Analyzing the main determinants of being a cultural traveler: the case of domestic cultural trips in Spain

Marcos Álvarez-Díaz, Mónica Villanueva-Villar and Elena Rivo-López

Abstract

Purpose – *Analyzing the main determinants that lead a traveler to make a cultural trip is an important issue to understand where the cultural tourism market is going, and where the decision-makers should intervene. This study helps develop a profile of cultural tourism participants, and underscore the changes in this market niche. This information is crucial for the successful marketing and development of cultural tourism in the future.*

Design/methodology/approach – *The authors estimate a binary probabilistic (logit) model to determine the probability of a tourist to travel for cultural reasons, as a function of the traveler's socio-economic characteristic (e.g. age, gender, income or level of studies), of the trip-related characteristics (e.g. distance traveled to destination or mode of transport) and of the characteristics of the province of destination (e.g. weather conditions or existence of cultural sites at destination).*

Findings – *This study's estimates reveal that middle-aged individuals, with a higher level of studies and with a medium level of income show a higher propensity to travel for cultural reasons. The latter finding evidences that cultural tourism has evolved from a niche market reserved for an elite clientele to a much wider range of people. Additionally, cultural travelers tend to travel statistically much longer distances. They are less prone to visit crowded destinations, prefer visiting destinations with important cultural sites, and are less sensitive to weather conditions. Finally, the authors discover a complementary effect of culture tourism and other activities carried out during the trip such as visiting cities or theme parks; and a substitution effect with "beach-and-sun" tourism.*

Practical implications – *The information given in this study can be crucial for the successful marketing and development of cultural tourism in the future. A better understanding of the main determinants of being a cultural traveler implies a better and a more efficient implementation of managerial and political measures to attract a kind of tourism characterized by a high spending capacity.*

Originality/value – *Discovering the main determinants of being a cultural traveler is a topic scarcely treated in the literature. This study has the main originality to include characteristics of the destination (pull factors) to explain the individual's decision to take a cultural trip. Moreover, the authors work at a provincial (NUTS-3) level of analysis, which makes this study original in the field of cultural tourism.*

Keywords *Domestic cultural tourism, Traveler behavior, Logistic regression*

Paper type *Research paper*

Marcos Álvarez-Díaz, Mónica Villanueva-Villar and Elena Rivo-López are all based at the Faculty of Business Sciences and Tourism, University of Vigo, Ourense, Spain.

Received 6 October 2021
Revised 11 February 2022
27 April 2022
Accepted 1 June 2022

1. Introduction

Cultural tourism is one of the largest and most rapidly growing segments in the global tourism market (UNWTO, 2018). Understanding culture as a driver of tourism is a promising research topic, but it has been little studied so far; see Richards (2018) for a detailed literature review. The lack of studies is due mainly to the lack of a clear definition of the relationship between culture and tourism, and to the limited availability of data (Zieba, 2017). Recently, all these research limitations have been partially overcome. The concept of cultural tourism is now well-defined (UNWTO, 2018), and many countries have experienced important improvements in travel and tourism data collection and analysis. In fact, nowadays, it is quite common for statistical offices of many countries to

conduct surveys on tourist trips that allow researchers to study, in detail, the specific movements of people for cultural reasons.

Interest in studying the relationship between culture and tourism has to be the focus of much more work. Most studies were conducted to identify specific groups within the cultural tourism markets (Richards, 2018), but there is a lack of studies that have analyzed the main factors that drive cultural tourism (Guccio *et al.*, 2017). Policy-makers and entrepreneurs are now aware of and anxious to design optimal public policies and efficient business strategies that promote cultural tourism. Thus, the main goal of our study is to fulfill this informational requirement by discovering the main determinants of the provincial domestic cultural trips for the case of Spain during the year 2019. Specifically, we perform our study analyzing the main determinants that lead a traveler to make a cultural trip. This is an important issue to understand how the cultural tourism market will evolve, where it will go, and where the decision-makers should intervene. In words of Richards (2014), analyzing the determinants currently acting on cultural tourism, and likely to impact on its evolution in the near future, is a necessary requirement to outline the potential routes toward the future of cultural tourism.

Focusing on the case of cultural tourism in Spain is a feasible, interesting and important case of study. It is feasible, because the surveys on tourism conducted by the Spanish Statistical Office (INE) provide a great amount of data for mining (Richards, 2018). It is interesting, because Spain has a great historical and cultural legacy, but cultural tourism comprises only a minority of the Spanish tourism market. Thus, this tourism market niche is full of untapped potential. It is important, because cultural tourism has a strong economic potential. Indeed, there is a growing consensus that cultural tourism is a strategic market that must be explored and promoted to strengthen tourist activity in Spain (Herrero-Prieto and Gómez-Vega, 2017).

Focusing on domestic trips is relevant because domestic tourism markets are now of political interest. International markets have become increasingly competitive, and are also more sensitive to external shocks, such as economic and health crises, and political instabilities. Therefore, many national policy-makers have prioritized the promotion of domestic tourism as a means to enhance the local economy. On the other hand, a provincial-based analysis is highly recommended in the literature to study tourism flows because it is more precise and allows achieving a greater level of detail (Álvarez-Díaz *et al.*, 2020). In our study, we assume a provincial approach based on the NUTS-3 classification. This is the smallest classification of territorial units offered by the Statistical Office of the European Union (Eurostat), and is commonly used by the European Commission for specific socio-economic analysis. More information about the NUTS-3 territorial classification can be found at https://ec.europa.eu/eurostat/web/nuts/background.

To carry out our analysis, we construct and estimate a binary probabilistic (logit) model to detect the main determinants that condition the likelihood of taking a cultural trip. These determinants are based on the traveler's socioeconomic characteristics (e.g. age, gender or level of education), characteristics of the destination regions (e.g. weather conditions or cultural sites at destination) and characteristics of the trip (e.g. distance traveled or main mode of transport used). Our study aims to contribute to the extant literature on cultural tourism in the following ways. First, we provide statistical evidence partially confirming that cultural travelers are "up-scaled": cultural travelers have a higher level of education, but do not show significantly higher levels of income compared to non-cultural travelers. This finding implies a break with the deep-rooted belief in tourists' travel behavior that cultural tourism market is restricted to a kind of travelers characterized by high levels of education and high socioeconomic status (Richards, 1996, 2007). Considering this mind shift could be significant for operational purposes, and have important practical future implications for decision-makers. For instance, cultural tourism could be turning into a mass market. The growing number of cultural visitors may cause serious future problems of overcrowding in many destinations (Richards, 2018). Second, to the best of our knowledge, this is the first study to include characteristics of the destination provinces (pull factors) to explain the individual's decision to take a cultural trip. We discover that these characteristics are as important as those usually considered in empirical studies (i.e. the socioeconomic and the trip-related characteristics).

Finally, we analyze and discuss the effects of some determinants that have led to an intense and controversial debate in academia (e.g. the effect of the UNESCO World Heritage Sites, and the effect of distance to destination).

Our paper is organized as follows. After this introductory section, in Section 2, we specify the methodological framework (logit model and variables). In Section 3, we present and discuss the main results derived from the estimation of the model. Finally, we conclude in Section 5.

2. Econometric model and variables

Discrete choice micro-economic models have been widely used in marketing, economics, transportation and many other areas that require determining the probability that a person chooses a particular alternative. McFadden (1974) laid the theoretical foundations of the discrete choice micro-econometric models; and Alegre and Pou (2004) describe the theoretical model for the specific case of tourism decisions. The empirical use of these models in tourism and, specifically, in cultural tourism has been remarkable (see, for example, Kim *et al.*, 2003; Kastenholz *et al.*, 2013; Falk and Katz-Gerro, 2016; Zieba, 2017; Artal-Tur *et al.*, 2018, Vergori and Arima, 2020). In our study, we apply the most commonly used discrete choice model: the logit model – see Greene (2002) and Wooldridge (2012) for a detailed econometric explanation of the logit model. In particular, we assume that the likelihood that an individual wants to travel for cultural reasons can be represented by the expression:

$$P(Y = 1|X, Z, T, S) = G(X \cdot \beta + Z \cdot \gamma + T \cdot \delta + S \cdot \varphi) \quad (1)$$

where Y_i is a binary random variable that verifies $Y_i = 1$ if the traveler reveals that their leisure trip corresponds to cultural reasons, and $Y_i = 0$ if otherwise. The expression $P(Y = 1|X, Z, T, S)$ reads like the probability of taking a cultural trip ($Y = 1$) conditional on the explanatory variables collected in the matrices X, Z, T and S. $G(\cdot)$ is the logistic function. The parameters to be estimated in the model are included in the vectors β, γ, δ and φ. Moreover, the estimated model represented in equation (1) can be used to predict the likelihood of whether a traveler is going to make a cultural trip given the specific values of the variables included in the matrices X, Z, T and S. This is an important piece of information for decision-makers to foresee or simulate the number of cultural travelers that could visit a tourist destination, depending on their socio-economic characteristics, characteristics of the tourist destination and characteristics of the trip.

Most of the explanatory variables included in equation (1) are based on the economic consumer theory (Brida and Scuderi, 2013), as well as on previous literature on modeling cultural tourism (Zieba, 2017; Falk and Katz-Gerro, 2016). In Table 1, we list and describe all the explanatory variables included in the matrices X, Z, and T, as well as the data sources. Most of the data come basically from the Resident Travel Survey 2019. This national survey is monthly conducted by the Spanish Statistical Office. It offers socioeconomic and travel-related information of 52,482 interviewees whose main reason to travel was leisure and visiting friends and relatives. The rest of the information is taken from the Spanish State Meteorological Agency – AEMET to construct the meteorological variable, and from the UNESCO for the cultural attractiveness variable. All these data refer to 2019 and are public and freely downloaded. Table 1 also provides the sources from which the data were taken.

Matrix X contains explanatory variables that represent socioeconomic characteristics of the travelers. These individual characteristics are assumed to be key determinants of the decisions to travel for cultural reasons (Falk and Katz-Gerro, 2016). Thus, we include in matrix X such variables as the traveler's age, gender, marital status, household income, level of education and occupational status.

In matrix Z, we consider variables that approximate the attractiveness of the province of destination (pull factors). In our study, matrix Z comprises the effect of the climatic and weather conditions of the destination province by means of the Good Weather Indicator developed by Eugenio-Martín and Campos-Soria (2010). As a proxy for the level of congestion at the destination, we include the

Table 1 Variables used in the analysis to explain to determine the main factors that drive the decision of taking domestic cultural trips in Spain throughout 2019

	Characteristic	*Variable*	*Description*	*Source*
SOCIO-ECONOMIC CHARACTERISTICS (MATRIX X)	AGE	AGE	Age of the traveler (in years)	Resident Travel Survey 2019. Spanish Statistical Office-INE (www.ine.es) Monthly data collected during 2019
	GENDER	GENDER	Value one if the individual is a man, and zero if a woman	
	MARITAL STATUS	MARRIED	Value one if the individual is married, and zero otherwise	
		WIDOW	Value one if the individual is widow, and zero otherwise	
		DIVORCED	Value one if the individual is divorced or separated, and zero otherwise	
		SINGLE	Value one if the individual is single, and zero otherwise (*base category*)	
	HOUSEHOLD INCOME	HIGH INCOME	Value one if the individual earns more than 3,500€ per month	
		MIDDLE INCOME	From 1,500€ to 3,500€ per month	
		LOW INCOME	Less than 1,500€ per month	
	LEVEL OF EDUCATION	HIGHER STUDIES	Value one if the individual has higher studies, and zero otherwise	
		SECONDARY STUDIES	Value one if the individual has secondary studies, and zero otherwise	
		PRIMARY STUDIES	Value one if the individual has primary studies, and zero otherwise (base category)	
	LABOR MARKET STATUS	EMPLOYED	Value one if the individual is employed, and zero otherwise	
		UNEMPLOYED	Value one if the individual is unemployed, and zero otherwise	
		INACTIVE	Value one if the individual belongs to the inactive population (retired people, students, . . .), and zero otherwise (base category)	
CHARACTERISTICS AT DESTINATION (MATRIX Z)	WEATHER	GOOD WEATHER	As explained in Eugenio-Martín and Campos-Soria (2010), this variable takes value 1 if the weather at destination during the month of study is considered to be good: (i) the temperature is between 15ºC and 35ºC, (ii) the total rainfall is less than 60 mm, and (iii) the number of days with rainfall is less than 10 days. Monthly data collected during 2019	Spanish State Meteorological Agency – AEMET (http://www.aemet.es/es/datos_abiertos/AEMET_OpenData)
	CULTURAL SITES	WHS	Number of UNESCO World Heritage sites at the destination province in 2019	United Nations Educational, Scientific and Cultural Organization – UNESCO (http://whc.unesco.org)
	ISLAND	ISLAND	1 if the province of destination is an island, and zero otherwise	Spanish Statistical Office – INE (www.ine.es)
	COAST	COAST	1 if the province of destination is coastal, and zero otherwise	
	POPULATION DENSITY	DENSITY	Population density at the province of destination in 2019	
	RELATIVE PRICES	CPIH	Relative Restaurant and Hotel Sector CPI between the region of destination and of origin. Monthly data collected during 2019	
CHARACTERISTICS OF THE TRIP (MATRIX T)	MAIN MODE OF TRANSPORT	AIR	1 if the main mean of transport is the airplane, and zero otherwise	Resident Travel Survey 2019. Spanish Statistical Office-INE (www.ine.es) Monthly data collected during 2019
		BUS	1 if the main mean of transport is the bus, and zero otherwise	
		TRAIN	1 if the main mean of transport is the train, and zero otherwise	

(*continued*)

Table 1 Continued

Characteristic	*Variable*	*Description*	*Source*
	CAR	1 if the main mean of transport is the car, and zero otherwise (*base category*)	
	OTHERTRANS	1 if the main mean of transport is other kind of transport such as boat, bicycle, horses . . ., and zero otherwise	
MEMBERS LESS THAN 15 YEARS	MEMBLESS15	Number of members of the trip less than 15 years old	
ACTIVITIES DURING THE TRIP	CITIES	1 if the individual declares that one activity was to visit cities, and zero otherwise	
	BEACH	1 if the individual declares that one activity was to use and enjoy the beach, and zero otherwise	
	THEME	1 if the individual declares that one activity was to visit theme parks, and zero otherwise	
	NATURE	1 if the individual declares that one activity was to visit natural areas, and zero otherwise	
DISTANCE TO DESTINATION	DISTANCE	Geographical distance in kilometers between the region of origin *i* and the region of destination *j*	

variable provincial population density (Marrocu and Paci, 2013). We approximate the cultural attractiveness of the destination province by the number of UNESCO World Heritage sites located in it (Yang *et al.*, 2010). The relative cost of living between origin and destination is represented by the relative restaurant and hotel sector consumer price index (CPIH) (Uysal, 1998). We also incorporate in this matrix two dichotomous variables: one to indicate whether the province is an island, and the other to signal whether the destination is a coastal province (Álvarez-Díaz *et al.*, 2020).

In turn, matrix *T* comprises variables that gather characteristics of the trip. Trip-related characteristics are also found to be a factor affecting individual tourism decisions in general, and cultural tourism decisions in particular (Taylor *et al.*, 1993). Matrix *T* includes such variables as the main mode of transport used on the trip, the number of members aged less than 15 years, the leisure activities undertaken during the trip (namely visiting cities, natural areas, theme parks or beaches) and the distance traveled to destination (Vergori and Arima, 2020). Finally, matrix *S* has dummy variables to account for the seasonal patterns strongly observed on leisure trips (Bernini and Craccolici, 2015).

3. Empirical results

The results of the regression are presented in Table 2. The parameters of this model are estimated by using the method of maximum likelihood. The standard errors for statistical inference are estimated by using the Huber–White robust standard errors to control for any heteroscedasticity in the estimation process. This method offers consistent estimates of the standard errors, even when the assumption of homoscedasticity is violated (Allison, 2012). Most estimates in Table 2 show the expected signs and are in agreement with previous findings on cultural tourism demand. The model presents an acceptable level of adjustment (McFadden *R*-squared equal to 0.19). Additionally, the estimated model presents a high forecasting capacity since more than 79.9% of the in-sample cases were correctly classified. Thus, the estimated model is suitable for making predictions and simulations, although this is not the purpose of the current study. Moreover, the LR statistic indicates that the model is statistically significant (p-value = 0.00).

3.1 Socioeconomic characteristics

Analyzing Table 2, we observe that many of the socioeconomic characteristics of the traveler have a significant effect on cultural consumption. In particular, the variable *AGE* and its squared term

Table 2 Econometric estimates of the Logit model

	Variable			*Coefficient*	p-*value*
	CONSTANT			−4.2074***	*0.00*
Socio-economic characteristics (Matrix *X*)	AGE			0.0119	0.16
	AGE^2			−0.0002*	0.06
	GENDER			−0.0131	0.73
	MARITAL STATUS	MARRIED		0.2297***	0.00
		WIDOW		−0.0674	0.50
		DIVORCED		−0.1517*	0.06
	HOUSEHOLD INCOME	HIGH INCOME		0.0476	0.46
		MIDDLE INCOME		0.1173**	0.01
	LEVEL OF STUDIES	HIGHER STUDIES		0.2759***	0.00
		SECONDARY STUDIES		0.3432***	0.00
	LABOR MARKET STATUS	EMPLOYED		0.0206	0.72
		UNEMPLOYED		−0.1739*	0.06
Characteristics at destination (Matrix *Z*)	WEATHER	GOODWEATHER		−0.0649	0.23
	CULTURAL SITES	WHS		0.2327***	0.00
	POPULATION DENSITY	DENSITY		−0.0006***	0.00
	RELATIVE PRICES	CPIH		−0.0033	0.86
	ISLAND			−0.5777***	0.00
	COASTAL PROVINCE			−0.2381***	0.00
Trip-related characteristics (Matrix *T*)	MAIN MODE OF TRANSPORT	AIR		−0.0113	0.92
		BUS		1.0537***	0.00
		TRAIN		0.6727***	0.00
		OTHERS		−0.0813	0.85
	MEMBERS LESS THAN 15 YEARS	MEMBLESS15		−0.1941***	0.00
	ACTIVITIES DURING THE TRIP	CITIES		2.0210***	0.00
		BEACH		−0.9447***	0.00
		THEME		0.4752***	0.00
		NATURE		0.0378	0.44
	DISTANCE TO DESTINATION	DISTANCE		0.0011***	0.00
McFadden *R*-squared: 0.194		LR statistic: (*p*-value)	5,236.828 (0.00)	Cases correctly classified	79.96%

Note(s): The symbols ***, ** and * mean statistically significant at 1%, 5 and 10%, respectively. The estimates for the seasonal dummies are omitted for the sake of brevity. They are available upon request. As recommended in Wooldridge (2012) when facing imbalanced samples, the percentage of cases correctly classified was calculated by using as threshold the fraction of successes in the sample. The success cut-off was established at the value of 0.072

demonstrate that the traveler's age has a nonlinear significant impact on the propensity to travel for cultural reasons [1]. There is a concave relationship: a positive sign for age and negative for its square. This finding is supporting the inverted *U*-shaped lifecycle profile already detected in previous studies on tourism decisions (Alegre and Pou, 2004; Eugenio-Martín and Campos-Soria, 2010). Thus, the oldest people seem to display a lower potential for participation in cultural tourism. The increasing health and mobility problems associated with old age may explain this lower probability of traveling (You and O'leary, 2000).

Traveler's gender does not seem to be a factor influencing travel for cultural reasons. The variable *GENDER* is not statistically significant. This finding is in accordance with that of Zieba (2017), who found that the effect of gender is insignificant or even negative for Austrian cultural domestic trips. Falk and Katz-Gerro (2016) confirmed the relatively small importance of the variable gender in explaining the decision to visit cultural sites. However, Vergori and Arima (2020) obtained mixed findings. On one hand, they found that the effect of gender on the probability of taking cultural trips in Italy was not significant for the year 2002; on the other hand, gender did have a significant impact in 2016.

Household income is considered as one of the key factors to explain the individual's decision to participate in the cultural tourism market (Falk and Katz-Gerro, 2016). Our estimates partially

confirm this fact. The variable *MIDDLE INCOME* is positive and statistically significant, meaning that middle-income earners have a significantly higher propensity to travel domestically for cultural reasons compared to those in the low-income category (*LOW INCOME* is the base category). However, we cannot find statistical differences for the case of high-income earners (i.e. *HIGH INCOME* is positive but not statistically significant**)**. Therefore, it seems that domestic cultural tourism in Spain is becoming a market open to a much wider range of people. At least in part, this result implies a break with the original belief that cultural tourism is oriented toward an elite clientele with a high income.

There is a broad consensus in the literature that the traveler's educational attainment is a strong determinant of cultural participation (Kastenholz *et al.*, 2013). In general, the positive influence of an individual's education on cultural decisions has been widely reported in the literature (see, for instance Falk and Katz-Gerro, 2016; Zieba, 2017; Artal-Tur *et al.*, 2018). In our study, the variables *HIGHER STUDIES* and *SECONDARY STUDIES* have a positive sign and are statistically significant. Thus, travelers in the middle and high education groups are more prone to select culture as their main reason for traveling.

Previous research found that an individual's marital status may exert an effect on the decisions of traveling (Eugenio-Martin and Campos-Soria, 2010; Alegre and Pou, 2004; Wang *et al.*, 2006). The sign and statistical significance of the variables *MARRIED* and *DIVORCED* evidence that married people are more likely to travel for cultural reasons compared to singles (*SINGLE* is the base category), whereas divorced people are less prone.

Turning to the effects of labor market status, the negative and significant effect of *UNEMPLOYED* suggests that unemployed people are statistically less predisposed to travel for cultural purposes compared to retired people and students (*INACTIVE* is the base category). This finding is coherent with the theoretical microeconomic idea of precautionary saving; i.e. current consumption falls and saving increases when there is uncertainty regarding future incomes. Other authors found empirically that, in general, unemployment negatively affects the probability of participating in cultural tourism (Falk and Katz-Gerro, 2016).

3.2 Characteristics of the province of destination

Pull factors are useful for examining the motivations underlying tourist and visitation behavior: Potential tourists in deciding "where to go" take into consideration the specific characteristics at the destination (Kim *et al.*, 2003). Thus, researching pull factors is important to understand better the individual's decision to take a tourist trip. Research on pull factors has increased a lot to examine the motivations laying behind tourists' decision; however, most empirical studies on modeling cultural tourist's decisions have not included these factors into the analysis. One novelty of our analysis is that we assume that the attractiveness of the destination is a determining factor in the individual's decision to travel for cultural motives.

We start analyzing the effect of climatic and weather conditions at destination. Climate and weather have a strong effect on domestic trips, which tend to be much more sensitive to weather conditions than international trips (Otero-Giráldez *et al.*, 2012). In spite of this importance, the climate and meteorological factors are often omitted from analysis (Álvarez-Díaz *et al.*, 2020). In Table 2, we observe that the variable approximating good meteorological conditions at destination, *GOODWEATHER*, has a negative effect on the probability of being a cultural traveler. This finding indicates that cultural travelers are less sensitive to weather conditions than other types of travelers, such as those who seek "sun-and-beach." Nevertheless, we must be very cautious with this finding, given that the variable is not statistically significant.

It is widely recognized that cultural and historic sites can increase tourism and recreational flows (Taylor *et al.*, 1993). However, one important issue that has been little explored is the extent to which the UNESCO World Heritage (UWH) sites affect tourism (Yang *et al.*, 2010). Recently, a lively and interesting debate in academia arose on this issue; however, the findings reported in the

literature are quite ambiguous. Whereas some authors have found a tourism-enhancing effect of the UWH sites (Yang *et al.*, 2010; Patuelli *et al.*, 2013), others question it (Cuccia *et al.*, 2016). In our study, we seek to contribute modestly to this debate. The positive and highly significant effect of *UNESCOWH* leads us to affirm that the number of UWH sites at the destination province is a pull factor determining the individual's probability of visiting a province for cultural reasons. In consequence, our findings reveal that the UWH sites have a significant positive influence to attract cultural travelers.

Apropos of the level of congestion, we find that *DENSITY* has a negative and significant sign, suggesting that cultural travelers are more reluctant to visit crowded destinations than other kind of travelers. This finding makes an additional contribution to the existing literature on how population density affects tourism. Different studies have recognized that the expected effect of this variable is ambiguous, as it depends on the individuals' preferences (Pompili *et al.*, 2019), or even on individuals' nationalities (Santana-Jiménez and Hernández, 2011). The negative reaction of cultural travelers to congestion may have important implications in the near future. Cultural tourism is expected to continue growing in future (UNWTO, 2018), and this situation may generate problems of tourist overcrowding in many destinations (Richards, 2018). Thus, the success of cultural tourism in a destination today could cause a problem of over-tourism tomorrow. Decision-makers must face this problem to ensure a sustainable growth of cultural tourism.

The relative cost of living in the destination, compared with the origin, is also considered as a determinant of cultural traveling decisions (Patuelli *et al.*, 2013). Unfortunately, the lack of data makes it difficult to find a good proxy for this determinant (Álvarez-Díaz *et al.*, 2020). As in Patuelli *et al.* (2013, 2014), we use as proxy the relative Restaurant and Hotel Sectors Consumer Price Index (*RHCPI*) at the region of destination over the region of origin. In spite of having the expected negative sign, the variable *RHCPI* does not appear to have a significant impact on the probability of taking a cultural trip. In line with Nicolau and Mas (2006), the traveler's interest in broadening cultural knowledge may be moderating the significance of relative prices on traveling decisions. To wit, the yearning to visit a specific province for cultural reasons may be what makes the negative effect of relative prices negligible.

The dummy variable indicating whether the province is an island (*ISLAND*) is included in our model, as insularity may present specific patterns (Álvarez-Díaz *et al.*, 2020). In turn, given that the coastline has long been a magnet for tourists (Jennings, 2004), the dummy *COAST* is a proxy of the attractiveness of being a coastal province (Cuccia *et al.*, 2016; Álvarez-Díaz *et al.*, 2020). Both dummy variables present a negative and significant effect on the likelihood of traveling for cultural reasons. It seems that those provinces in which tourism is based on "sun-and-beach" are not attractive to cultural travelers.

3.3 Trip-related characteristics

As for trip-related characteristics, we find that the main mode of transport used to travel, the presence of children on the trip, the complementary recreational activities undertaken during the trip and the distance traveled play an important role in the individual's decision to travel for cultural reasons.

With respect to the main mode of transport used, the sign and statistical significance of the variables *BUS* and *TRAIN* lead us to affirm that cultural travelers are statistically more inclined than other types of travelers to use the bus and train as their main means of transport. Zieba (2017) also came to a similar finding. She found that the bus was the main transport mode for domestic trips of cultural tourists in the Austrian case.

The number of children participating in the trip may constrain the probability to travel for cultural reasons (e.g. time constraints on parents taking care of the children, higher traveling cost, and influence of children on making tourism decisions for family vacation). For instance, Zieba (2017) found that traveling with children aged less than 15 years significantly reduces the likelihood to

participate in culture. In our study, we corroborate this finding for the case of domestic cultural trips in Spain. In particular, the negative sign and high significance of the variable *MEMBLESS15* indicates that traveling with children under the age of 15 years discourages taking a domestic trip for cultural reasons.

According to UNWTO (2018), an important pointer to the future of cultural tourism is the existing synergies between tourism and culture. For that reason, we investigate the interrelation between the main reason for the trip (culture) and other complementary leisure activities done during the cultural trip. To that end, we analyze the effect of such activities as visiting cities (*CITIES*), enjoyment of the beach (*BEACH*), visit of a theme park (*THEME*) or a natural area (*NATURE*). Given the sign and significance of these variables, we find that the likelihood of traveling for cultural reasons increases if the travel is complemented with other leisure activities, such as visiting cities (*CITIES*) or theme parks (*THEME PARKS)*. Conversely, enjoying the beach (*BEACH*) is an activity that reduces the likelihood of being a cultural traveler. Therefore, it seems that there is a substitution effect between cultural tourism and beach-and-sun tourism. On the other hand, visiting a natural area does not seem to be a complementary activity to culture.

Geographical distance is generally perceived to impact negatively on tourism demand. Given similar attractions and amenities, travelers usually prefer to visit neighboring destinations rather than destinations further afield. In general, most empirical studies have confirmed this perception, concluding that geographical distance to destination is a deterrent factor of traveling (Álvarez-Díaz *et al.*, 2020). Interestingly, distance may be a pull (attraction) factor, depending on the individual preferences and motivations (Nicolau and Mas, 2006; Nicolau, 2008). An interest in broadening cultural knowledge can moderate the effect of distance; and individuals may be willing to travel greater distances to satisfy their cultural needs. In this regard, Patuelli *et al.* (2014) showed that distance matters for cultural tourism. They concluded that a destination's endowments in culture seem to be more attractive for long-distance travelers. In our study, we offer evidence that increasing distance has an incentive effect on the likelihood of traveling for cultural reasons. The variable *DISTANCE* shows a significant and positive sign, indicating that cultural travelers travel longer distances, relative to travelers with other leisure motivations. This finding is relevant in the sense that it corroborates an apparently contradictory effect of distance previously detected in the literature.

4. Conclusions

Culture can be a key resource that contributes to the future growth and diversification of the tourism activity in countries highly dependent on "sun-and-beach" tourism, as it happens in the case of Spain. Policy-makers and entrepreneurs must design and implement policies and business strategies that strengthen cultural tourism, an underused niche of the tourism market, but one with high economic potential.

Designing and implementing an optimal policy and/or entrepreneurial strategy requires an optimal understanding of cultural tourism. Decision-makers must know the factors that drive the choice of taking a cultural trip. Our research seeks to answer this question for the case of Spain, a country in which tourism is one of the most important economic sectors. Our findings provide useful information that should help policy-makers and entrepreneurs make efficient and effective decisions on promoting domestic cultural tourism. The analysis is focused on domestic trips and assumes a provincial (NUTS-3) level of analysis.

To analyze the main factors that determine the likelihood of taking a trip for cultural reasons, we define and estimate a logit model. We include in the model socioeconomic variables, characteristics of the province of destination and characteristics of the trip.

As expected, the results indicate that an individual's socioeconomic characteristics impact on the likelihood of being a cultural traveler. The effect of the traveler's age is significant, and shows a nonlinear pattern. Additionally, the level of education has a positive effect. The middle-income

earners are statistically more disposed to travel for cultural reasons, whereas the high-income earners do not show this predisposition. This could be because high-income earners tend to travel internationally more for culture. What this finding does evidence is that domestic cultural tourism in Spain has evolved from a niche market reserved for an elite clientele to a much wider range of people. This fact represents an opportunity to bet on cultural tourism, as the set of possible visitors is not constrained to a reduced social segment.

At the same time, the characteristics of the province at the destination (pull factors) are also important factors that influence the decision to take a cultural trip. This aspect of our research represents an element of originality, as previous studies on cultural tourism did not consider pull factors in the analysis. We find that the UWH sites have a significant positive influence to attract cultural travelers. This result supports those studies affirming that UWH sites increase cultural tourist flows. Cultural tourism is considered a kind of tourism socially desirable as it fosters the economy and helps to preserve culture. Thus, decision-makers must promote and protect UWH sites, because they are sources of cultural tourist attraction. On the other hand, according to our results, decision-makers must also take into consideration that cultural travelers react negatively to crowded places. Cultural tourism is a growing market that may generate a future serious problem of over-tourism in some destinations. Managers and policy-makers must face this challenge by fragmenting and diversifying cultural tourism demand and supply. Moreover, being an island or a coastal province are deterrent characteristics for cultural travelers.

Our findings also suggest that the attributes of the trip matter. The bus and train are means of transport usually employed by cultural travelers. The distance traveled has a positive effect on being a cultural traveler. This apparently counterintuitive finding has been explained and reported in previous studies. The individual is willing to travel longer distances to satisfy their need to consume culture. Conversely, traveling with children aged less than 15 years reduces the probability of traveling for cultural reasons. Interestingly, our findings reveal that there is a complementary relationship between culture and other activities carried out during the trip: visiting cities and theme parks. Public authorities should encourage cultural tourism in those provinces that have an important cultural and historical endowment, as well as an urban offer and thematic parks. On the other hand, our findings also indicate that there is a substitution effect (i.e. there is no a synergistic effect) between cultural tourism and "beach-and-sun" tourism. Decision-makers should prioritize the development of cultural tourism in inland provinces. This may help diversify the supply and demand of cultural tourism in destinations, alleviating the possible future problems of over-tourism.

All these findings can help understand future trend and directions for cultural tourism. Our study helps develop a profile of cultural tourism participants, underscore the changes in this market niche, detect future possible problems and design solutions. Specifically, the information given in this study can be crucial for the successful marketing and development of cultural tourism in the future. A better understanding of the main determinants of being a cultural traveler implies a better knowledge of the cultural tourism market, and a more efficient implementation of managerial and political measures to attract in the future desirable potential travelers characterized by a high spending capacity. Additionally, our findings may be also very useful for further research and discussions that inspire the tourism industry and academia about cultural tourism: Is cultural tourism transforming from an elite market to a mass market? Could the growing of cultural tourism cause a problem of over-tourism? Do UWH sites increase cultural tourist flows? Is the distance to destination a deterrent or attractor factor? Are our findings generalizable to other tourism market niches or to other countries? These questions should be covered in the research agenda on the future of cultural tourism.

Note

1. The Wald test rejects the null hypothesis of no effect of the variable Age and its squared (p-value < 0.01).

References

Alegre, J. and Pou, L. (2004), "Micro-economic determinants of the probability of tourism consumption", *Tourism Economics*, Vol. 10 No. 2, pp. 125-144.

Allison, P.D. (2012), *Logistic Regression Using SAS: Theory and Application*, SAS Institute, Cary, NC.

Álvarez-Díaz, M., D'Hombres, B., Ghisetti, C. and Pontarollo, N. (2020), "Analysing domestic tourism flows at the provincial level in Spain by using spatial gravity models", *International Journal of Tourism Research*, Vol. 22 No. 4, pp. 403-415.

Artal-Tur, A., Briones-Peñalver, A.J. and Villena-Navarro, M. (2018), "Tourism, cultural activities and sustainability in the Spanish Mediterranean regions: a probit approach", *Tourism and Management Studies*, Vol. 14 No. 1, pp. 7-18.

Bernini, C. and Cracolici, M.F. (2015), "Demographic change, tourism expenditure and life cycle behaviour", *Tourism Management*, Vol. 47, pp. 191-205.

Brida, J.G. and Scuderi, R. (2013), "Determinants of tourist expenditure: a review of microeconometric models", *Tourism Management Perspectives*, Vol. 6, pp. 28-40.

Cuccia, T., Guccio, C. and Rizzo, I. (2016), "The effects of UNESCO World Heritage List inscription on tourism destinations performance in Italian regions", *Economic Modelling*, Vol. 53, pp. 494-508.

Eugenio-Martín, J.L. and Campos-Soria, J.A. (2010), "Climate in the region of origin and destination choice in outbound tourism demand", *Tourism Management*, Vol. 31 No. 6, pp. 744-753.

Falk, M. and Katz-Gerro, T. (2016), "Cultural participation in Europe: can we identify common determinants?", *Journal of Cultural Economics*, Vol. 40 No. 2, pp. 127-162.

Greene, W.H. (2002), *Econometric Analysis*, Prentice Hall, NJ.

Guccio, C., Levi Sacerdotti, S. and Rizzo, I. (2017), "An empirical investigation of cultural travellers' preferences and behaviours in a destination with mixed environmental features", *Enhancing Participation in the Arts in the EU*, Springer, Cham, pp. 249-265.

Herrero-Prieto, L.C. and Gomez-Vega, M. (2017), "Cultural resources as a factor in cultural tourism attraction: technical efficiency estimation of regional destinations in Spain", *Tourism Economics*, Vol. 23 No. 2, pp. 260-280.

Jennings, S. (2004), "Coastal tourism and shoreline management", *Annals of Tourism Research*, Vol. 31 No. 4, pp. 899-922.

Kastenholz, E., Eusébio, C. and Carneiro, M.J. (2013), "Studying factors influencing repeat visitation of cultural tourists", *Journal of Vacation Marketing*, Vol. 19 No. 4, pp. 343-358.

Kim, S.S., Lee, C.K. and Klenosky, D.B. (2003), "The influence of push and pull factors at Korean national parks", *Tourism Management*, Vol. 24 No. 2, pp. 169-180.

Marrocu, E. and Paci, R. (2013), "Different tourists to different destinations. Evidence from spatial interaction models", *Tourism Management*, Vol. 39, pp. 71-83.

McFadden, D. (1974), "The measurement of urban travel demand", *Journal of Public Economics*, Vol. 3 No. 4, pp. 303-328.

Nicolau, J.L. (2008), "Characterizing tourist sensitivity to distance", *Journal of Travel Research*, Vol. 47 No. 1, pp. 43-52.

Nicolau, J.L. and Mas, F.J. (2006), "The influence of distance and prices on the choice of tourist destinations: the moderating role of motivations", *Tourism Management*, Vol. 27 No. 5, pp. 982-996.

Otero-Giráldez, M.S., Alvarez-Díaz, M. and González-Gómez, M. (2012), "Estimating the long-run effects of socioeconomic and meteorological factors on the domestic tourism demand for Galicia (Spain)", *Tourism Management*, Vol. 33 No. 6, pp. 1301-1308.

Patuelli, R., Mussoni, M. and Candela, G. (2013), "The effects of World Heritage Sites on domestic tourism: a spatial interaction model for Italy", *Journal of Geographical Systems*, Vol. 15 No. 3, pp. 369-402.

Patuelli, R., Mussoni, M. and Candela, G. (2014), "Cultural offer and distance in a spatial interaction model for tourism", *Economics and Business Letters*, Vol. 3 No. 2, pp. 96-108.

Pompili, T., Pisati, M. and Lorenzini, E. (2019), "Determinants of international tourist choices in Italian provinces: a joint demand–supply approach with spatial effects", *Papers in Regional Science*, Vol. 98 No. 6, pp. 2251-2273.

Richards, G. (1996), "Production and consumption of European cultural tourism", *Annals of Tourism Research*, Vol. 23 No. 2, pp. 261-283.

Richards, G. (Ed.) (2007), *Cultural Tourism: Global and Local Perspectives*, Psychology Press.

Richards, G. (2014), *Tourism Trends: the Convergence of Culture and Tourism*, Academy for Leisure NHTV University of Applied Sciences, Brenda.

Richards, G. (2018), "Cultural tourism: a review of recent research and trends", *Journal of Hospitality and Tourism Management*, Vol. 36, pp. 12-21.

Santana-Jiménez, Y. and Hernández, J.M. (2011), "Estimating the effect of overcrowding on tourist attraction: the case of Canary Islands", *Tourism Management*, Vol. 32 No. 2, pp. 415-425.

Taylor, D.T., Fletcher, R.R. and Clabaugh, T. (1993), "A comparison of characteristics, regional expenditures, and economic impact of visitors to historical sites with other recreational visitors", *Journal of Travel Research*, Vol. 32 No. 1, pp. 30-35.

UNWTO (2018), *Report on Tourism and Culture Synergies*, UNWTO, Madrid.

Uysal, M. (1998), "The determinants of tourism demand: a theoretical perspective", in Ioannides, D. and Debbage, K. (Eds), *The Economic Geography of Tourism*, Routledge, London, pp. 79-95.

Vergori, A.S. and Arima, S. (2020), "Cultural and non-cultural tourism: evidence from Italian experience", *Tourism Management*, Vol. 78, 104058.

Wang, Y., Rompf, P., Severt, D. and Peerapatdit, N. (2006), "Examining and identifying the determinants of travel expenditure patterns", *International Journal of Tourism Research*, Vol. 8 No. 5, pp. 333-346.

Wooldridge, J.M. (2012), *Introductory Econometrics: A Modern Approach*, South-Western Cengage Learning, Mason, OH.

Yang, C.H., Lin, H.L. and Han, C.C. (2010), "Analysis of international tourist arrivals in China: the role of World Heritage Sites", *Tourism Management*, Vol. 31 No. 6, pp. 827-837.

You, X. and O'leary, J.T. (2000), "Age and cohort effects: an examination of older Japanese travelers", *Journal of Travel and Tourism Marketing*, Vol. 9 Nos 1-2, pp. 21-42.

Zieba, M. (2017), "Cultural participation of tourists – evidence from travel habits of Austrian residents", *Tourism Economics*, Vol. 23 No. 2, pp. 295-315.

Corresponding author

Marcos Álvarez-Díaz can be contacted at: marcos.alvarez@uvigo.es