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Article

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Direct and moderating effects of COVID-19 on cultural tourist satisfaction

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ABSTRACT

This paper proposes a model to determine the direct and moderating effects of COVID-19 on the overall satisfaction of cultural tourists with the heritage destination visited. The hypotheses put forward in the model have been tested employing non-linear structural equation models (SEM), estimated with data from the Resident Travel Survey of the National Statistics Institute (NSI), on domestic demand for cultural tourism in Spain. The data analyzed covers both a pre-covid and pandemic period, from January 2019 to September 2021. The results confirm that COVID-19 significantly impacted the decrease in cultural tourists' satisfaction with the visit. It highlights the negative relationship between cultural tourists' socioeconomic profile and satisfaction. This research provides knowledge on the impact of COVID-19 on the behavior of cultural tourists, with practical implications for the design of tourism policies for the promotion and marketing of heritage destinations through differentiated marketing that increases satisfaction for this demand segment in crisis scenarios.

1. Introduction

The health crises, such as the SARS outbreak (Pine & McKercher, 2004) or Ebola (Cahyanto, Wiblishauser, Pennington-Gray & Schroeder, 2016), reveal that, in these situations, changes in tourist behavior and travel demand occur in response to perceived risks. There is an increasing tendency to make fewer trips, short-stay trips, excursions, and to destinations close to the place of residence, with trips within a maximum radius of 200 km (Gómez Escudero, 2018; UNWTO, 2009).

The COVID-19 pandemic confirms these trends (ObservaTUR, 2021; Sánchez-Cañizares, Cabeza-Ramírez, Muñoz-Fernández & Fuentes-García, 2021; Xu, Cong, Wall & Yu, 2021). Tourists preferred national destinations with a lower tourist flow, linked to the offer of nature and culture, consolidating proximity tourism (OECD, 2020; Segittur, 2020). It leads to tourist ethnocentrism (Zenker & Kock, 2020).

Therefore, it is even more necessary to diversify the product by promoting complementary sun and sand offers, attracting customers with various motivations to travel and high consumption (Priestley, 2007), a strategy that allows sustainable tourism and is more oriented towards the income margin than the volume of visitors.

Thus, the domestic market and demand segments with high purchasing power, such as cultural tourists, become even more critical for destination marketing in the post-covid tourism industry (Du Cross, 2001; Wang, 2014).

Data on the international tourist flow to Spain in 2019 show that the average expenditure per person per day for those with a cultural motivation was 183 euros compared to 137 euros for those searching for sun and beach. The total expenditure of cultural tourists increased by more than 15 %, while that of sun and beach tourists decreased by 7 % (NSI, 2019). That allows for sustainable tourism that is more oriented towards the revenue margin than the volume of visitors.

Visitor satisfaction is an essential variable of tourism sustainability and competitive advantage for destinations (Iniesta-Bonillo, Sánchez-Fernández & Jiménez-Castillo, 2016; Jarvis, Stoeckl & Liu, 2016; Kozak, 2002), as well as a predictor of tourist behavior, through repetition or recommendation of the visit to third parties (Chen & Chen, 2010). However, measuring tourists' satisfaction after the visit is complex as it is influenced by endogenous and exogenous factors (Martínez, 2011). The latter, such as crisis scenarios, are difficult for tourist destination managers to control.

It is therefore essential to provide information on the variation in the behavior of the cultural tourist, before and during the pandemic, to the agents involved in the tourism management of cultural destinations, which will help to design and develop specific tourism promotion and marketing policies and actions, as well as its territorial sustainability and competitiveness within the tourist market (DNA, 2020).

This paper aims to analyze the influence of COVID-19 on the overall satisfaction with the destination visited by Spanish cultural tourists. To

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this end, an examination is made of the key factors that can influence it, as well as the moderating role of COVID-19 in its relations. The aim is to understand the importance that Covid-19 can have as a determining factor with respect to the degree of satisfaction of tourists with the destination and it is based on the need to analyze how this change in their behavior can influence the current and future context of tourism (Zenker & Kock, 2020).

This research proposes and estimates a statistical model, by means of structural equation modeling (SEM), with two time periods, pre- and post-pandemic, to assess differences in tourist satisfaction. A model based on the theory that explains the variables that would integrate the customer experience (Garduño & Cisneros, 2018; Homburg, Jozić & Kuehnl, 2017), relating it to the use or experience of tourism consumption (Lončarić, Perišić Prodan & Dlačić, 2019) and satisfaction with the object of consumption, the destination.

The empirical analysis has been obtained from the data on culturally motivated tourism demand from the Resident Travel Survey conducted periodically by the National Statistics Institute (NSI).

This research has two main contributions. The study demonstrates the effect of COVID-19 on overall visitor satisfaction. Furthermore, it builds a model as a methodological solution, providing an empirical basis to measure the influence of variables associated with disaster or crisis scenarios on the general satisfaction of tourists.

The knowledge generated by this study, through the analysis of the tourism experience of the demand, is a necessary step to provide information to heritage destinations in managing of their resilience and competitiveness in scenarios of crisis and uncertainty. Overall tourist satisfaction is related to the positioning and competitiveness of destinations within the tourism offer, since it increases the flow of visitors (Devesa Fernández, Laguna García & Palacios Picos, 2008; Kim, Cheng & O'Leary, 2007).

The structure of the study starts with a review of the relevant literature in support of the hypotheses formulated in the proposed theoretical model. Next, the research methods and the results obtained from the structural equation model are analyzed. Finally, the article concludes with a discussion and establishes the study's conclusions, its theoretical and practical contributions, limitations, and future lines of research.

2. Conceptual framework

Next, the conceptual foundations of the different factors that influence the satisfaction of the cultural tourist are reviewed, focusing on the variables in the Resident Survey (NSI) explored in the proposed model.

A systematic review of the scientific production on the subject in the databases has been carried out to synthesize the contribution of knowledge of the variables that influence the satisfaction of cultural tourists. Web of Science and Scopus databases were consulted, using the keyword: tourist satisfaction. The review was conducted from 2000 to the present, selecting 25 articles directly related to this research. Table 1 below shows the ten most relevant contributions for the variables used and their justification in the reviewed literature.

2.1. Variables influencing cultural tourist satisfaction

In the case of tourists, their satisfaction is determined by a group of activities-experiences that have proven positive not only during their stay at the destination but also during the preparation for the trip. In this way, the final satisfaction would be a set of several gratifying actions that occur at different times during the trip, including during the organization before it even takes place. As a result, satisfaction will depend on both the expectations of the consumers-visitors and the evaluation they make of the experiences with the product-destination once it has been "consumed" (Kotler, Cámara, Grande & Cruz, 2000; Mkono, 2016).

To the above, we must add that in the tourism sector, we need to include both tangible and intangible elements that influence satisfaction. Among the first group are the destination's tourism resources,

Table 1
Studies on variables that affect tourist satisfaction.

Authors	Year	Study variables
SOCIO DEMOGRAPHIC PROFILE		
Huete-Alcocer, López-Ruiz & Grigorescu	2019	Level of education, professional status and household income
Bautista, Martín, Fernández & Da Silva	2015	Age and sex
Pulido-Fernández & Sánchez	2010	Age
Royo & Serarols	2005	Age and level of education
Lara de Vicente & López-Guzmán	2004	Age and level of education
Callan & Bowman	2000	Sex
ACTIVITIES		
Alcoba, Mostajo, Paras, & Ebron	2017	Activities
Kotler, Cámara, Grande & Cruz	2000	Activities
TRAVEL ORGANIZATION		
Hui, Wan & Ho	2007	Travel organization
Kozak	2002	Travel organization

Source: Own elaboration.

infrastructure, accessibility, etc. The intangible elements include the emotions tourists experience, the perceived quality of services, and the level of compliance with expectations (Gómez Patiño, 2012). These factors are difficult to quantify but can have a much greater influence on the satisfaction of tourists than the tangible elements (Bourdeau, 1985; Picos & Fernández, 2005).

Therefore, satisfaction would be a broader concept that is not only affected by benefits-rewards but also by consumer-related factors (cultural, personal, or experiential elements) and situational factors that are beyond the control of the service provider (Devesa Fernández et al., 2008; Zeithaml & Bitner, 2002).

In short, different variables have an influence on the ultimate satisfaction of tourists, such as those related to the socioeconomic profile of the visitor (Valls, 2003), their main motivation for travel (Yoon & Uysal, 2005) or those intrinsic to the destination itself (Chen & Chen, 2010).

Following several studies that divide the factors influencing tourist consumption behavior into internal and external factors (Bigné & Zorio, 1989; Martínez, 2011), this research classifies these variables into two groups: endogenous and exogenous. Thus, endogenous variables are those derived from the different attributes of the cultural tourist, such as cultural level, sex, or age, and exogenous variables are those connected with the tourist's own consumption experience at the destination, including indicators related to the organization of the trip and activities carried out, present in the Residents' Survey (NSI, 2016).

2.1.1. Endogenous variables related to the tourist attributes

Age is essential within sociodemographic variables. Various authors note that the age segment of the cultural tourist is between 25 and 55 years, with the age range of 30–44 years- making the most trips, mainly due to economic stability and family independence (Lara de Vicente & López, 2004; Pulido-Fernández & Sánchez, 2010; Royo & Serarols, 2005; Valls, 2003).

Concerning cultural motivation according to age, the latest research conducted in the city of Madrid (Spain) concludes that there are differences between tourists over 45 years compared to those between 18 and 44 years, the first being those with lower levels of motivation (Bautista, Martín, Fernández & Da Silva, 2015).

Gender is one of the personal characteristics of the tourist highlighted in the literature. It affects the perception of the destination and the motivations to visit it, as evidenced by several studies that point to it as a discriminating factor in the client's perception, often being more positive on the part of the woman (Callan & Bowman, 2000). It would

also exert some significant influence on the motivations since women, when they visit a destination, present motivations more related to knowledge than men (Gil, Beerli & De León, 2012). However, other authors do not show significant differences between the sexes about their cultural motivation or satisfaction with the destination's resources or infrastructures (Bautista et al., 2015).

The educational level of cultural tourists is high, with university or secondary studies, as shown by several types of research (Lara de Vicente et al., 2004; Royo & Serarols) and field studies developed in different Spanish cities (Troitiño et al., 2000). This level of studies would positively impact satisfaction by providing a better understanding and interpretation of the cultural resources visited. At the same time, having higher education would have a higher level of demand on the part of the tourist, which has a decisive influence on their satisfaction (Valls, 2003).

2.1.2. Exogenous variables related to the tourism experience

Linked to the influence of the variables related to the tourist's experience (among which would be those concerned with the organization of the trip and the activities carried out) and their degree of satisfaction, several studies analyze the positive relationships in a cultural destination between the quality of the tourist experience and satisfaction to the destination (Chen & Chen, 2010). This study emphasizes that it substitutes the variables related to the quality of service for the quality of the experiences to explain the degree of satisfaction as it considers that this variable better explains existing relationships in the case of cultural tourism.

The experiences lived at the destination, through the activities carried out, are one of the aspects that the tourist will value once the trip is over, comparing it with the projected expectations, resulting in their degree of satisfaction (Kotler et al., 2000). The clients –and the tourist with even more intensity, due to the nature of tourism– seek experiences that complete their identity, so it is essential to generate satisfaction that these experiences are authentic, not artificial. Thus, as pointed by Alcoba, Mostajo, Paras and Ebron (2017), not always the price or quality will be the most important, but the creation of value emerged from the quality of experiences.

Other works highlight that the ability of the destination to provide the visitor with an experience according to their expectations and needs will generate a greater or lesser levels of satisfaction of the tourist towards the destination (Yoon & Uysal, 2005).

The tourist's experience at the destination is also influenced by the degree to which the trip is organized. The data of the survey object of this study on the organization of the trip, on the part of the internal demand of cultural tourism, show that tourists hardly use the standard organized trips (tourist packages) in their trips in Spain, predominantly the organization of trips takes place in an independent way (NSI, 2019). This is explained by the fact that as the physical and cultural distance between origin and destination increases, the use of package tours increases (Calle & García, 2010). Therefore, the degree of organization of the trip can also influence the way of "living" the destination visited.

Based on the theoretical foundations exposed in the literature, the relationships of satisfaction with socio-demographic factors (age, education, gender...), travel attributes (type of accommodation and transport, existence or not of advance bookings...) and the activities carried out at the destination were established to verify their influence on satisfaction.

Sánchez-Sánchez, De Pablos-Heredero and Montes-Botella (2021) propose and validate the following hypotheses:

H1. *Travel organization influences the overall satisfaction of the cultural tourist.*

H2. *The socio-demographic profile of cultural tourists influences their overall satisfaction.*

H3. *The activities carried out at the destination influence the satisfaction of*

the cultural tourist.

Derived from the general objective of this study, to analyze the influence of COVID-19 on the overall satisfaction of Spanish cultural tourists with the destination visited, and its relationships with other factors in the definition of their behavior, the model of cultural tourist satisfaction published by Sánchez-Sánchez et al. (2021) is applied, incorporating the variable COVID-19.

Therefore, the aim is to confirm whether the model of Sánchez-Sánchez et al. (2021) behaves in the same way in the face of an unforeseen scenario, such as a pandemic, and promotes unexpected changes in the usual behavior of the cultural tourist.

2.2. Impact of COVID-19 on tourist behavior

The COVID-19 epidemic has led to significant changes in the behavior of tourists (Kock, Norfelt, Josiassen, Assaf & Tsionas, 2020; Lee, 2020; Wang, Wong & Narayanan, 2020). On the one hand, those resulting from limitations on international tourism flows imposed by countries through lockdowns and quarantines (Muhammad et al., 2020). On the other hand, the functional adaptation of tourists (Kock, Josiassen & Assaf, 2019) to the new health situation by mitigating the perceived risk of travel due to fear of contagion (Neuburger & Egger, 2020).

The pandemic has caused a paradigm shift in tourist behavior, resulting in new patterns that have become entrenched (Zenker & Kock, 2020). Tourists demand closer destinations, with outdoor activities and social distancing (Nanni & Ulqinaku, 2021). As well as a preference for organized travel and travel insurance that guarantees last-minute cancellations (Kock et al., 2020).

Therefore, the following hypothesis is put forward:

H4. *COVID-19 influences the activities undertaken in the destination by the cultural tourist.*

The pandemic could also influence cultural tourist satisfaction to different extents depending on socio-demographic characteristics. Humagain and Singleton (2021), have studied that higher-risk groups such as older people, people with illnesses, pregnant women or people travelling with children were more satisfied with the visit if the destination implemented anti-COVID-19 measures because they perceived higher safety.

As a result of the above, the following hypothesis is put forward:

H5. *COVID-19 influences the socio-demographic profile of the cultural tourist.*

After the pandemic, it is expected that off-season travel will increase, activities will decrease or visitation options will expand to avoid overcrowded destinations (Wen, Kozak, Yang & Liu, 2020). Air travel will be less frequent and there will be a preference for travel by own vehicle (De Haas, Faber & Hamersm, 2020; Shamshiripour, Rahimi, Shabanpour & Mohammadian, 2020).

Health safety and cleanliness will play an important role in the choice of destinations in the future (Higgins-Desbiolles, 2020).

Therefore, the following hypothesis is put forward:

H6. *COVID-19 influences the organization of travel.*

2.3. The effect of COVID-19 on tourist satisfaction

In the tourism context, tourists' overall satisfaction derives from the rating given to the attributes of the destination visited, including both tangible attributes (tourist resources, accommodation, safety, etc.) and intangible attributes (attitude of the local population, etc.).

Satisfaction is therefore the evaluation of the tourism experience at the destination (Chi & Qu, 2008; Chi, Lee, Ahn & Kiatkawsin, 2020), which depends on both positive and negative emotions experienced during the trip (Pestana, Parreira & Moutinho, 2020).

The various measures implemented in tourist destinations during the

COVID-19 pandemic, such as reduced capacity at tourist attractions to maintain a safe distance or restrictions on the services provided by accommodation, are new experiences that can influence satisfaction. Thus, the following hypothesis is advanced:

H7. COVID-19 influences the overall satisfaction of cultural tourists.

2.4. Moderating effect of COVID-19

This study incorporates COVID-19 as a moderating variable comparing two tourism contexts: pre-COVID-19 and pandemic, as it could condition tourist behavior, modifying it (Humagain & Singleton, 2021).

Due to the importance of analyzing changes in tourist behavior resulting from the pandemic (Zenker & Kock, 2020), the present research focuses on changes in factors affecting the overall satisfaction of cultural tourists. To this end, it analyses the existence or not of COVID-19 as a moderator in the relationships between the three exogenous variables of the model and cultural tourist satisfaction. The following hypotheses are proposed:

H8. COVID-19 plays a moderating role in the relationship between the socio-cultural profile of cultural tourists and their overall satisfaction.

H9. COVID-19 plays a moderating role in the relationship between activities carried out in the destination and the overall satisfaction of the cultural tourist.

H10. COVID-19 plays a moderating role in the relationship between the degree of organization of the travel and the overall satisfaction of the cultural tourist.

2.5. Proposed conceptual model

Based on the theoretical foundations set out above, we have identified those variables from the Resident Travel Survey questionnaire which are considered to influence the behavior of cultural tourists in cultural destinations. Subsequently, the conceptual model and its system of interdependent relationships has been set out with the specific effects that can be seen in Fig. 1.

The 5 factors included in the proposed model comprise COVID-19, the overall satisfaction with the cultural tourist's trip, his/her socio-cultural profile, the organization of the travel and the activities undertaken at the destination. The hypothetical associations are established between the four independent variables concerning profile, organization, activities and COVID-19, the dependent variable (overall satisfaction of the cultural tourist) and the moderator variable (COVID-19).

All factors are integrated and measured by different indicators. 8

indicators for the socio-cultural profile (age, sex, level of education, professional status, economic activity, household income, autonomous community of residence and number of household members) (Sánchez-Sánchez et al., 2021).

19 indicators make up the travel organization factor, grouped by destination, type of trip, services used and bookings made, and 5 indicators for the activities factor (cultural visits, attendance at cultural shows, other cultural activities, visiting cities and gastronomic activities) (Sánchez-Sánchez et al., 2021) Overall satisfaction is composed of a single indicator (Sánchez-Sánchez et al., 2021) as it is the case for the COVID-19 factor. This makes a total of 34 indicator variables present in the model.

3. Methodology

3.1. Data

The estimation of the model and the hypotheses put forward have been empirically tested using data obtained from the Resident Travel Survey of the National Statistics Institute (NSI), for the study of tourist trips and excursions in Spain made by the resident population. The Resident Travel Survey allows, among other variables, to obtain complete information on the traveler's profile, travel typology or motivation (Carrera & Bes, 2021; Prado-Mascullano, 2013). The data used were those whose main motivation for the trip was cultural.

To measure the degree of satisfaction, the questionnaire establishes a Likert-type scale of 10 points ranging from 1 (totally dissatisfied) to 10 (totally satisfied) (NSI, 2016).

The study period analyzed runs from January 2019 to September 2021. The sample size is $n = 9789$. Of these, 6421 surveys were conducted before Covid-19 and 3368 during the pandemic. Table 2 shows their main characteristics.

Table 2
Characteristics of the sample.

Type of survey	Continuous on a quarterly basis.
Population scope	Population aged 15 and over residing in the main family dwelling.
Area	The entire national territory.
Reference period	Monthly.
Sample size	Around 16,400 interviews conducted each month.
Data collection	Telephone interviews and, in some cases, personal interviews.

Source: National Statistics Institute (2021).

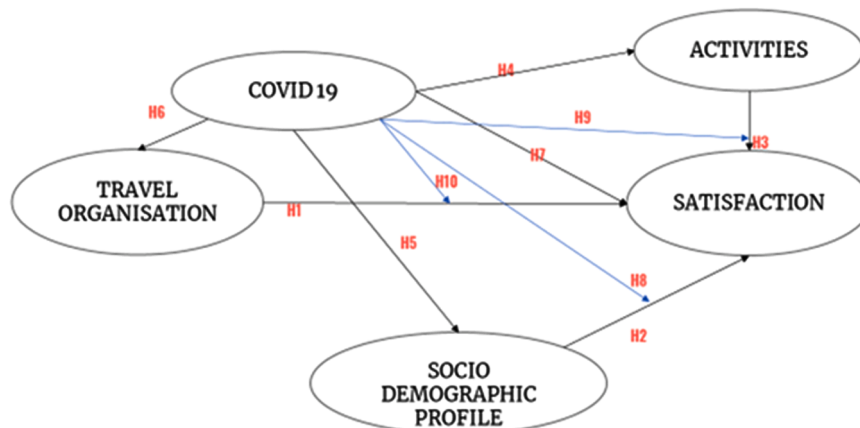


Fig. 1. Proposed model. Source: Own elaboration.

3.2. Data analysis

The applied research framework aims to show the causal relationships between the following six factors or latent variables: socioeconomic and cultural profile of the tourist, travel organization, activities undertaken at the destination, COVID-19 and overall satisfaction with the destination or type of destination, estimated by means of a non-linear structural equation model (SEM, Structural Equations Modelling). The COVID-19 disease has been introduced into the model as a dummy variable.

The choice of using structural equations as a methodology derives from the exploratory nature of this research, as it is particularly useful for analyzing relationships between latent variables (theoretical concepts) and indicators (empirical concepts) related through hypotheses in prediction-oriented research (Henlein & Kaplan, 2004). It is therefore a suitable tool for revealing causal relationships between concepts in empirical social science research, which uses indicators to establish relationships.

Several empirical studies in tourism have analyzed the causal relationships between various factors and satisfaction using structural equations (Chi & Qu, 2008; Domínguez, Camuñez, Pérez & González, 2017; Eusebio & Vieira, 2011; Yoon & Uysal, 2005). However, according to the review of the scientific literature, the models published to date are linear and therefore do not reflect the actual behavior of the relationship between the variables.

To estimate the model parameters, the statistical software WarpPLS 7.0 (Kock, 2019) was used, which allows the estimation of non-linear effects to test the full range of relationships between factors, allowing a closer approximation to reality. The parameter values were obtained by bootstrap (Efron & Tibshirani, 1993) with 100 samples of a size equal to the sample size $n = 9791$.

Their choice for the estimation of the model was based on the following assumptions: the modeling of the investigated problem is in an emerging state; the minimum requirements of PLS with respect to sample size; the accuracy of the prediction; and low requirements, compared to other techniques, concerning the multi-normality of the data (Jöreskog & Wold, 1982; Henseler, Ringle & Sinkovics, 2009).

3.3. Estimation of the model and fit indices

To verify the quality of the model, we first analyzed the reflective measurement models that constitute the different factors considered, and then the structural model. The analysis of measurement models includes their validity and reliability.

Table 3 shows a summary of the values obtained together with the values of the indicators generally accepted in the literature. To assess the

Table 3
Model fit and reliability indices.

Index	Value	Value Interpretation
Average path coefficient (APC)	APC=0.060, $P < 0.001$	
Average block VIF (AVIF)	AVIF=1.395	Acceptable if ≤ 5 , ideally ≤ 3.3
Average full collinearity VIF (AFVIF)	AFVIF=1.143	Acceptable if ≤ 5 , ideally ≤ 3.3
TenenhausGoF (GoF)	GoF=0.132	Small ≥ 0.1 , medium ≥ 0.25 , large ≥ 0.36
Sympson's paradox ratio (SPR)	SPR=0.900	Acceptable if ≥ 0.7 , ideally = 1
R-squared contribution ratio (RSCR)	RSCR=0.991	Acceptable if ≥ 0.9 , ideally = 1
Statistical suppression ratio (SSR)	SSR=1.000	Acceptable if ≥ 0.7
Nonlinear bivariate causality direction ratio (NLBCDR)	NLBCDR=0.700	Acceptable if ≥ 0.7

Source: Own elaboration.

adequacy of the theoretical model in relation to the data collected in the study sample, the overall fit of the total theoretical model was analyzed by evaluating the following fit indices (Table 3).

4. Results

Of the four hypotheses of the model regarding the direct influence of various factors on satisfaction, only one has not been confirmed. Hypothesis 2 (H2) has not been confirmed ($p = 0.23$) at the 95 % confidence level, slightly lower at around 77 %. Therefore, the socioeconomic profile of the cultural tourist would not significantly affect his or her overall satisfaction (H2). In hypothesis 1 (H1), the sign of the coefficient ($\beta = -0.02$) indicates that the higher certain variables of the travel organization, the lower the degree of satisfaction of the cultural tourist. All proposed hypotheses concerning the influence of COVID-19, either directly or as a moderator, have been accepted ($p < 0.05$).

Table 4 presents the results for each hypothesis:

The relationships between the different variables of the estimated non-linear model are described and presented graphically below (Fig. 2). Only the effects of COVID-19, direct or as a moderating effect, are analyzed, as the other variables have been analyzed in previous publications (Sánchez-Sánchez et al., 2021).

H4. COVID-19 → Activities carried out at destination.

In this hypothesis, the presence of COVID-19 confirms a statistically positive and significant relationship on the activities carried out by the tourist during the trip ($p < 0.01$).

The graph shows fewer activities occur in the pre-covid period than during the pandemic.

H5. COVID-19 → Socioeconomic profile of the cultural tourist

The curve in Fig. 3 shows an inverted U-shape for the association between COVID-19 and the type of socio-cultural profile of the tourist. In the absence or low levels of COVID-19 its influence on the socio-demographic profile of the cultural tourist is increasing until a maximum from which, and already in the pandemic, it progressively decreases.

H6. COVID-19 → Travel organization

COVID-19 has a significant and negative effect on travel organization (Fig. 4). Thus, the higher presence of COVID-19 would be associated with a lower growth in travel organization and its lower incidence leads to an increase in travel organization.

H7. COVID-19 → Overall satisfaction

The figure's inverted U-shaped curve for the association of these two variables indicates that in the absence or low levels of COVID-19 satisfaction increases. In turn, in the presence of COVID-19, satisfaction decreases (Fig. 5).

H8. Socioeconomic profile of cultural tourists → COVID-19 → Satisfaction

Table 4
Assessment of the hypotheses.

H1: Travel Organization → Satisfaction ($\beta = -0.02$, $p = 0.02$). Confirmed
H2: Socio-demographic profile → Satisfaction ($\beta = 0.01$, $p = 0.23$). Not confirmed
H3: Activities performed → Satisfaction ($\beta = 0.02$, $p = 0.01$). Confirmed
H4: COVID-19 → Activities performed ($\beta = 0.27$, $p < 0.01$). Confirmed
H5: COVID-19 → Sociodemographic profile ($\beta = 0.07$, $p < 0.01$). Confirmed
H6: COVID-19 → Travel organization ($\beta = -0.13$, $p < 0.01$). Confirmed
H7: COVID-19 → Satisfaction ($\beta = 0.02$, $p = 0.03$). Confirmed
H8: COVID-19 → (Socio-demographic profile → Satisfaction) ($\beta = 0.02$, $p = 0.03$). Confirmed
H9: COVID-19 → (Activities performed → Satisfaction) ($\beta = -0.02$, $p = 0.04$). Confirmed
H10: COVID-19 → (Travel organization → Satisfaction) ($\beta = 0.02$, $p = 0.02$). Confirmed

Source: Own elaboration.

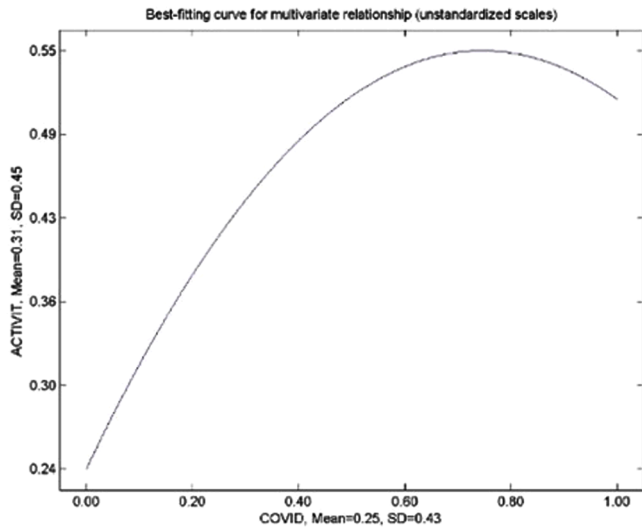


Fig. 2. Direct influence of the presence of COVID-19 (COVID) on the activities (ACTIVIT) of the cultural tourist (H4). Source: Own elaboration. In this hypothesis, the presence of COVID-19 confirms a statistically positive and significant relationship on the activities carried out by the tourist during the trip ($p < 0.01$).

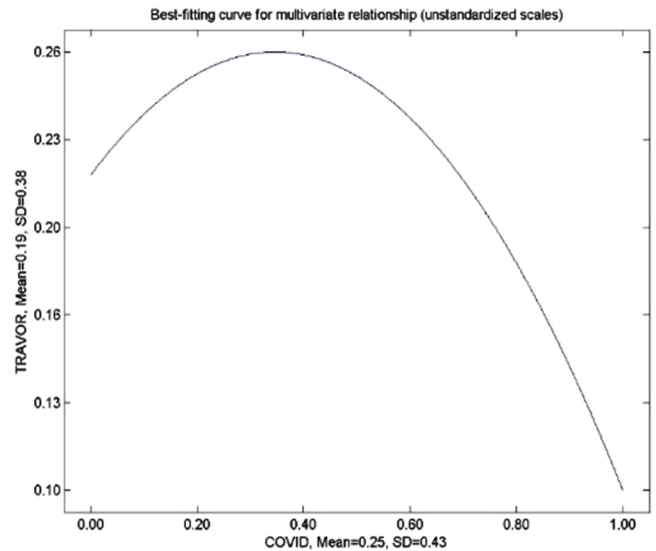


Fig. 4. Direct influence of the presence of Covid-19 (COVID) on the travel organization (TRAVOR) of the cultural tourist (H6). Source: Own elaboration.

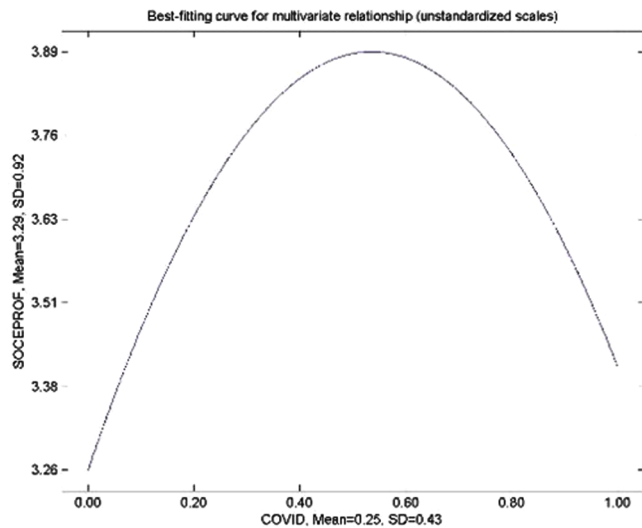


Fig. 3. Direct influence of the presence of COVID-19 (COVID) on the socio-demographic profile (SOCEPROF) of the cultural tourist (H5). Source: Own elaboration.

The results of the graphs (Fig. 6-7) show that the presence of COVID-19 clearly alters the relationship between the sociological profile of cultural tourists and their satisfaction. Whereas under non-pandemic conditions, lower-than-average socio-cultural profiles were associated with increased satisfaction up to a maximum, after which satisfaction decreased. The situation under pandemic conditions is reversed, and it is observed that for low values of the socio-cultural profile, satisfaction decreases as the socio-cultural profile increases. However, after a certain point, this trend is reversed, with higher levels of the sociological profile being accompanied by a higher level of satisfaction.

H9. Activities carried out → COVID-19 → Satisfaction

In the absence of COVID-19 the activities carried out in the destination favor the satisfaction of the cultural tourist. 3 tranches can be distinguished. At low levels of these, satisfaction increases to reach a stationary level of satisfaction for intermediate values. Above a certain

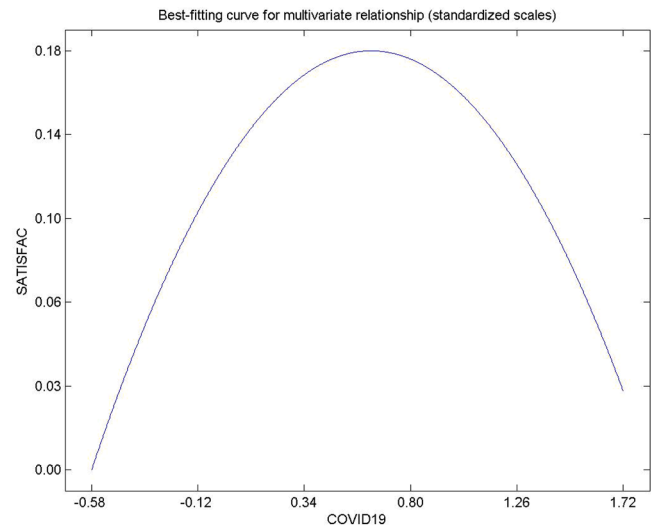


Fig. 5. Direct influence of the presence of COVID-19 (COVID) on the satisfaction (SATISFAC) of cultural tourists (H7). Source: Own elaboration.

threshold, the level of satisfaction increases significantly.

On the contrary, in the presence of COVID-19, the increase in activities is accompanied by an increase, albeit not very pronounced, in the satisfaction of cultural tourists. This tendency is evident in practically the whole range of activities, except when they reach a notably high level, where satisfaction decreases. It is noteworthy that, while in the absence of COVID-19 a high number of activities notably increases the satisfaction of cultural tourists, this is not the case during the pandemic, showing that the level of satisfaction derived from the activities does not increase above a certain threshold, being, in general, less appreciated (Figs. 8-9).

H10. Satisfaction → COVID-19 → Travel organization

The graphs (Figs. 10-11) show that for low levels of organization (TRAVOR), both with and without the pandemic, there is an increase in satisfaction (SATISFAC) of the cultural tourist, until a maximum value where it starts to decrease. However, this maximum level occurs in non-COVID-19 times at a lower level of organization than during COVID-19 times. In other words, the cultural tourist during the pandemic requires

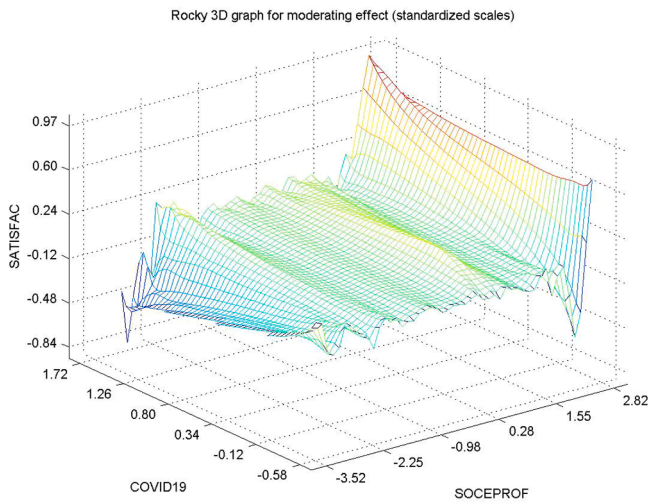


Fig. 6. (Three-dimensional graphic).

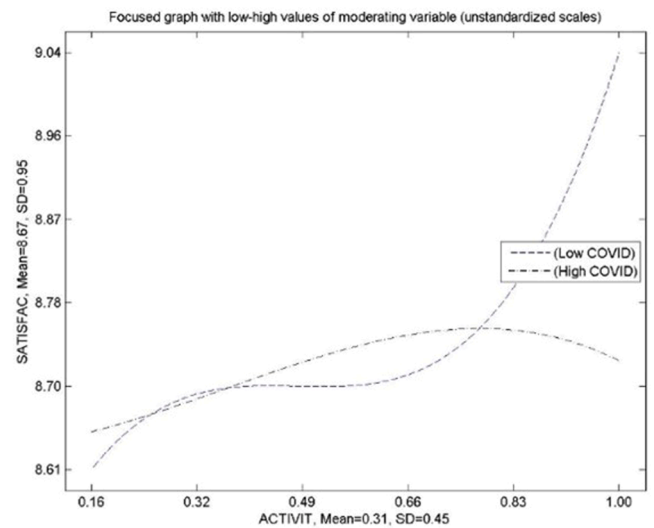


Fig. 9. Moderating influence (H9) of COVID-19 (COVID) on the relationship between the activities of cultural tourists (ACTIVIT) and their satisfaction (SATISFAC) before and after the appearance of COVID-19. Source: Own elaboration.

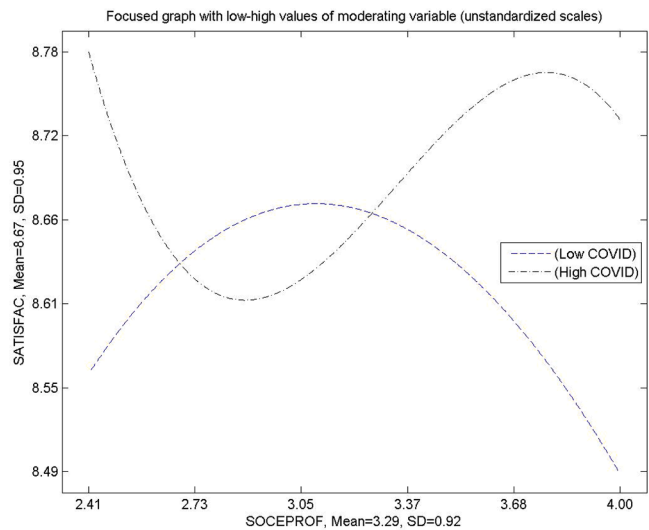


Fig. 7. Moderating influence (H8) of COVID-19 (COVID) on the relationship between the profile of cultural tourists (SOCEPROF) and their satisfaction (SATISFAC) before and after the appearance of COVID-19. Source: Own elaboration.

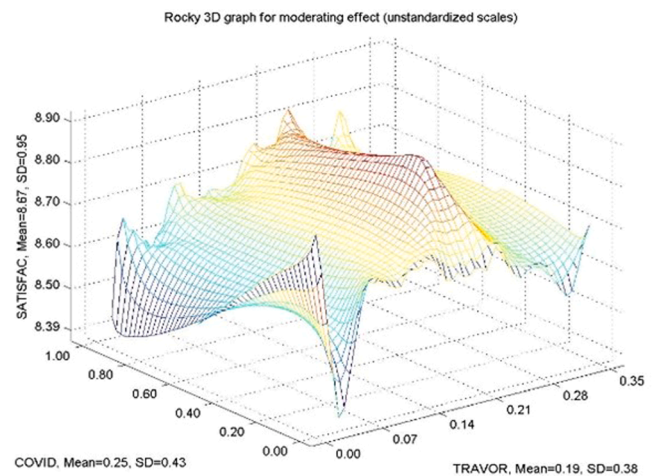


Fig. 10. (Three-dimensional graphic).

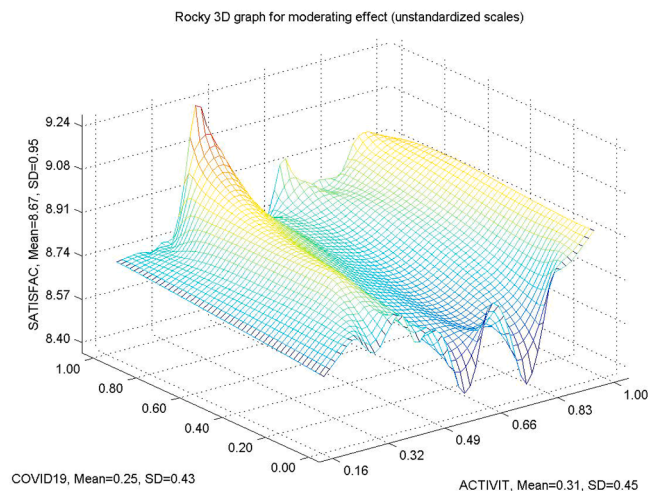


Fig. 8. (Three-dimensional graphic).

a higher degree of organization than in the absence of the pandemic. However, in both situations, high levels of organization lead to a decrease in the level of satisfaction of this type of tourist.

5. Discussion, conclusion and implications

The influence of travel organization on overall tourist satisfaction (H1) is confirmed. Their negative result does not follow the findings of other studies, conducted before the pandemic, on the positive influence of travel organization on tourist satisfaction (Hui, Wan & Ho, 2007; Sánchez-Sánchez et al., 2021). The moderating influence of COVID-19 on the relationship between travel organization and customer satisfaction (H10) also confirms a decrease in the level of satisfaction.

Data from the Resident Travel Survey (NSI, 2019), on travel organization, show that cultural tourists hardly use standardized organized trips (package tours), but travel independently. During the pandemic, the use of travel agencies has increased due to health constraints imposed by destinations and the need for more travel information for tourists (Kock et al., 2020). The need, during the pandemic, to use tourism intermediaries in a customer who is used to being autonomous

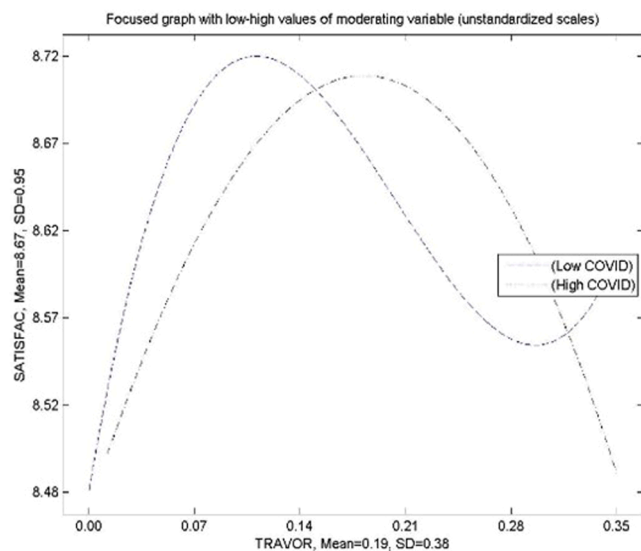


Fig. 11. Moderating influence (H10) of COVID-19 (COVID) on the relationship between travel organization (TRAVORG) and customer satisfaction (SATISFACT) before and after the emergence of COVID-19. Source: Own elaboration.

and who does not consume organized trips or standardized products (Lara de Vicente & López-Guzmán, 2004), could imply a lower degree of satisfaction.

Associated with the above, it is also demonstrated that the presence of COVID-19 has a direct effect on travel organization (H6) leading to less independent trip organization by the tourist, in favor of hiring tourism intermediaries (Kock et al., 2020), which leads to a change in the behavior of the cultural tourist and its impact on overall satisfaction with the destination (H10).

The influence of the socioeconomic profile of the cultural tourist in relation to the degree of satisfaction (H2) is not confirmed. Previous studies, conducted in the absence of a pandemic, did confirm this relationship (Huete-Alcocer, López-Ruiz & Grigorescu, 2019; Sánchez-Sánchez et al., 2021). Thus, starting from low levels for the profile variables, the degree of satisfaction also increases as their average values increase.

The presence of COVID-19 reveals that from one point onwards, it does directly impact the socioeconomic characteristics of the cultural tourist (H5), lowering the average values of the profile. Cultural tourists with higher profile variables stop travelling. Age, in this case, would be a variable that can predict travel demand (Kara & Mkwizu, 2020), associated with health risk (Karl & Schmude, 2017).

The moderating influence of COVID-19 on the relationship between the socioeconomic profile of cultural tourists and their satisfaction (H8) also confirms a change in the degree of satisfaction. The pandemic causes satisfaction to decrease for lower values of the socio-cultural profile and to increase for higher levels of the profile, the reverse of the trend in pre-COVID times. The educational level of cultural tourists gains importance as they generally have a higher education, which allows them to access, interpret and understand what they visit (Bourdeau, 1985), facilitating a higher degree of overall satisfaction.

The relation between the higher number of activities undertaken and the increase in satisfaction (H3), confirms that the experiences of tourists when undertaking activities in the destination are compared to their projected expectations, resulting in their degree of satisfaction (Kotler et al., 2000). Therefore, it is essential for destinations to include a diversity of tourist attractions and complementary offers, such as incorporating nature and rural tourism resources (Williams & Buswell, 2003).

The direct effect of COVID-19 on the activities carried out (H4) is manifested in an increase in these activities during the pandemic. Therefore, it is worth highlighting the finding that the pandemic

modifies the behavior of cultural tourists, favoring a greater tourist consumption of the destination's cultural resources.

This increase in the number of activities undertaken, moderated by COVID-19, also confirms a change in the satisfaction of cultural tourists (H9) which is not higher, as is the case in the absence of COVID-19, even though there is a considerable increase in the number of activities undertaken. It is evident that the behavior of cultural tourists during the pandemic impacts their tourism experience. However, for high levels of tourism consumption in the destination, it is not possible to link a higher degree of participation in cultural activities with a higher level of enjoyment by the cultural tourist, as has been confirmed by studies in the absence of COVID-19 (Teo, Khan & Rahim, 2014; Van der Ark & Richards, 2006).

Finally, analyzing the direct influence of COVID-19 on satisfaction (H7), it is clear that the overall satisfaction of cultural tourists with the destination declined on trips made during the pandemic. Thus, the evaluation of the tourism experience incorporates a greater number of negative emotions/evaluations resulting in increased dissatisfaction (Pestana et al., 2020).

In this sense, could be related to tourists' assessments of the practices undertaken by destinations during the pandemic to provide visitors a safe and satisfactory experience. Humagain and Singleton (2021), have analyzed and confirmed the positive link of COVID-19 measures with satisfaction, negating its negative consequences (closure of activities or reduced availability of services). However, the result of this study could provide contrary information in the case of the cultural tourism demand segment.

5.1. Theoretical implications

This study contributes to the understanding of cultural tourist satisfaction through a model that examines the direct influence and role of the moderating effect of COVID-19 on causal relationships, empirically verified through quantitative methods between travel organization, socio-demographic characteristics, activities undertaken and satisfaction.

This research proposes a statistical model, estimated by means of a non-linear structural equation model (SEM, Structural Equations Modelling), which allows us to know the direct and moderating effects of supervening circumstances, such as the COVID-19 pandemic, on the overall satisfaction with the destination of cultural tourists after their visit.

A significant contribution is the use of non-linear functions to test the relationships between the factors in the proposed model, since, in the systematic review of the literature on the subject, no work has been found that has applied non-linear relationships.

However, non-linear Structural Equation Modeling (SEM) with Partial Least Squares (PLS) has advantages over linear SEM PLS models in certain situations. Nonlinear SEM PLS models are best suited for capturing complex, nonlinear relationships between variables when the underlying relationships in the data are not strictly linear. This leads to a more accurate representation of the real-world phenomena being studied. Nonlinear SEM PLS models, as in the proposed model, can handle complex mediation and moderation effects common in the social and behavioral sciences. Linear models may not adequately capture these effects- (Chin, 1998; Tenenhaus, Vinzi, Chatelin & Lauro, 2005; Henseler et al., 2009; Hair, Hult, Ringle & Sarstedt, 2016).

The analysis focuses on assessing the satisfaction of cultural tourists in pre-pandemic and pandemic times, providing relevant results, due to the national scope of the data analyzed from the Resident Travel Survey, to implement marketing strategies aimed at their satisfaction in the new post-covid tourism scenario.

5.2. Practical implications

This study provides information on crisis scenarios and tourist

participation. From a practical point of view, the paper provides empirical evidence on the effect of COVID-19 exposure on tourists.

Concerning the results obtained, a relevant conclusion is that the level of education, in times of pandemic, is related to the degree of satisfaction; providing information on the need to carry out actions to improve the satisfaction of cultural tourists with lower educational levels by implying "cultural distancing" from the destination in crises, which could be promoted through strategies to generate more attractive and personalized complementary cultural offers for the demand segment with a lower profile.

COVID-19 has incorporated the hiring of tourism intermediaries by tourists who are not accustomed to using them to organize their trips, as is the case of cultural tourists, resulting in a lower degree of satisfaction. Therefore, travel agencies and other intermediaries have ample room for improvement in the satisfaction and loyalty of culturally motivated customers. It is essential for these actors not only to specialize but also to personalize the offer of services and products with high-added value that responds to the needs of tourists in crises.

Knowing how COVID-19 influences the satisfaction of cultural tourists makes it possible to expand/redesign the cultural offer available in cultural tourism products adapted to the new realities of present and future cultural tourism.

This will help improve the recovery and resilience of destinations, since the proposed statistical model aims to provide greater knowledge production to destinations on the behavior and tourist experience of cultural tourists in crisis scenarios. Relevant information, from a marketing point of view, is required to carry out early response strategies aimed at maintaining the competitiveness of destinations in scenarios of uncertainty or crisis.

5.3. Limitations and future lines of research

This article has limitations derived from the variables present in the Resident Travel Survey (NSI) framed within the general guidelines given by the World Tourism organisation (UNWTO) for the demand study. In particular, the measurement of satisfaction is done generally and not by attributes, giving less precise information on the assessment of the destination. In addition, it is necessary to integrate the analysis of other indicators to understand the behavior of cultural tourists that are not present in the questionnaire variables.

For a better understanding of this demand segment, it could be interesting in future research to analyze the moderating influence of COVID-19, or other crisis and uncertainty variables, between satisfaction and intention to repeat the visit and the recommendation of the destination to others.

Data availability statement

Data set associated with the paper will be provided on demand.

Declaration of Competing Interest

The authors report no conflicts of interest.

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