such activities, though, may vary from country to country. Indeed, the influence of situational wine involvement (AQWINT) on post-lockdown wine tourism intentions (ALWTINT) shows a significant direct effect only for the Italian subsample (β .20; $p < .001$). The same variable is a also a mediator of personal involvement with wine (WI) on ALWTINT for both French and Italians, while playing a greater and positive role for the latter. Summing up, while in Italy situational involvement is an antecedent of short-term wine tourism intentions independently from involvement with wine, its effect is exclusively connected to the latter variable in France.

Nevertheless, ss past studies suggest [33, 62], the significant mediation of AQWINT on the path from WI to wine tourism intentions supports the relevance of situational involvement in enhancing the predictive power of WI. Academically, this finding paves the way to further research exploring the role of situational involvement in predicting wine tourism intentions and behaviour.

WI further confirmed to be a key antecedent of long-term wine tourism intentions, [52, 53, 54]. The remarkable standard deviation observed for WI highlights the present sample includes wine tourists possessing different degrees of interest and involvement with wine: a characteristic that may impact their future behavioural intentions. Future studies should address this issue and analyse group differences in wine tourism behaviour after the Covid outbreak based on respondents' profiles as wine consumers, which is beyond the scope of this study.

Solidarity, intended as the willingness to support local wineries by purchasing their products (SUPLOCW), emerged as a noteworthy driver of long-term wine tourism intentions. This finding is in line with proximity being a key driver of wine tourism [25], which is also supported by the remarkable share of day-trippers in the sample. Moreover, it highlights the strong connection between the wine tourism phenomenon and support to rural communities through direct sales [66] and, on a greater scale, the vital role wine tourism can have as a form of sustainable tourism, answering rising concerns of tourism growth in the context of climate change [10]. Winery owners and tourism stakeholders should build on the willingness to support local businesses to attract travellers outside major city destinations, designing sustainable itineraries and experiences in rural areas.

Post-lockdown wine tourism intentions (ALWTINT) seem to benefit of proximity as well, being positively impacted by negative repercussions of Covid-19 on household income. So, in a sense, trips to close wine areas may represent an attractive and affordable getaway for families suffering the negative financial repercussions of Covid-19. This is true especially for the Italian subsample, where the effect is significant and not negligible (β 0.12; $p < .01$).

Despite some researchers argue that the pandemic brought people attention on society problems [63], in our model solidarity with local winemakers after the Covid-19 crisis does not impact intentions to go on a wine holiday after the lockdown significantly. This outcome may be the result of risks connected to travelling representing a too high price to pay to prioritize collective wellbeing, since the potential losses associated with Covid infection include health issues.

Whilst offering a comprehensive overview on a still unexplored topic, the present study comes with some limitations, which are mostly connected to operational difficulties in collecting data. Notably, a relevant size difference between the two subpopulations exists. In this respect, data analysis relied on weighted estimates based on the French and the Italian group sizes. Some heterogeneity in terms of wine tourism intentions is also present between the two countries. The nature of such Country-based behavioural differences calls for further research, while the present study results represent an exploratory step forward to their comprehension.

To conclude, the pandemic has deeply impacted tourism dynamics, inducing changes in travellers' behaviour that call for fast, innovation-based responses [68]. Moreover, the emergence and re-emergence of lethal viruses have become increasingly frequent and worrying in the last decade, notably for the ease of transmission fostered by international travel [83]. Covid itself is still undefeated, and new viral variants are emerging. The findings of this study, therefore, provide wine tourism stakeholders with relevant information on how such unprecedented circumstances impact wine tourists' behaviour and to effectively plan a recovery strategy accordingly. Academically, this research represents important progress to wine tourism research as, differently from many past studies, it provides a comprehensive view of behavioural intentions by simultaneously modelling positive and negative drivers of intentions: an improvement which is very much needed to avoid undesired myopias connected to the important role played by constraints in behavioural research [84].

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