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Does Designation as a UNESCO World Heritage Site Influence Tourist Evaluation of a Local Destination?

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(Article begins on next page)

## **Does designation as a UNESCO World Heritage Site influence tourist evaluation of a local destination?**

### ***Abstract***

The purpose of this study is to explore whether the UNESCO World Heritage Site (WHS) designation affects tourists' evaluation of the local destination hosting the site, building on a large sample of about 0.8 million tourists who visited Italy over the period 1997-2015. We find that the inscription onto the UNESCO World Heritage List exerts surprisingly a negative effect on the overall evaluation of the destination and also on the evaluation of its artistic assets though the magnitude of the latter is lower. The effect is heterogeneous across visitors, depending on evaluation levels, as well as origin/destinations and demographics. Nonetheless, the presence of multiple WHSs in the same destination tends to increase evaluation suggesting that destination stakeholders with previous experience in dealing with WHS designations are better equipped to manage the complicated relationship between tourism and preservation. Managerial and policy-making implications are discussed.

**Key words:** UNESCO World Heritage, tourist perceptions, evaluation, cultural heritage site, destination marketing, longitudinal study, Cumulative Logit.

## 1. Introduction

Natural and cultural heritage assets constitute important components of tourism destinations (Formica and Uysal 2006), playing a crucial role as pull factors for tourist flows (Buckley 2018) and destination's comparative advantage and competitiveness (Crouch 2011). A number of tourism studies have focused on a special subset of natural and cultural heritage assets: the UNESCO World Heritage Sites (WHSs) (e.g., Schackley, 1998, Su and Lin, 2014). Generated within different disciplinary fields, these studies have tackled a wide range of research questions (Buckley 2018) by adopting either a descriptive or an experientially based approach to conceptualising heritage tourism (Timothy and Boyd, 2003; Poria et al., 2006).

Tourism management and marketing scholars have recognised that the UNESCO designation generates multiple impacts that do not only involve tourism development but also heritage preservation and community well-being (Su and Wall 2014). In particular, the relationship between tourism and preservation is a complicated one (Buckley 2018), characterised by symbioses and tensions (Nuryanti 1999; Tunbridge 2007; Su and Wall 2014). This issue is particularly relevant for cultural heritage as, historically, cultural heritage management professionals have worked isolated from the tourism industry (McKercher and du Cros 2012). In continental European countries the activities of commercial tourism enterprises (CTEs) have sometimes been slowed down by conservation-oriented cultural policy makers and several generations of heritage administrators with a curatorial mindset, almost disregarding tourism development and tourist and visitor perceptions and satisfaction (Zan et al. 2016). Current news for instance reported that the mayor of the Italian city of Florence (whose historical center was inscribed in the World Heritage List (WHL) in 1982) ordered to hose down the steps of some of the most renowned historical churches at about lunchtime, in order to stop tourists and visitors from eating on them (Giuffrida 2017). This is just one of a long series of anecdotic facts that are emblematic of the tensions between destination marketers - primarily interested in attracting tourism flows - and heritage management agencies (HMAs) concerned with conservation. Accordingly, among the top priorities of destination marketers and the commercial tourism industry there is tourist perceptions of and attitudes

toward the local destination hosting a WHS. This is not necessarily the case for heritage administrators (Zan et al. 2016).

To date, research on the influences of the WHS inscription on tourists' evaluation of the destination hosting the WHS is unexpectedly virtually missing, despite the fact that tourist evaluation and satisfaction are positively associated with destination loyalty in the form of revisit intentions and recommendation to others (e.g., Alegre and Cladera 2006). Moreover, studying the relationship between WHSs and tourists' evaluation of the hosting destination might be instrumental to shedding new light on relevant issues such as the analysis of tourism demand at destinations hosting WH and the understanding of tourists' perceptions of WHSs.

Thus, this study proposes to investigate the relationship between the designation of WHSs and tourist evaluation of the local destinations (i.e., provinces) hosting the WHSs themselves. Our analysis is situated in Italy, home to the highest number of UNESCO WHSs in the world, with a specific focus on international tourists for whom WH is a consolidated top brand (Buckley 2018; King et al. 2014; Ryan and Silvanto 2014; Watkinson, 2004).

Accordingly, our study is distinctive and innovative for at least four reasons: 1) it explores quantitatively the relationship between the designation of UNESCO WHSs and tourist evaluation of the wider tourism area hosting the site, beyond the physical perimeter of the individual WHS, and of its artistic/cultural assets; 2) it adopts a dynamic perspective on tourist evaluation of destinations, tracking longitudinally when the inscription of heritage onto the World Heritage List (WHL) starts generating a significant effect on tourists' evaluation and investigating how long the effect of the designation on evaluation persists over time; 3) it captures how the WHS designation affects visitors' evaluation based on the ratings expressed by tourists, controlling for visitors' features such as origin/destination, demographics, expenditure, length of stay; 4) it is based on a large panel of tourists' evaluations related to 47 sites listed between 1997 and 2015.

The paper is structured in five sections. Section 2 reviews the theoretical and empirical contributions in the extant tourism management literature dealing with WHSs and tourism destinations.

The third section describes the data and illustrates the methodology adopted. In section 4, research findings are discussed. Section 5 elucidates both managerial and policy-making implications, highlights the limitations of our study and draws a future research agenda.

## **2. Literature review**

### **2.1 The UNESCO World Heritage Convention**

The original purpose of inscribing WHSs is to identify, protect, conserve and present attractions of outstanding universal value (OUV) to be considered as “a concept of value based on human perceptions” (Buckley 2018: 565). This point is crucial for the purposes of our analysis, as it indicates that the paramount priority set by the Convention is to protect WHSs for future generations worldwide on the basis of the human perceptions at the time when the heritage property is candidate for the inscription. However, UNESCO itself lists among the benefits of WHS designation also the increase of tourism activities at the site, with important spillover effects to the local economy (UNESCO 2008).

The impact, role and implications of the inscription of a WHS designation has been the object of a plethora of studies in the wider social sciences and more specifically in a number of different disciplinary fields. Taken together, the literature review sections of the studies conducted by Poria et al. (2011) and Buckley (2018) identify comprehensively several of the themes developed in relation to WHS. We refer to Poria et al. (2011) for issues related to designation, and Frey and Steiner (2013) for the criteria deployed by the UNESCO Committee when inscribing a heritage property onto the WHL. In the footsteps of Buckley (2018), we recognize that extant research on the nexus between WHSs and tourism has been conducted mainly in two areas: tourism growth studies (including marketing and economics) and management and control (including social and environmental impacts and visitor management). In the next subsections we review those two areas and we also focus on tourists’ and residents’ perceptions of UNESCO World Heritage Sites.

### **2.2 UNESCO World Heritage Sites and tourism growth**

Tourism management and economics literature includes a growing number of studies focusing on aspects related to many different issues: economic assessment of a WHS (Kim et al. 2006), effect of the designation on tourism flows (Buckley 2004; Ribaudo and Figini 2017), visitors management (Airey and Shakley 1998; Muresan 1998), marketing practices (Gilmore et al. 2007), sustainability (Landorf 2009),

strategic planning (Wager 1995), community inclusion and exclusion related to the heritage presentation and interpretation (Tucker and Carnegie 2014), de-marketing (Medway et al. 2010).

Several econometric approaches have been adopted to gauge the impact of WHSs on domestic and international tourism flows, yielding mixed results. Several works highlighted that the WHS avowal increased tourist arrivals in the destination (Yang et al. 2010, 2011; Su and Lin 2014), others found negative or not statistically significant effects (Cellini 2011; Huang et al. 2012; Ribaud and Figini 2017). Positive effects on tourism demand seems to echo the anecdotic evidence that the UNESCO “brand” can function as a promotional tool to attract more visitors to a site, thanks to its worldwide recognized prestige (Marcotte and Bourdeau 2012; Pedersen 2002; Yang et al. 2010). Several studies have emphasized that the WHS designation has been progressively considered as an opportunity for a UNESCO property (and its hosting destination) to increase its international visibility (Kausar 2012), develop tourism and attract travelers. On the other hand, negative effects suggest that the UNESCO “brand” by itself is not enough to attract tourism flows toward either a country or the regional destination hosting WHSs (Huang et al. 2012; Ribaud and Figini 2017). However, extant literature clarifies that frequently tourists are moderately aware of the UNESCO brand: thus marketing efforts after the designation rather than the designation per se might lead to a growing number of visitors (Poria et al., 2011).

Additional studies have identified a trade-off between tourism development and preservation objectives, with pro-preservation stakeholders (i.e., HMAs) sometimes underestimating the relevance of tourism receipts and expenditure as funding sources to improve the level of protection and pro-tourism development stakeholders (i.e., CTEs) mostly concentrated on visitor and tourists acquisition and retention, sometimes at the expense of carrying capacity (Buckley, 2018). In the light of this trade-off, a research line has investigated how to strike a balance between conservation of WHSs and tourism development. For instance, Hall and Piggin (2001) conducted a survey on 44 WHSs, finding that more than two-thirds of the site managers declared to have taken advantage from the designation, which attracted a higher number of visitors. Nevertheless, they also reported drawbacks, such as lack of

funding, congestion, site degradation due to an excess of tourists and variations in the seasonal patterns of arrivals. Wager (1995) points out that the zoning and environmental management plan developed for the Angkor WHS in Cambodia explicitly proposed a shift from economic to sustainable economic development. Interestingly, the practitioner suggests that tourism development costs of negative impacts should be absorbed by the commercial tourism industry while preservation might bring further economic development.

### **2.3 UNESCO World Heritage Sites, conservation and destination de-marketing**

A further research line has analysed how pro-preservation stakeholders (i.e., HMAs) and cultural and environmental policy makers might lobby and convince destination marketers to adopt de-marketing strategies and tactics to deter people from visiting a destination (Medway et al., 2010). De-marketing has a long tradition in marketing studies (Kotler and Levy, 1971) and relates to the bundle of marketing activities aimed at reducing the demand for a specific offering. Originally observed and conceptualised in companies willing to compress entirely or selectively (Farquhar and Robson, 2017) customers who are not profitable or destroy value, it has been applied also to destination marketing (Medway et al., 2010). Accordingly, destination de-marketing could be defined as the corpus of strategies, tactics, practices and activities aimed at decreasing demand for a tourism destination, including overpricing, access restrictions, redirection or diversion marketing. Its purpose is to deflect visitors and interest to a specific destination for segmentation and targeting (Beeton, 2003; Clements, 1989), sustainability (Beeton and Benfield, 2002) and crisis management purposes. Archaeological and environmental protection of cultural and natural heritage is certainly one of the main reasons why HMAs and cultural and environmental policy maker might be willing to de-market the tourism destination hosting them. In their work on de-marketing, Medway et al. (2010) conduct an exploratory qualitative analysis with a number of destination marketers including two managers of WHSs. Their qualitative study points out that WHSs managers (i.e., representative of HMAs) tend to de-market their sites for destination sustainability reasons and to enhance the quality of visitors' experience by using techniques such as no



marketing (i.e., “no marketing de-marketing”) or redirection to alternative places (i.e., “diversion de-marketing”). In their work on branding for archeological sites, Poria et al. (2011) observe that on one hand the level of awareness of the UNESCO brand is low and more marketing efforts should be performed; on the other hand they suggest that in cases of overburdened UNESCO WHS sites, it is recommended to consider applying de-marketing strategies.

## **2.4 UNESCO World Heritage Sites and tourists’ perceptions**

Since the end of the nineties, an increasing number of studies have focused on residents’ and tourists’ perceptions of WHSs. As the focus of this paper is not on residents but rather on tourists, we will focus on tourists’ perceptions. Studies related to the tourists’ perceptions of cultural heritage have been pioneered at the beginning of 2000 (Poria et al. 2003) with a consolidation over the last decade (e.g., Antón et al. 2017; Poria et al. 2006; Palau-Saumell et al. 2013; Su et al. 2017). Poria et al. (2003) find that the perception of a place as part of personal heritage is positively associated with visitation patterns of the Wailing Wall in Israel. In a more recent study, Poria et al. (2013) found that respondents perceived the designation as 1) a potential trigger for tourism growth but rarely could translate into higher tourism demand; 2) a validation of the designed site; 3) a global recommendation to visit the site. Palau-Saumell et al. (2013), based on a multi-group analysis of tourists of La Sagrada Família, Barcelona (Spain), found that both employee displayed emotions and cathedral building influence tourists emotions that in turn affect satisfaction, with the latter one influencing behavioural intentions. Taken together, the studies related to tourists’ perceptions analyse, with various degrees of depth, constructs and concepts such as motivations, emotions, consumer segments and profiles, preferences, attitudes, satisfaction, use patterns, behavioural intention. However, these studies do not look at how tourists perceive destinations hosting WHSs.

## **2.5 Destinations hosting UNESCO World Heritage Sites and tourists' perceptions**

A number of studies within the destination marketing domain have investigated tourists' perceptions of a destination and its attributes, focusing on attitudes (e.g., Um and Crompton, 1990), satisfaction (e.g., Song et al., 2012), loyalty (e.g., Oppermann, 2000) and return visit (e.g., Alegre and Caldera, 2006).

We can argue that WHSs are typically one of the many tangible and intangible attributes of wider tourism destinations (at the country or local level) and destination marketers could leverage them to increase destinations' competitiveness (Ritchie and Crouch 2000). To this aim, destination managers and policy-makers should carefully measure and assess tourists' perceptions of WHSs as they can influence tourists' perceptions of the destination hosting WHSs. However, to date it is not clear to what extent WHSs actually contribute to tourist evaluation of a destination. Addressing this issue is of paramount importance as both evaluation and the very same concept of OUV at the basis of the UNESCO designation are related to human perceptions. Indeed if WHSs' OUV mirrors human perceptions of the value of WHSs (Buckley 2018), then we would expect those destinations endowed with WHS to display higher levels of destination evaluation. That said, extant literature dealing with WHSs tourists' satisfaction and evaluation from a destination perspective (Antón et al. 2017; Bui et al. 2016; Su et al. 2017) has not taken into account the extent to which the "watershed event" of the UNESCO inscription affects tourists' evaluation of the wider local hosting destination (i.e., with the wider tourism area hosting the site, beyond the physical perimeter of the site).

Our study aims at bridging this gap, by studying the relationship between the designation of Italian WHSs and tourist evaluation of the local destinations (i.e., tourist areas) hosting the WHSs themselves. Accordingly, we contribute to the increasingly relevant research stream at the intersection between destination marketing and UNESCO World Heritage Sites (WHS) in different ways. First, we explore quantitatively the relationship between the designation of UNESCO WHSs and tourist evaluation of the local hosting destination and its attributes (e.g., arts). Second, from a methodological point of view, this study is to our knowledge the first adopting a dynamic perspective on tourists' evaluation of a destination, tracking longitudinally when the inscription of heritage onto the World Heritage List

(WHL) starts generating a significant effect on tourist perceptions of the destination and how long the effect of the designation persists over time. Third and related to the previous point, as far as the methodological contribution is concerned, we model evaluation statements through CLMs to obtain efficient and unbiased estimates in presence of ordinal assessments displaying a strong asymmetry.

### 3. Methodology

#### 3.1 Data

Our study is situated in Italy, home to the highest number of UNESCO WHSs in the world. It is based mostly on secondary data stemming from a nationwide survey on inbound tourism to Italy conducted by the Central Bank of Italy. Data is collected annually by means of almost 145,000 face-to-face interviews carried out at 82 border points (roads, railways, international airports and ports) that are selected as representative for inbound flows. The questionnaire consists of 48 questions, comprising judgments/ratings about the experience lived in destination provinces (NUTS 3 level) and destinations' attributes. The first item measured is "welcoming and warmth of the people followed by evaluation of "cities and art". The overall evaluation is the last surveyed rating. Tourists' socio-demographic characteristics, travel purposes, spending information and trip-related variables are also recorded. Interviews are conducted by professional interviewers (employed by DOXA, a major national market research company) ensuring the correct understanding of the questions, a homogeneous classification of the answers and the correct identification of the main destination province if a tourist had visited multiple places and attractions.

To be consistent with the UNWTO definition of tourist, we focus on 806,945 respondents who spent at least one night in a hotel between 1997 and 2015, assessing their evaluation of the destination and/or their evaluation of the artistic/cultural endowment. Assessments are all expressed on a 10-points rating scale, ranging from 1 ('very bad') to 10 ('excellent').

The socio-demographic and trip-related characteristics of respondents are used as control variables, to increase evaluation consistency over the time. Table 1 displays the average values (for continuous data and evaluation) or relative frequencies (for categorical data) of the considered variables. We also quantify the WHS effect with dummy variables equal to 1 if the respondent visited a province hosting a WHS. As our goal is to measure significant changes in the tourist evaluation dynamics, we focus on those sites (and the respective hosting provinces) whose latest listing took place after 1991 as our data allow us to capture the effect of the listing on evaluation with a 6 years lag (see paragraph 3.2).

Consequently, among the population of 51 sites designated before 2016, we only exclude from the analysis the Rock Drawings in Valcamonica (Brescia), Venice and its lagoon, the Convent of Santa Maria delle Grazie (Milan) and Piazza del Duomo (Pisa), listed respectively in 1979, 1987, 1980 and 1987. The time elapsed from the date of the last listing to the date when the survey was first conducted is excessive and would not allow to observe any differential effect of the listing on tourist perceptions. It is worth noting that our dataset includes Brescia and Venice among WH provinces as they were involved in listing also in years after 1991.

**Table 1. Descriptive statistics and variable description**

<b>CONTROL VARIABLES</b> (806,945 respondents)										
GENDER		DESTINATION (Overall 106 provinces)		ORIGIN (Overall 289 countries)			AGE			
Male	67.1%	North-West	13.4%	<b>Individual Country</b>	Austria	3.1%	Aged 15-24	6.7%		
Female	32.9%	North-East	16.6%		UK	17.3%	Belgium	2.7%	Aged 25-34	24.6%
<b>PURPOSE</b> (Overall 12 purposes)		Centre	6.2%	Germany	16.9%	<b>Areas of origin</b>	Aged 35-44	30.6%		
Leisure	65.5%	South-islands	11.2%	USA	11.1%		Europe (no EU)	32.9%	Aged 45-64	32.7%
Other	34.5%	Milan	12.4%	France	9.0%		Other EU	11.1%	Aged 65-	5.4%
<b>HOLIDAY LENGTH (DAYS)</b>		Venice	9.0%	Spain	5.1%	Asia	5.2%	<b>AVERAGE DAILY EXPENDITURE</b>		
Average	6,5	Florence	6.6%	Netherland	3.4%	Canada and Oceania	3.7%	At destination	139.1 €	
Median	4	Rome	24.7%	Switzerland	3.9%	Others	3.5%	Overall	364.6€	
<b>DEPENDENT VARIABLES</b>				<b>Break-down of interviews by site and province</b>						
		1 <sup>st</sup> quart.	Median	3 <sup>rd</sup> quart.		# Sites	# Provinces	# interviews (year 2010)		
Perc. Perf. (Destination)		8.0	8.0	9.0	Environment	4	8	2848		
Perceived. Perf. (Art)		8.0	9.0	10.0	Heritage	43	51	32130		
		Valid assessments		Spearman's $\rho$	Multiple	32	18	20826		
Perc. Perf. (Destination)		96,2% (776,220)			Shared	11	37	30710		
Perceived. Perf. (Art)		87,2% (703,701)		Others	-	52	11648			

In the study's sample one third of respondents are females. More than 65% of the interviewees chose Italy for leisure. The great majority of visitors is aged between 25 and 64. Considering any prepaid expenses, inbound tourists spent an average of 364.6 Euros per person per day (constant prices, base year 2005) while the average expenditure once at destination is 139.1 Euros. Figures are computed excluding a share equal to 0,15% of individuals reporting a daily expenditure higher than 6,000 Euros.

The “average-tourist” spent almost one week in the target destination, but the median length of stay is just 4 days.

Except for expenditure and number of nights, all the control variables listed in Table 1 are categorical some associated to a very small number of interviews per year. To avoid multicollinearity problems, we aggregate under-represented countries of origin and destinations into larger areas (see next section).

The province of the capital, Rome, is the main destination in the sample, with almost 25.0% of respondents who have spent most of their holiday in this province; the province of the business capital of Italy, Milan, follows with 12,4%. As far as the countries of origin are concerned, the UK leads (17.3%) followed by Germany (16.9%) and the US (11.1%).

With reference to the dependent variables, both the evaluations of destination and evaluation of the artistic endowment, are concentrated on the highest values of the rating scale and negatively skewed. More specifically, the evaluation of the destination is the most concentrated variable, while the evaluation of art is less concentrated but more skewed. Interestingly, most of the respondents rated art higher than the destination and the two variables are only moderately related ( $\rho=0.498\%$ ). This could suggest that the cultural and artistic assets of Italian destinations provide tourists with one of the most fulfilling experiences in the peninsula, but that this is not enough to generate high evaluations for the destination.

### 3.2 Methods

We model evaluation ratings through Cumulative Logit Models (CLMs) to obtain efficient and unbiased estimates in presence of non-linearity and heteroscedasticity, caused by the heavily skewed and concentrated values of the dependent variables (e.g. floor or ceiling effects).

We test whether the endowment of WHSs increases tourist performance ratings, how long it takes (from the entry of a site into the UNESCO list) for changes in performance ratings to emerge and manifest, and how long they persist, through the following model:

$$Y_r = -\alpha_r + Tr\omega_{1,r} + \ln(Tr)\omega_{2,r} + \ln(Ni)v_r + \ln(Ex)\eta_r + \mathbf{UC}_{t^*,d,k}\boldsymbol{\gamma}_{1,r} +$$

$$+UN_{t^*,d,k}\boldsymbol{\gamma}_{2,r} + US_{t^*,d,k}\boldsymbol{\gamma}_{3,r} + UM_{t^*,d,k}\boldsymbol{\gamma}_{4,r} + X\boldsymbol{\beta}_r + Z\boldsymbol{\theta}_r \quad (1)$$

where  $\mathbf{Y}_r$  is a vector containing the (inverse) cumulative logit transformation:

$$y_{j,r} = \ln \left( \frac{\Pr[S_{i,r} > j^* | I_i]}{1 - \Pr[S_{i,r} > j^* | I_i]} \right) = \ln \left( \frac{1 - \sum_{j=1}^{j^*} \Pr[S_{i,r} = j^* | I_i]}{\sum_{j=1}^{j^*} \Pr[S_{i,r} = j^* | I_i]} \right)$$

with  $S_{i,r}$ , the item object of evaluation, expressed by the  $i$ -th ( $i=1, \dots, N$ ) respondent with the  $r$ -th item ( $r$ =overall experience, artistic endowment) and  $j^*$  the observed evaluation ( $j=1, \dots, 9$ ).

This inverse CLM can be understood as a model for the cumulative probability of the  $i$ -th rating falling in the  $j$ -th category or above.  $\alpha_r$  is a vector of  $N$  elements, that can take one of the ( $j=1, \dots, 9$ ) threshold values functioning as the intercept of the  $j$ -th cumulative logit. In general, regression parameters can be made independent by  $j$  assuming that odds are proportional or allowed to vary across different thresholds (assuming nominal effects). In the former case the CLM can be understood as a set of binary logistic regressions all represented by parallel lines, with increasing intercepts.  $\mathbf{Tr}=1, 2, \dots, 19$  is the vector coding the years when the respondents visited Italy,  $\omega_{1,r}$  and  $\omega_{2,r}$  are the coefficients that captures the dynamics of evaluations at the national level.  $Ni$  is the vector of numbers of nights, with coefficient  $\nu_r$  and  $Ex$  is that of tourist daily overall expenditure, with coefficient  $\eta_r$ .

$UC_{t^*,k,d}$ ,  $UN_{t^*,k,d}$ ,  $US_{t^*,k,d}$  are categorical ( $N \times 9$ ) control matrices with a column for each response category (minus 1). Coefficients are equal to 1 if the respondent visited a province holding a Cultural, Natural or Shared site respectively in a year  $t \in [t^*+k, t^*+k+d]$ , being  $t^*$  the year when the site entered the UNESCO list,  $k=0, 1, 2$  the delay by which the WHS effect could manifest on tourists' evaluation and  $d=0, 1, \dots, 6$  the hypothesized duration of the corresponding WHS effect.  $UM_{t^*,k,d}$  is a matrix containing 9 dummy variables equal to one if the visited province holds more than 1 WHS. The associated vectors of coefficients ( $\boldsymbol{\gamma}_{\cdot,r}$ ) represent the main object of interest of the study: it contains the 9 coefficients each corresponding to a certain threshold  $j$  (nominal effect). On the contrary, for the sake of parsimony, parallelism of the regression slopes is assumed for the other variables (whose in-

depth analysis goes beyond the scope of this work). For the same reason, and to ensure the robustness of our model, we do not specify a parametric model (e.g., a linear, U-shaped, logarithmic or exponential function) to represent the dynamics of evaluation after a WHS designation. The choice, would have implied to consider and model possible differences among provinces and types of site (cultural, natural, multiple and shared) that would have generated further complexity and is beyond the scope of this work.

The  $\mathbf{X}$  matrix contains 4 dummy variables for age, 1 for gender and 1 for purpose of the trip (age 15-24, male and other purpose than leisure are used as baseline to estimate the model).  $\boldsymbol{\beta}_r$  is the vector of fixed effects, quantifying demographic and trip purpose influence on the evaluation (assuming odds proportionality).

Finally the  $\mathbf{Z}$  matrix contains  $P$  columns synthetizing the information on the 395 different tourists' origin/destination;  $\boldsymbol{\theta}_r$ , are  $P$ -dimensional vectors to be estimated. The high number of origins and destinations - some of which are associated with a few interviews per year - prevents to consider  $P=393$  dummies in this matrix. We manage multi-collinearity problems following two distinct approaches: a Multiple Correspondence Analysis (MCA) - the counterpart of principal component analysis for categorical data (Greenacre 1984) - and the aggregation in few larger origin/destination areas of the less represented countries of origins/destination provinces. Both choices have an intrinsic subjectivity related to the “cut-off” point. We acknowledge this choice as a possible limitation of this study although we find similar results for matrices  $\mathbf{Z}$  build on different hypothesis (i.e with different  $P$ ). In particular, regarding MCA approach, we consider three matrices containing the first MCA components ( $P=4, 5, 6$ ). The proportion of variances retained range from 71% and 86%. We also consider 4 different province and destination aggregations, setting the (per year) maximum sample size to be aggregated to 1000 or 2000.

Equation (1) is estimated on the whole sample through maximum likelihood (using the R package “Ordinal”), for different values of  $k$  and  $d$ , different choices for the matrix  $\mathbf{Z}$ , testing for the presence of restrictions on  $\boldsymbol{\gamma}_r$ . (i.e. nominal effects or equally spaced structured parameters). Models'



comparison is based on the Akaike Information Criterion (AIC) values. A likelihood ratio test was also deployed to test whether restrictions are warranted by our data.

Thus we model the probability that  $S_{i,r}$  is higher than the observed value ( $j^*$ ), over the probability that it is not, conditional to the values of the explanatory variables in the information set for the  $i$ -th respondent. In general, a CLM coefficient quantifies the variation in the  $y_{i,j,r}$  value, following a unitary increase in the corresponding explanatory variable. Therefore, a positive coefficient means that if the corresponding determinant increases, then it is more probable that the visitor will give a higher evaluation/rating than s/he would for the observed value of such explanatory variable (vice versa for negative coefficients). However, to make the discussion of results more fluent, we are going to explain estimated coefficients in terms of effects on tourist evaluation, rather than on the logarithm of the cumulative odd  $y_{i,j,r}$  (that would be more correct but less straightforward).

To better interpret and contextualize the findings stemming from the model we triangulated data from supplemental sources including additional primary sources (e.g., confidential reports of organizations in charge of destination marketing and regional and provincial level) and secondary sources that comment on the observed phenomena in significant detail (e.g., newspaper articles and press releases reporting emblematic anecdotal and factual evidence). Moreover, preferential and exclusive access to several key knowledgeable informants representing four WHSs HMAs and nine local DMOs allowed us to gather also their own interpretations of our findings. Typically, triangulation from multiple data sources reduces the risk of retrospectively imposing meaning on events occurred in the past based on knowledge of the outcomes (Jick, 1979) and helps contextualizing and interpreting in a more comprehensive and nuanced way the phenomena under investigation.

#### 4. Findings

Comparing the AIC values for all the possible combinations of  $k$  and  $d$ , it turns out that the highest informative contribution of listing a WHS to tourists' evaluation of the destination and its cultural/artistic assets manifests immediately, during the same year of the UNESCO avowal ( $k=0$ ) and it persists for 5 years ( $d=5$ ).

We also test the assumptions that one or more  $\gamma_{j,r}$  parameters do not vary with  $j$  (proportional odds) or that they are equidistant (structured thresholds). Both hypotheses are rejected ( $p < 0.01$ ) for both dependent variables independently from the chosen  $k$  and  $d$ . It is worth noting that models where the  $\mathbf{Z}$  matrix is built on MCA factors never outperform the models considering macro-regions of origin/destination, (LR tests  $p > 0.01$ ). Thus we use directly the demographics and related variables to explore effects for various subgroups of visitors though not in huge depth, given that this is beyond the aims of this study.

The estimated models are illustrated in Table 2. Parameters are identifiable and optimization works well. Both models provide better predictions than models based on the marginal probabilities for the outcome categories ( $p$ -values of the  $\chi^2$  tests is always less than 0.01). The Nagelkerke statistic reaches 0.098 when perceived overall performance of the destination is the dependent variable and 0.139 in the model related to evaluation of the artistic assets.

The combined effect of time on both dependent variables is positive and increases until 2001.

Afterwards it starts decreasing and turns negative in 2009 and 2011 for overall performance and performance with arts respectively (as the linear negative component -  $\omega_{1,r}$  - takes over). Expenditure and length of stay affect negatively the evaluation of the destination (and its artistic assets) as the associated  $\mathbf{v}$  and  $\boldsymbol{\eta}$  parameters are both significant and negative. Paying for expensive exclusive services or developing an in depth knowledge of the visited places (by increasing the length of stay) does not necessarily translate into a more positive evaluation of the destination. A possible explanation is that visitors spending little time on holiday, typically visit only the major attractions of the destination (Lau and McKercher, 2006) that are likely the more interesting and developed from a tourism supply side.

Table 2. Estimates of coefficients (eq. 1)

Proportionaleff.	Coeff. Overall S.	Coeff.S. with Art	Proportionaleff.	Coeff.Overall S.	Coeff. S. with Art
ZNorth-Est	-0.268***	-0.374***	ZGermany	0.201***	0.531***
ZCentre	-0.161***	-0.365***	ZOtherEU	-0.053***	0.217***
ZSouth-Islands	0.163***	0.267***	ZEurope not EU	0.093***	-0.068***
ZMilan	0.305***	0.235***	ZAsia	0.511***	0.381***
ZVenice	-0.145***	-0.94***	ZCanada,Oceania	0.119***	0.234***
ZFlorence	-0.151***	-1.036***	XHoliday	0.473***	0.396***
ZRome	0.186***	-0.989***	XFemale	-0.225***	-0.227***
ZAustria	-0.309***	0.019	XAged25-34	-0.038***	-0.06***
ZBelgium	0.374***	0.574***	XAged35-44	-0.066***	-0.086***
ZFrance	0.398***	0.417***	XAged45-64	-0.21***	-0.218***
ZUK	-0.136***	0.289***	XAged65-	-0.388***	-0.369***
ZNetherlands	0.543***	0.84***	Ni	-0.147***	-0.104***
ZSpain	0.482***	0.396***	Ex	-0.137***	-0.115***
ZUSA	-0.396***	-0.089***	Tr	-0.032***	-0.038***
ZCH	0.174***	0.526***	Ln(Tr)	0.156***	0.206***
Nominal effects	Coeff. Overall S.	Coeff.S. with Art	Nominal effects	Coeff.Overall S.	Coeff. S. with Art
$\alpha_{j^*=1}$	6.044***	6.067***	$UN_{k=0,d=5,j^*=6}$	-0.46***	0.062
$\alpha_{j^*=2}$	5.428***	5.217***	$UN_{k=0,d=5,j^*=7}$	-0.351***	0.175***
$\alpha_{j^*=3}$	4.917***	4.429***	$UN_{k=0,d=5,j^*=8}$	-0.118***	0.212***
$\alpha_{j^*=4}$	4.241***	3.744***	$UN_{k=0,d=5,j^*=9}$	-0.084***	-0.013
$\alpha_{j^*=5}$	3.258***	2.747***	$UM_{k=0,d=5,j^*=1}$	0.087	-0.177
$\alpha_{j^*=6}$	2.145***	1.946***	$UM_{k=0,d=5,j^*=2}$	0.151	-0.279***
$\alpha_{j^*=7}$	0.596***	0.906***	$UM_{k=0,d=5,j^*=3}$	0.019	-0.418***
$\alpha_{j^*=8}$	-1.223***	-0.436***	$UM_{k=0,d=5,j^*=4}$	-0.081	-0.506***
$\alpha_{j^*=9}$	-2.789***	-1.561***	$UM_{k=0,d=5,j^*=5}$	-0.014	-0.459***
$UC_{k=0,d=5,j^*=1}$	-0.381**	0.144	$UM_{k=0,d=5,j^*=6}$	0.255***	-0.276***
$UC_{k=0,d=5,j^*=2}$	-0.312**	0.104	$UM_{k=0,d=5,j^*=7}$	0.368***	-0.019
$UC_{k=0,d=5,j^*=3}$	-0.277***	0.142**	$UM_{k=0,d=5,j^*=8}$	0.317***	0.168***
$UC_{k=0,d=5,j^*=4}$	-0.282***	0.126**	$UM_{k=0,d=5,j^*=9}$	0.374***	0.305***
$UC_{k=0,d=5,j^*=5}$	-0.187***	0.118***	$US_{k=0,d=5,j^*=1}$	-0.281	-0.057
$UC_{k=0,d=5,j^*=6}$	-0.252***	0.048**	$US_{k=0,d=5,j^*=2}$	-0.045	0.103
$UC_{k=0,d=5,j^*=7}$	-0.15***	0.042**	$US_{k=0,d=5,j^*=3}$	0.18*	0.042
$UC_{k=0,d=5,j^*=8}$	-0.051***	-0.042***	$US_{k=0,d=5,j^*=4}$	0.244***	-0.012
$UC_{k=0,d=5,j^*=9}$	-0.13***	-0.155***	$US_{k=0,d=5,j^*=5}$	0.193***	-0.042
$UN_{k=0,d=5,j^*=1}$	-0.225	0.044	$US_{k=0,d=5,j^*=6}$	0.131***	-0.066***
$UN_{k=0,d=5,j^*=2}$	0.205	-0.152	$US_{k=0,d=5,j^*=7}$	-0.018	-0.146***
$UN_{k=0,d=5,j^*=3}$	0.21	-0.268	$US_{k=0,d=5,j^*=8}$	-0.128***	-0.125***
$UN_{k=0,d=5,j^*=4}$	-0.081	-0.233*	$US_{k=0,d=5,j^*=9}$	-0.054***	0.018
$UN_{k=0,d=5,j^*=5}$	-0.466***	-0.131*	Nagelkerke	0.0979	0.1389

\*\*\* p<1%; \*\* p<5% \*p<10%

In contrast with studies that have detected a positive effect of income on satisfaction (Shahrivar, 2012), the negative relation between tourists' evaluations and expenditure may reflect that wealthier tourists are not in a condition to benefit from high-end service during their trips (Jarvis et al., 2016). This calls for a possible role played by expectations as tourists willing to spend for exclusive services, are expected to be the more dissatisfied if conservation constraints do not allow for highly differentiated forms of preferential access to and use of the attractions. Leisure tourists, who have more freedom to

choose the destination and attractions they visit, express higher ratings than business ones. The older the tourist, the lower the likelihood that his/her evaluation will be high, in line with previous literature (e.g., Alegre and Cladera, 2006; Shahrivar, 2012; Jarvis et al. 2016). This effect is similar for both dependent variables. Women give the most negative evaluations of the destinations: this finding is in line with Ngai (2005). However, we acknowledge that the extant literature shows “symmetric” sometimes non-significant relationship between gender and satisfaction (e.g., Tsiotsou and Vasioti, 2006; Huh and Uysal, 2004).

The effect on the evaluation of both the visited and origin areas is mixed but always significant. Moreover, the contribution of the destination itself to the evaluation of the artistic assets is negative and always lower than its contribution to overall evaluation, with the relevant exception of the provinces in the South and Islands. This finding seems to suggest the centrality of expectations in affecting tourists’ evaluation, as foreign tourists tend to choose Southern Italy driven by natural and seaside resources or eno-gastronomic attractions (Trunfio, et al. 2006). Accordingly, the evaluation of the destination’s artistic assets for arts destinations such as Venice, Rome and Florence is lower than the evaluation in destinations in the South of Italy and the urban business destination of Milan.

The effect of the country/region of origin is more homogenous across the two dependent variables; the Spearman’s rank correlation between the estimated  $\theta$  is 77.0% (only 21.0% if we consider destinations). The tourists that express the higher ratings are from the Netherlands but, in general, all EU tourists give higher ratings than those from other regions of the world, while the parameters estimates are less positive for the overall evaluation of the destination compared to the evaluation of art. The two aforementioned findings can be interpreted in light of different levels of expectations of long-haul tourists. Indeed tourists may perceive the negative effects associated with a long journey (e.g., increased travel time, physical and psychological fatigue, higher travel costs), as a sacrifice that needs to be made in view of a reward such as a superior experience at the destination (Nicolau and Mas, 2006), thus raising tourists’ overall expectations about the destination being visited (Radojevic et al. 2015).

Tourists giving the lowest ratings are from the USA: they are the only ones whose coefficients are negative both regarding evaluation of the destination and evaluation of the artistic assets of the destination.

Shifting our attention to the core of the paper, we find that in general, the likelihood to give a high rating to a destination declines if a UNESCO WHS is designated in that destination, as displayed by the coefficients of the UC and UN variables in Table 2. In particular, the presence of a cultural WHS in the province destination tends to lower the overall evaluation by a greater extent than the presence of a natural WHS. A possible explanation is that Italy is recognized especially for its artistic and cultural attractions ranking second in the dimension “culture” of the country brand index (GFK, 2009); as a consequence we can conjecture that tourists would form high expectations if a new WHS is designated in Italy. This finding is also strengthened by the evidence that the designation of a natural WHS has a marginal influence on the evaluation of the artistic assets of a destination.

More specifically, the findings show that listing a UNESCO WHS exerts heterogeneous effects on tourists’ evaluation of the destination and its artistic assets; these effects vary based on the evaluations expressed by tourists.

The negative effect of a WHS listing on tourists’ evaluation decreases as the level of the  $j^*$  rating increases (i.e., the overall  $j^*$  ratings given are in the upper part of the scale), whereas the presence of a natural WHS reduces significantly the evaluation only when tourists give a rating  $j^* > 4$ . Nonetheless, we record higher evaluations in provinces holding more than one WHS, especially when they are rated higher than 5 ( $j^* > 5$ ). On the contrary, the influence of listing a shared WHS is mixed: negative for tourists whose ratings are higher than 6 ( $j^* > 6$ ) and positive for tourists whose ratings are between 3 and 6. The aforementioned evidence seems to suggest that the experiential richness and variety exert a positive effect on tourists’ evaluation of the destination if combined with local stakeholders’ previous experience/knowledge in dealing with the listing.

The picture is different if we analyse the evaluations of the destination artistic assets. Here we find a positive effect of the WHS listing on tourists’ evaluation that becomes negative only for  $j^*$  ratings in the

upper part of the scale ( $j^* > 7$ ), whereas the listing of a natural WHS produces – as expected - mixed and less significant effects. On the contrary, the probability to observe an higher evaluation, by listing a new WHS in a province already holding one or more WHS, increases only for tourists giving very high ratings to the artistic assets ( $j^* > 7$ ). A possible explanation is that tourists to enjoy culture and art could be overwhelmed by a massive presence of cultural attractions.

Overall, our findings highlight that UNESCO clusters (i.e., areas with a high concentration of WHSs), rather than single sites, do make a difference for overall tourist evaluation. Tourists' evaluation of arts is less negatively affected by listing than the overall evaluation of the destination, highlighting the importance to reshape and reconfigure (even partially) the supply at the destination level, focusing on the valorization, accessibility and maintenance of the wider tourism area hosting the site.

Thus, the negative impact of WHSs' designation on evaluation of the destination is not only related to the need to fulfil higher tourist expectations as it could be also interpreted as the combined effect of the priorities and agendas of the destination marketers on one hand and the priorities and agendas of the HMAs on the other hand. In what follows we focus on plausible factors that, based on the triangulation of data stemming from our quantitative analysis and qualitative evidence, can offer meaningful interpretations of the phenomenon analysed.

#### **4.1 Priorities and agendas of the destination marketers**

Destination marketers (DMs) and in general Destination Marketing Organisations (DMOs) are typically interested in enhancing tourism flows to a destination (Mariani et al., 2014; Morrison, 2013; Pike and Page, 2014). Consequently, we would expect DMs to embrace the WHS designation as a tourism development and marketing opportunity for the destination. However, this would imply:

1) to coordinate the DMO's promotional efforts with the HMA agendas about the promotion. This is a very delicate aspect as there has been historically a lack of collaboration between the cultural and tourism local departments that were endowed (at the province level) with separate budgets;

2) to further or better invest in promotion. Given the tight budget of DMOs in the Italian context and the fact that all of the local DMOs are embedded in public administrations, we would expect at best these investments to be not timely, and in most of the cases that few marketing activities would be planned and implemented;

3) to invest to reshape and reconfigure the supply as suggested by the more negative effect of a WHS listing on tourists' overall evaluation compared to tourists' evaluation of arts. After the UNESCO inscription, we could expect that more travelers particularly interested in art and culture or nature would be attracted to the destination than before. Thus, destination managers are challenged to enhance valorization, accessibility and maintenance of the wider hosting area, to meet the modified expectations of existing visitors as well as the expectations of new markets.

All of the aforementioned observations seem to support complementary and plausible explanations and interpretations of the findings that are backed by the literature, qualitative evidence and preferential access to key informants and related exclusive primary data. In particular it appears that the local DMOs are not taking much responsibility in marketing the destination after the designation of a WHSs and this might contribute to the scarce information of visitors about the designation itself (King and Halpenny 2014). Moreover, the contextual conditions where destination marketers operate might induce them to de-market the areas where a WHS is located as a result of the lobbying activities of cultural policy makers. This is the case of Italy where the legislation and planning for heritage has followed a more structured approach than its counterpart for tourism (Paloscia, 1994). Moreover, it is likely that also DMOs will increasingly comply with sustainability considerations, thus adopting de-marketing strategies for the area where a WHS is located to decrease the tourism pressure.

#### **4.2 Priorities and agendas of HMAs**

The Italian properties awarded the designation are typically public sector organizations and have historically paid more attention to conservation and restoration than marketing and promotion (Zan 2016). For years, they have not been equipped with effective marketing departments given the rigid

governance structure of their overarching Superintendences, resulting in poor marketing activities (Ferri & Zan, 2014). Moreover, HMAs constantly face a trade-off between protecting and conserving attractions of OUV versus making them easily exploitable for commercial purposes. In the context under analysis, where curators and historians have historically managed most of the UNESCO attractions with a conservation-oriented mindset, the inscription onto the WHL could push both heritage managers and cultural policy makers to implement de-marketing measures and actions that can be perceived negatively by many visitors. For instance, they might limit purposefully access to the site and block or delay plans to expand the accommodation and transportation capacity of the area surrounding the site, because this could undermine the status quo of their governance structures (Ferri & Zan, 2014). Consistently, we find that the negative effect of listing a WHS affects evaluation in the medium term ( $d=5$ ): this finding seems compatible with the negative effect that WHSs exert on overnights (see Ribaudo and Figini 2017).

#### **4.3 Effects of the combination of the priorities and agendas of DMOs and HMAs**

Overall, our findings corroborate the idea that the relationship between tourism growth and preservation is a complicated one characterised by symbioses and tensions between HMAs and CTEs (Buckley, 2018). The relationship is even more complicated as destination marketers and DMOs might not play on the side of CTEs but could in some political and legal contexts simply surrender to lobbying pressure of cultural policy makers and HMAs (Zan et al., 2007).

This situation is captured through our measures of evaluation at the local destination level. Negative coefficients suggest that the conservation and preservation priorities might prevail and cultural policy makers might convince destination marketers to decrease their marketing efforts and/or to avoid embarking in investments to fine-tune the supply.



Overall, this might enhance HMAs' protection and generate unwanted side effects in terms of tourism promotion and destination development. The latter ones are apparently clear when looking at the evidence that the WHS listing exerts a more negative effect on the overall evaluation than on evaluation of artistic assets. In other words, it appears that the main difficulties do not arise from unmatched visitors' expectations about the cultural and artistic features but rather from "dissatisfaction" with the destination. Interestingly, the effect is more evident in the three most relevant and iconic destinations of Rome, Venice, and Florence, i.e., in destinations where high tourism pressure and carrying capacity issues lead tourism marketers to implement de-marketing actions. For instance, in Florence the mayor who supervises the city government office in charge of the DMO, has recently ordered to hose down the steps of some of the most renowned historical churches (Giuffrida 2017) and has restricted the access to several historical areas in a move that certainly provides evidence of a demarketing attitude of city government DMOs. In Rome, the situation is not different as the city is endowed with a city government department that limited access to visit of the Sistine Chapel back in 2012 ([http://www.repubblica.it/speciali/arte/recensioni/2012/10/30/news/cappella\\_sistina-45553024/](http://www.repubblica.it/speciali/arte/recensioni/2012/10/30/news/cappella_sistina-45553024/)), while in Venice, de-marketing initiatives have been undertaken to decrease tourism flows on the occasion of the historic Carnival. These are just a few examples, but the full list is very long. The long lasting negative effect on evaluation, suggests that it takes time for Italian tourism policy-makers and destination marketers to adjust the local supply to the formation of new market needs and the evolution of extant market segments triggered by the listing of a WHS. We recognize that this state of affairs is affected by the austerity measures undertaken by the central government (to comply with European Union regulations) and leading to worsen the budgetary capacity of DMOs and tourism developers and their capability to adjust the local supply. The aforementioned considerations are supported by the strong positive effect on tourists' evaluation associated to the listing of a multiple WHS. In other words, in areas where tourism and cultural policy makers, DMOs and destination managers, HMAs, have a past experience/knowledge of the trade-off between site preservation and tourism planning, local stakeholders can find a more satisfactory balance

among the need to preserve the focal assets and tourism development (i.e. to enhance tourism accessibility, promotion and commercial exploitation of artistic and natural resources). Moreover, the positive effect associated with multiple sites allows hypothesizing that structural interventions carried out to adapt the local tourism supply to the new market needs, triggered by a previous UNESCO designation, might generate learning useful to develop tourism for the newly listed sites too and, in general, of the whole local destination.

## 5. Conclusions and implications

This study has contributed to the increasingly relevant research area at the intersection between tourism and UNESCO World Heritage Sites (WHS) in different ways. First, this research is to the best of our knowledge the first to explore quantitatively the relationship between the designation of UNESCO WHSs and tourist evaluation of the local hosting destination (i.e., of the tourism area hosting the site, beyond the physical perimeter of the individual WHS) and of destination attributes (i.e., artistic/cultural assets). However, if WHSs' OUV mirrors human perceptions of the value of WHSs (Buckley 2018), then we would expect destinations endowed with assets of OUV to record an increase in tourists' evaluation of the destination after the UNESCO designation. Our study shows that the inscription of a property on the WHL influences negatively tourists' overall evaluation of the destination more than evaluation of its artistic assets. This is not the case when considering destinations hosting multiple WHSs, suggesting that the expected positive effect on tourists' overall evaluation of the destination stems from the combination of the variety and range of WHSs and previous experience/knowledge of the local stakeholders in managing the conflict between preservation and tourism development arising from WHS designation processes.

Second, from a methodological point of view, the study adopts a dynamic perspective on tourists' evaluation of a destination, tracking longitudinally when the inscription of heritage onto the World Heritage List (WHL) starts generating a significant effect on tourist perceptions of the destination and how long the effect of the designation persists over time. The negative effects are instantaneous and persist for 5 years suggesting that they cannot be seen as temporary shocks but as the result of systematic (de)marketing activities or structural gaps of the local tourism supply.

Third and related to the previous point, as far as the methodological contribution is concerned, we model evaluation statements through CLMs to obtain efficient and unbiased estimates in presence of a strong assessment asymmetry. This approach allows employing demographics and related variables to explore effects for various subgroups of visitors and – more importantly given the goal of the paper –

to model the extent to which those effects are present and vary as the ratings expressed by tourists vary (assuming nominal effects).

In more detail, our empirical findings indicate a differential effect of listing a WHS on tourists' evaluation of art. The effect is negative only for individuals expressing higher ratings, while when considering overall destination performance, the negative effect of WHS listing is more evident and tends to decrease as the ratings increase.

The inscription of a shared WHS (i.e., a site that is shared among two or more nearby local destinations) brings about a mixed effect. Regarding evaluation of arts, the effect is mostly negative although only for those tourists that already give high ratings to artistic assets. Regarding the overall evaluation of the destination, the performance is weakly negative for tourists providing high ratings but highly positive for tourists giving lower ratings.

Tourists' evaluation appears always to increase in the presence of multiple WHSs especially for tourists expressing higher ratings. This evidence hints that the variety of highly valuable cultural and natural assets actually makes a difference for the overall tourist experience. Thus, UNESCO clusters matter, rather than single sites, consistently with the result in Poria et al. (2011), according to which the more WHSs in a destination, the more tourists are interested in visiting it. However, we believe that there is an equally important effect due to the fact that DMOs and HMAs might find it easier and more convenient to pool resources to market a set of WHSs after structural interventions are carried out to adapt the local tourism supply to the new market needs triggered by a previous UNESCO designation. Moreover, past experience of the destination stakeholders in dealing with WHS designations might have facilitated a constructive dialogue between DMOs and HMAs that ultimately could contribute to reducing tensions and paving the way for collaborative attitudes.

Theoretical contributions stem from the findings of the study. First, we enrich the debate revolving around the reasons and consequences of a WHS inscription by arguing that research might address the relationship between two sets of perceptions. The first set includes human beings'

perceptions that have apparently led to the UNESCO designation (captured in the concept of OUV) and the second set includes human beings' perceptions of the destinations that have secured an OUV recognition for one or more of their assets (captured through tourists' evaluation of the destination hosting the WHSs). Secondly, we find that the measured effects on evaluation are relatively similar when looking at the designation of cultural and natural WHSs, with a few exceptions in the evaluation of cultural and artistic assets. This seems to strengthen the theoretical consideration that a fine-grained demarcation between cultural and natural heritage might be misleading and that the categories currently used to segment heritage might not be relevant for empirical studies (Poria et al. 2006; Su and Wall 2016). Third, an interpretation of the quantitative findings, based on feedback from four WHSs HMAs and nine local destination marketing organizations corroborates the idea that destination de-marketing is an unwanted effect of WHS designation which enriches extant literature on both de-marketing (Medway et al., 2010) and the way it can be deployed to face carrying capacity issues (Getz, 1983; Kennel, 2016) that can become problematic in cultural heritage destinations (Van de Borg, 1992).

As far as the managerial implications are concerned, there are several considerations to put forward. First, the negative effect of a WHS designation on tourists' evaluation of the destination in the short term might be the consequence of one (or a combination) of the priorities and agendas of Destination Marketing Organisations (DMOs) on one hand and HMAs on the other hand. As far as DMOs are concerned, given their tight budgets, their investments might not be timely and no marketing activities would be planned and implemented in the short term. Moreover, the local DMO might decide that further marketing and promoting the destination based on the newly inscribed WHS might simply duplicate marketing efforts carried out by the HMA.

Second, the long lasting (i.e., five years) negative effect of a WHS designation on tourists' evaluation of the destination seems to indicate that HMAs and cultural policy makers are more interested in preserving heritage than in allowing the development of the commercial tourism industry and CTEs on one hand. On the other hand, this might be the consequence of de-marketing actions

(Medway et al., 2010) on behalf of DMOs. For instance, if we look at the 5-years duration of the negative effects on tourists' evaluation of the destinations, we can clearly appreciate that Italian HMAs and destination managers do not adjust promptly the local supply to match the modification of the tourist preferences, which could differ from those of the market segments targeted before the listing. This might imply more efforts and investments in valorization, accessibility and maintenance of the UNESCO protected assets (both because this is in line with the philosophy underlying the UNESCO Convention and because it generates value for visitors who eventually could express higher ratings) and the wider hosting area. This implication is corroborated by the findings that tourists paying for expensive exclusive services or developing an in depth knowledge of the visited places (by increasing the length of stay) show lower levels of evaluation of the destination. Consequently, the local authorities, stakeholders and the whole territory should be conjointly involved in the processes that are necessary for reaping the opportunities of regional development offered by the UNESCO designation, in face of increasing competition in the global tourism marketplace (Pike and Page 2014).

This result shows clearly the urgency of a deep reflection on good practices to adjust the local supply to the formation of new market needs and the evolution of extant market segments triggered by the listing of a WHS. Structural interventions carried out to adapt the local tourism supply to the new market needs, might be helpful as clear from the findings related to multiple WHS. Accordingly, UNESCO might be willing to collect data and write up case studies with emphasis on the good and bad managerial practices (of HMAs and possibly of local DMOs) following past WHS designations. These case studies might be included in a technical report that could be shared with relevant HMAs and DMOs. Third, the discovery that the negative effect of WHS designation on tourists' evaluation of the destination is mitigated when there are multiple WHSs hosted by a destination, emphasizes that clusters of WHSs and local destination stakeholders' experience with previous designation processes matter, rather than individual sites in areas where destination stakeholders have never dealt with WHS designation processes and their outcomes. This appears consistent with the results of Poria et al. (2011), highlighting that the more WHSs in a destination, the more tourists could be interested in visiting it.

Accordingly, a “variety-portraying” marketing communication strategy may be more effective than strategies marketing individual WHSs as independent silos. We would therefore recommend that destination marketers should work more closely to HMAs and cultural policy makers and build networks of UNESCO sites, promoting them through umbrella branding strategies of local destinations (d’Angella and Go 2009). They could also possibly work closely with UNESCO, to strengthen the brand equity of their sites.

Fourth while anecdotic evidence clearly show that not only HMAs and destination managers act slowly, but also that they develop de-marketing activities, we should consider that this state of affairs might be the consequence of a historical trend that subordinated tourism to cultural heritage in Italy since the seventies when the first national Ministry of Cultural Heritage was constituted. Since then most of the political attention has been devoted to conservation rather than tourism development. Despite changes in the overall denomination of the central ministry and local administrations, the largest share of resources has been allocated to heritage rather than tourism, thus making the relationship between preservation and tourism development even more complicated. Indeed, even DMOs are prevented from marketing their destinations by leveraging on WHSs. Certainly more efforts on behalf of the central government is needed in terms of developing the tourism sector. On one hand, there is a general lack of culture towards tourism development and it is rather emblematic that a country destination like Italy has developed its first strategic plan for the development of tourism just in 2013 and it has never been approved by the parliament (Gnudi 2013). A new strategic plan, developed under a different government from 2014 to 2016 was approved by the parliament only in 2017 and is being implemented for the first time in history starting from 2018 (a year not covered in our dataset).

On the other hand, the possibility of creating new opportunities for tourism development is seriously constrained by austerity measures undertaken by the central government to comply with deficit-related European Union regulations.

## **6. Limitations and research agenda**

This research is not without limitations. First, while our findings stem from a large longitudinal sample survey conducted annually since 1997 in Italy, results might vary in other contexts and destinations.

Therefore, further empirical analyses are needed to validate the findings and check if the latter ones can be generalised to other destinations.

Second, while we based our analysis on measures of perceptions, it would be interesting to match perceptions data with actual tourist behaviour data. To this aim, it might be a value added activity to triangulate tourists' ratings stemming from the survey with other measures such as tourism flows in the local destinations hosting WHSs. In parallel, future studies might control for changes in elements such as entrance fees, and the actual marketing budgets, which may have an impact on the visitation patterns to the designated site and related destination. Finally yet importantly, the mitigation of the negative effect on evaluation of destinations endowed with multiple sites could be further dug in depth with in-depth qualitative case studies in the destinations actually hosting more than one site in contexts with a high number of WHSs such as China.



## REFERENCES

- Airey, D., and M. Shakley. 1998. "The former capital and national shrine." In *Visitor management: Case studies from World Heritage Sites*, edited by M. Shakley, 46–65. Oxford: Butterworth-Heinemann.
- Alegre, J., and M. Cladera. 2006. "Repeat visitation in mature sun and sand holiday destinations." *Journal of Travel Research* 44 (3): 288–297.
- d'Angella, F., and F.M. Go. 2009. "Tale of two cities' collaborative marketing: Towards a theory of destination stakeholder assessment." *Tourism Management* 30: 429-440.
- Antón C., C. Camarero, and M. Laguna-García. 2017. "Towards a new approach of destination loyalty drivers: satisfaction, visit intensity and tourist motivations." *Current Issues in Tourism* 20(3): 238-260.
- Beeton, S. (2003). "Swimming against the tide – Integrating marketing with environmental management via demarketing." *Journal of Hospitality and Tourism Management*, 10(2): 95–107.
- Beeton, S., and R. Benfield. R. 2002. "Demand control: The case for demarketing as a visitor and environmental management tool." *Journal of Sustainable Tourism* 10(6): 497–513.
- Buckley, R. 2004. "The effects of World heritage listing on tourism to Australian National Parks." *Journal of Sustainable Tourism* 12(1): 70-84.
- Buckley, R. 2018. "Tourism and natural world heritage: a complicated relationship." *Journal of Travel Research* 57(5): 563–578.
- Bui H.T., and T.-A. Le. 2016. "Tourist Satisfaction and Destination Image of Vietnam's Ha Long Bay." *Asia Pacific Journal of Tourism Research* 21(7): 795-810.
- Cellini, R. 2011. "Is UNESCO designation effective in fostering tourism? A comment on Yang, Lin and Han." *Tourism Management* 32: 452-454.
- Clements, M.A. 1989. "Selecting tourist traffic by demarketing." *Tourism Management* 10(2): 89–94.
- Crouch, G.I. 2011. "Destination Competitiveness: An Analysis of Determinant Attributes." *Journal of Travel Research* 50(1): 27-45.
- Farquhar J.D., and Robson, J. 2017. "Selective demarketing: When customers destroy value." *Marketing Theory*, 17(2): 165–182.

- Ferri, P., and L. Zan. 2014. "Ten years after: The rise and fall of managerial autonomy in Pompeii." *Critical Perspectives on Accounting* 25: 368–387.
- Formica, S., and M. Uysal. 2006. "Destination attractiveness based on supply and demand evaluations: An analytical framework." *Journal of Travel Research* 44(4): 418-430.
- Frey, B.S., and L. Steiner. 2013. "World heritage list". In *Handbook on the Economics of Cultural Heritage*, edited by I. Izzo and A. Mignosa, 171-186. Cheltenham: Elgar.
- Getz, D. 1983. "Capacity to absorb tourism: Concepts and implications for strategic planning." *Annals of Tourism Research* 10(2): 239-263
- GfK. 2009. "2008 Anholt-GfK Roper Nation Brands IndexSM Report Highlights". Available at: [http://www.gtai.de/GTAI/Content/CN/Invest/\\_SharedDocs/Downloads/Studies/diw-wochenbericht-9-2010.pdf](http://www.gtai.de/GTAI/Content/CN/Invest/_SharedDocs/Downloads/Studies/diw-wochenbericht-9-2010.pdf) (retrieved 16.09.2018)
- Gilmore, A., D. Carson and M. Ascençao. 2007. "Sustainable tourism marketing at a World Heritage site." *Journal of Strategic Marketing* 15(2-3): 253-264.
- Giuffrida, A. 2017. "Florence mayor aims to keep picnicking tourists at bay with hosepipes" *The Guardian*, <https://www.theguardian.com/world/2017/may/31/florence-mayor-dario-nardella-hosepipes-basilica-santa-croce> (accessed 3 June, 2017).
- Gnudi P. 2013. "Una strategia unica per il turismo" *IlSole24Ore*, 19 gennaio 2013, [http://www.ilsole24ore.com/art/commenti-e-idee/2013-01-19/strategia-unica-turismo-093612.shtml?uuid=AbD3vrLHandrefresh\\_ce=1](http://www.ilsole24ore.com/art/commenti-e-idee/2013-01-19/strategia-unica-turismo-093612.shtml?uuid=AbD3vrLHandrefresh_ce=1) (accessed 3 June, 2017).
- Greenacre, M. J. 1984. *Theory and Applications of Correspondence Analysis*. London: Academic Press.
- Hall, C. M., and R. Piggin. 2001. "Tourism and world heritage in OECD countries." *Tourism Recreation Research* 26(1): 103–105.
- Huh, J., and M. Uysal. 2004. "Satisfaction with cultural/heritage sites: Virginia historic triangle." *Journal of Quality Assurance in Hospitality and Tourism* 4(3-4): 177-194.
- Huang, C.H., J.R. Tsaur and C-H. Yang. 2012. "Does world heritage list really induce more tourists? Evidence from Macau." *Tourism Management*: 1450-1457.

- Jaafar, M., S.M. Rasoolimanesh and S.M. Noor. 2016. "An investigation of the effects of an awareness campaign on young residents' perceptions: a case study of the Lenggong World Heritage Site." *Tourism Planning and Development* 13(2): 127-139.
- Jarvis, D., Stoeckl, N., Liu, H.B. 2016. "The impact of economic, social and environmental factors on trip satisfaction and the likelihood of visitors returning." *Tourism Management* 52: 1-18.
- Jick, T. D. 1979. "Mixing qualitative and quantitative methods: Triangulation in action." *Administrative Science Quarterly* 24: 602-611.
- Jimura, T. 2011. "The impact of world heritage site designation on local communities - A case study of Ogimachi, Shirakawa-mura, Japan." *Tourism Management* 32(2): 288-296.
- Jurowski, C., M. Uysal and D. R. Williams. 1997. "A theoretical analysis of host community resident reactions to tourism." *Journal of Travel Research* 36(2): 3-11.
- Kausar, D.R. 2012. "Sustainability in the Management of World Cultural Heritage". In *Visions for Global Tourism Industry - Creating and Sustaining Competitive Strategies*, edited by M. Kasimoglu, Rijeka: InTech.
- Kennell, J., 2016. "Carrying capacity". In *Encyclopedia of Tourism* (pp. 133-135). Springer International Publishing.
- Kim, S.S., K.K.F. Wong and M. Cho. 2006. "Assessing the economic value of a world heritage site and willingness-to-pay determinants: A case of Changdeok Palace." *Tourism Management* 28: 317-322.
- King, L. M., and E.A. Halpenny. 2014. "Communicating the World Heritage Brand: Visitor Awareness of UNESCO's World Heritage Symbol and the Implications for Sites, Stakeholders and Sustainable Management." *Journal of Sustainable Tourism* 22:768-786.
- Kotler, P., and S.J. Levy. 1971. "Demarketing, yes, demarketing." *Harvard Business Review*, 49: 74-80.
- Landorf, C. 2009. "Managing for sustainable tourism: A review of six cultural World Heritage Sites." *Journal of Sustainable Tourism* 17(1): 53-70.
- Lau, G., and B. McKercher. 2006. "Understanding tourist movement patterns in a destination: A GIS approach." *Tourism and hospitality research*, 7(1): 39-49.

- Marcotte, P., and L. Bourdeau. 2012. "Is the World Heritage Label Used as a Promotional Argument for Sustainable Tourism?" *Journal of Cultural Heritage Management and Sustainable Development* 2(1): 80–91.
- Mariani, M., Buhalis, D., Longhi, C., and O. Vitouladiti. 2014. "Managing change in tourism destinations: Key issues and current trends." *Journal of Destination Marketing & Management* 2: 269–272.
- McKercher, B., and H. du Cros. 2012. *Cultural Tourism: The Partnership between Tourism and Cultural Heritage Management*. New York: Routledge.
- Medway, D., Warnaby, G., and S. Dharni. 2010. "Demarketing places: Rationales and strategies." *Journal of Marketing Management*, 27 (1-2): 124-142.
- Morrison, A. 2013. *Marketing and Managing Tourism Destinations*. New York: Routledge.
- Muresan, A. 1998. "The fortified church of Biertan". In *Visitor management: Case studies from World Heritage Sites*, edited by M. Shakley, 26–45. Oxford: Butterworth-Heinemann.
- Ngai, V. T. 2005. "Leisure satisfaction and quality of life in Macao, China." *Leisure Studies* 24(2): 195-207.
- Nicolau, J. L., and F. J. Mas. 2006. "The influence of distance and prices on the choice of tourist destinations: The moderating role of motivations." *Tourism Management*, 27(5): 982-996.
- Nuryanti W. 1999. "Introduction: Sustaining heritage through cultural industries". In *Heritage, tourism, and local communities*, edited by W. Nuryanti. Yogyakarta, Indonesia: Gadjah Mada University Press.
- Oppermann, M. 2000. "Tourism Destination Loyalty." *Journal of Travel Research*, 39(1): 78-84.
- Palau-Saumell R., S. Forgas-Coll, J. Sánchez-García and L. Prats-Planagumà. 2013. "Tourist Behavior Intentions and the Moderator Effect of Knowledge of UNESCO World Heritage Sites: The Case of La Sagrada Família." *Journal of Travel Research* 52(3): 364-376.
- Paloscia, F. 1994. *Storia del turismo nell'economia Italiana*, Città di Castello: Pedruzzi.
- Pedersen, A. 2002. *Managing Tourism at World Heritage Sites: a Practical Manual for World Heritage Site Managers*, World Heritage Manuals 1. Paris: UNESCO World Heritage Centre.
- Pike, S., and Page, S. J. 2014. "Destination Marketing Organizations and destination marketing: a narrative analysis of the literature." *Tourism Management*, 41: 202-227.

- Poria, Y., Butler, R., and Airey, D. 2003. "Links between tourists, heritage, and reasons for visiting heritage sites." *Journal of Travel Research* 43(1): 19–28.
- Poria, Y., Reichel, A., and Biran, A. 2006. "Heritage site perceptions and motivations to visit." *Journal of Travel Research*, 44(3): 318–326.
- Poria, Y. Reichel, A., and Cohen, R. 2011. "World Heritage Site: an effective brand for an archeological site?" *Journal of Heritage Tourism* 6(3): 197-208
- Poria, Y., A. Reichel, and R. Cohen. 2011. "World Heritage Site— Is It an Effective Brand Name? A Case Study of a Religious Heritage Site." *Journal of Travel Research*, 50: 482–495.
- Poria, Y., A. Reichel and R. Cohen. 2013. "Tourists' Perceptions of a World Heritage Site and Its Designation." *Tourism Management* 35: 272–74.
- Radojevic, T., Stanistic, N., & Stanic, N. 2015. Solo travellers assign higher ratings than families: Examining customer satisfaction by demographic group. *Tourism Management Perspectives*, 16, 247-258.
- Ribaudo, G., and P. Figini. 2017. "The Puzzle of Tourism Demand at Destinations Hosting UNESCO World Heritage Sites. An Analysis of Tourism Flows for Italy." *Journal of Travel Research* 56(4): 521-542.
- Ritchie, B. J. R., Crouch, G. I. 2000. "The Competitive Destination: A Sustainable Perspective." *Tourism Management* 21(1): 1-7.
- Ryan, J., and S. Silvanto. 2014. "A Study of the Key Strategic Drivers of the Use of the World Heritage Site Designation as a Destination Brand." *Journal of Travel and Tourism Marketing* 31: 327–43.
- Shackley M. 1998. *Visitor management: Case studies from World Heritage Sites*. Oxford: Butterworth-
- Shahrivar, R. B. 2012. "Factors that influence tourist satisfaction." *Journal of Travel and Tourism Research*, 12 (1): 61-79.
- Song, H., R. van der Veen, G. Li and J.L. Chen. 2012. "Hong Kong tourist satisfaction index." *Annals of Tourism Research* 39(1): 459-479.
- Su L., M.K. Hsu, S. Swanson. 2017. "The Effect of Tourist Relationship Perception on Destination Loyalty at a World Heritage Site in China: The Mediating Role of Overall Destination Satisfaction and Trust." *Journal of Hospitality and Tourism Research* 41(2): 180-210.

- Su, M.M., and G. Wall. 2016. "A Comparison of Tourists' and Residents' Uses of the Temple of Heaven World Heritage Site, China." *Asia Pacific Journal of Tourism Research* 21 (8): 905-930.
- Su, M.M., and G. Wall. 2014. "Community Participation in Tourism at a World Heritage Site: Mutianyu Great Wall, Beijing, China." *International Journal Tourism Research*, 16: 146–56.
- Su, Y-W., and H.L. Lin. 2014. "Analysis of international tourist arrivals worldwide: The role of world heritage sites." *Tourism Management* 40: 46-58.
- Timothy, D. J., and S. W. Boyd. 2003. *Heritage Tourism*. Harlow, UK: Prentice Hall
- Trunfio, M., Petruzzellis, L., and C. Nigro. 2006. "Tour operators and alternative tourism in Italy: Exploiting niche markets to increase international competitiveness." *International Journal of Contemporary Hospitality Management* 18: 426-438.
- Tsiotsou, R., and E. Vasioti. 2006. "Using demographics and leisure activities to predict satisfaction with tourism services in Greece." *Journal of Hospitality and Leisure Marketing* 14(2): 69-82.
- Tucker, H., and E. Carnegie. 2014. "World heritage and the contradictions of 'universal value'" *Annals of Tourism Research* 47: 63–76.
- Tunbridge J. 2007. "From heritage to tourism: a personal Odyssey." In *Approaching Tourism*, edited by G. Wall, 143–154. Waterloo, Canada: University of Waterloo.
- Um, S., Crompton, J. 1990. "Attitude determinants in tourism destination choice." *Annals of Tourism Research*, 17(3): 432-448.
- UNESCO 2008. *World Heritage Information Kit*. Paris: UNESCO
- Van Der Borg, J. 1992. "Tourism and Urban Development: The Case of Venice, Italy", *Tourism Recreation Research*, 17:2, 46-56.
- Wager, J. 1995. "Developing a strategy for the Angkor World Heritage Site." *Tourism Management*, 16(7): 515–523.
- Watkinson, R. 2004. "World Heritage Branding: Is Marketing a Dirty Word?" In *Tourism in Parks: Australian Initiatives*, edited by R. C. Buckley, 79–90. Gold Coast: Griffith University

Yang, C. H., H. L. Lin and C.C. Han. 2010. "Analysis of international tourist arrivals in China: the role of World Heritage Sites." *Tourism Management* 31(6): 827-837.

Yang, C. H., H. L. Lin and C.C. Han. 2011. "Is UNESCO designation effective in fostering tourism? A comment on Yang, Lin and Han: Reply." *Tourism Management* 32: 455-456.

Zan, L., S. Baraldi, M. Lusiani, D. Shoup, P. Ferri and F. Onofri. 2016. *Managing cultural heritage. An international research perspective*. New York: Routledge.

Zan, L., S. Baraldi and C. Gordon. 2007. "Cultural heritage between centralisation and decentralisation." *International Journal of Cultural Policy* 13(1): 49-70.

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