Residents' perception of cultural heritage in terms of job creation and overtourism in Europe

Bailey Ashton Adie*
School of Business, Law and Communications
Solent University, UK

Martin Falk
School of Business and IT,University of South-Eastern Norway, Norway

*corresponding author: bailey.adie@solent.ac.uk

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Abstract

In 2017, about 45 per cent of the European population believed that cultural heritage has a positive effect on the local economy and that there are not too many tourists. However, about 33 per cent of Europeans consider the number of tourists to be too high while simultaneously recognising cultural heritage's positive impact on the local economy. Based on Flash Eurobarometer data, this paper employs a Bivariate Probit model to estimate the characteristics of both the perception of tourism as a threat to heritage and as a benefit to the local economy. The results show that people who live near cultural sites, who are highly educated, and those with a higher social status are more likely to believe that tourism poses a threat to heritage while also having a positive impact on the local economy. The findings provide data-based support for the assertion that tourism itself is not the problem.

Keywords: cultural heritage, overtourism, local economic effects, resident perceptions, Europe, Bivariate Probit model.

Introduction

Cultural heritage is an integral aspect of the European tourism market. According to the European Commission (n.d.), 40 per cent of all tourism in Europe is culturally motivated. However, the continued growth in tourism has led to rising unrest, much of which is centred in heritage cities such as Venice and Edinburgh. It should be noted that the impact of tourism on localized contexts is not a new topic, and there are several studies that examine whether tourism, in general, stimulates the local economy and creates jobs for the local population (Andereck et al., 2005; Brunt and Courtney, 1999; Choi and Sirakaya, 2005; Deery, Jago and Fredline, 2012; Johnson, Snepenger and Akis, 1994; McCool and Martin, 1994; Teye, Sikaraya and Sonmez, 2002; Williams and Lawson, 2001).

However, research specifically engaging with the topics of overtourism, tourism impacts and heritage assets are much more limited. While there are several studies on the tourist impact of certain types of cultural heritage sites, such as UNESCO World Heritage (Adie, 2019; Cellini, 2011; Gao and Su, 2019; Patuelli, Mussoni and Candela, 2013), or of cultural events (Brida, Disegna and Scuderi, 2014; Herrero-Prieto et al., 2006), there is substantially less literature that explicitly examines residents' perception of cultural heritage tourism (i.e. Chen and Chen, 2010; Janusz, Six and Vanneste, 2017; Pavlić, Portolan and Puh, 2019). Similarly, there are few studies that have investigated whether tourists are viewed as a threat to cultural heritage sites. Recent exceptions include case studies from cultural heritage destinations, both at specific sites and in wider, urban environments. Examples include destinations in Spain (Muler Gonzalez, Coromina and Galí, 2018), Belgium (Neuts and Nijkamp, 2012) and Italy (Popp, 2012). However, the findings from these studies are difficult to generalise as the data analysed are derived from small surveys and varied methods.

In order to address this gap, this study examines the characteristics of the perceptions of

cultural heritage impacts in Europe, more specifically the perception of tourism as a threat to

cultural heritage sites and the impact that this heritage has on the local economy. This work

builds on Adie et al. (2019), which is based on the same data set. However, unlike in Adie et

al. (2019), in this study, the two perceptions of local economic benefits and tourism threat are

studied simultaneously. This makes it possible to investigate different combinations of

perceptions such as the threat from tourism and expected employment growth compared to no

threat from tourism and expected employment growth. A Seemingly Unrelated Regression

(SUR) Bivariate Probit model is used to jointly estimate the determinants of both perceptions.

Data underlying the analysis originate from the 2017 Flash Eurobarometer and represent a

large population of about 28,000 European citizens. The main contribution of this study, then,

is that it is the first to focus on the incidence and determinants of the perception of tourism as

a threat to cultural heritage as well as its perceived employment effects using a representative

and large dataset encompassing all European residents. The large, novel, internationally

comparable and representative data set used in this study allows for more general conclusions

to be drawn than the previous smaller and country-specific individual surveys. Another

important contribution of the study is the joint modelling of factors affecting both overtourism

at cultural heritage sites and effects on employment whereas previous studies have often

focused on one aspect.

This paper begins with a discussion of the literature focused on overtourism, heritage and

community perceptions of tourism and heritage damage in these contexts. This is followed by

the methodology, highlighting the empirical model used, and the presentation of the data and

descriptive statistics before moving into the empirical findings. This then shifts into the

discussion of the findings before finally turning to the conclusions, limitations and recommendations for future research.

Conceptual background

Overtourism and Europe: A Brief Overview

The idea that there is a limit to tourism, in terms of, for example, physical carrying capacity or community perspectives on limits of acceptable change, is nothing new (Capocchi et al., 2019; Milano, Novelli and Cheer, 2019; UNWTO, 2018). However, recent socio-political unrest, as seen in the anti-tourist movements in Venice, Barcelona, and Edinburgh, have brought the clash between local populations and established policies of tourism growth into stark relief (Coldwell, 2017; Dodds and Butler, 2019; Seraphin, Sheeran and Pilato, 2018). This has led to the rise of a new term, "overtourism", to describe an old phenomenon (Capocchi et al., 2019). The Oxford Dictionary (2019), which shortlisted overtourism as its word of the year in 2018, defines the phenomenon as "an excessive number of tourist visits to a popular destination or attraction, resulting in damage to the local environment and historical sites and in poorer quality of life for residents." This is perhaps overly simplistic when compared to Milano, Cheer and Novelli's (2019: 1) definition which refers to overtourism as "the excessive growth of visitors leading to overcrowding in areas where residents suffer the consequences of temporary and seasonal tourism peaks, which have caused permanent changes to their lifestyles, denied access to amenities and damaged their general well-being." Peeters et al. (2018: 22) provided an even broader definition, namely that overtourism occurs when "the impact of tourism, at certain times and in certain locations, exceeds physical, ecological, social, economic, psychological, and/or political capacity thresholds."

What becomes apparent when examining all of these definitions is the subjectivity inherent in the conceptualization of overtourism. Intense crowding may occur, but so long as residents and tourists are both accepting of this, the destination may be exceeding carrying capacity without suffering from overtourism. As a perception-driven phenomenon, it is not limited to any specific context, occurring across the globe in both urban and rural destinations (Milano, Novelli and Cheer, 2019; Novy and Colomb, 2019; Peeters et al., 2018). While the concept is internationally applicable, the media coverage has been more narrowly focused. To date, a large proportion of the media coverage around overtourism has concentrated specifically on urban areas in Europe (Phi, 2019), and this European focus is echoed in the academic literature (Milano, Cheer and Novelli, 2019). Again, while this is not to say that overtourism as a phenomenon does not also occur in other regions of the world, it is, instead, indicative of a mature policy and economic environment in Europe which has, for decades, prioritized growth and commercialization over resident well-being in international tourism policy and planning.

In fact, in their report to the EU on overtourism, Peeters et al. (2018: 99) found that "current destination-level measures and policies aim at accommodating higher volumes by spreading, building and changing tourists' inadvertent behaviours, failing to include tourism volume and growth management." This policy environment has been openly criticized by Hall (2019: 1056) in his discussion of tourism and the Sustainable Development Goals, wherein he calls for "shifting from a growth mentality to one that explicitly commits humanity to prospering and travelling within the limits of the ecosystems of which we are a part." However, to date, this does not appear to have been seriously integrated into any national tourism planning system, and this emphasis on growth has resulted in significant crowding in many European tourist hot spots (Seraphin, Sheeran, and Pilato, 2018). Therefore, given this current policy

environment and the visible clashes that it has elucidated, it becomes essential to re-centre the

planning system around local populations.

Local Communities, Cultural Heritage and Overtourism: The Influence of Socio-Economic

Factors

The need for a community-oriented approach is particularly important for those local

residents who live within the vicinity of culture and heritage sites. As has been previously

noted, culture accounts for two-fifths of all tourism within Europe. Thus, it is unsurprising

that the EU's current policy focus on cultural heritage tourism stresses continued development

and increased employment, in other words 'sustainable growth' (Estol and Font, 2016). It is

thought that this will both promote heritage and provide a potential pathway to local

regeneration (Lähdesmäki, 2016). As can be seen, cultural heritage is viewed not only as a

community resource but also a potential attraction for tourists in urban and rural

areas (Richards, 2007; Silberberg, 1995). Furthermore, cultural tourism is often regarded as

one of the fastest growing sectors in the tourism industry (McKercher and Du Cros, 2014).

However, Europe's heritage is currently facing increasing foot traffic and subsequent

overcrowding (Neuts and Nijkamp, 2012), which negatively affects the local communities

around the site, site visitors and the physical environment in and around heritage areas (Adie,

2019; Cheung and Li, 2019; Neuts and Nijkamp, 2012; Phi, 2019; Rasoolimanesh, Taheri, et

al., 2019, Tarawneh and Wray, 2017). For example, the average growth rate of overnight

stays in the 80 European cities that are home to at least one UNESCO World Heritage Site

was around 6 per cent between 2012 and 2017 (based on various national statistical office

data and Eurostat).

While local businesses such as accommodation providers, restaurants, retailers and tour operators are likely to benefit from this increase in visitation, many local residents may feel that too many tourists could pose a threat to these cultural heritage sites (Litvin, Smith and McEwen, 2020). This is enhanced by local communities' sense of ownership over sites and, as heritage sites often are intrinsically related to sense of place, their emphasis on conservation over tourism development (Cheer, Milano and Novelli, 2019; Vong, 2015). However, although local residents may perceive tourism as a threat to the sites themselves, their relationship with tourism in general is much more nuanced. According to several authors (Andereck et al., 2005; Chen and Chen, 2010; Janusz et al., 2017), local communities' views of tourism activity are dependent on the perceived costs and benefits of tourism development within their communities. For example, Eckert et al. (2019) indicate that areas which are more economically dependent on tourism would be more tolerant of higher levels of tourism. However, Neuts and Nijkamp (2012) suggest that the tourism effects perceived by local inhabitants are by no means homogeneous and are influenced by many factors. This is partly due to the diverse nature of cultural participation, with occupation, skills and income being the main predictors.

Empirical studies show that both wealthy individuals and those in highly skilled occupations are more likely to not only participate in cultural activities but also do so more often (Suarez-Fernandez, Prieto-Rodriguez and Perez-Villadoniga, 2020). Therefore, the perceived benefits of cultural heritage tourism in relation to employment may be viewed more positively by individuals within these demographic groupings, particularly as a positive attitude towards the effects of tourism by more highly educated individuals has been previously noted by Teye et al. (2002). However, particularly in urban contexts, local economic systems are often diversified, with only certain community members actively benefiting from, and, in some instances, relying on, tourism income, which may result in negative views of tourism

development by those community members who are not directly reliant on tourism (Amore, 2019; Ashworth and Page, 2011; Rasoolimanesh, Roldán, et al., 2017).

Additionally, social class may play a role in overall perceptions of heritage preservation the face of tourism, particularly when drawing on Bourdieu's (1984) theory of cultural capital which links this criterium with occupation. According to Bourdieu (1977, 490-492 cited in Sullivan, 2001), social class is strongly linked to participation in cultural activities such as going to the cinema, theatre, concerts and museums. Although social class has been discussed solely in terms of interdependent economic relationships between people (Krieger, William and Moss, 1997), Adler et al (2000) state that social class can be measured by either objective (e.g household income, education, occupation) or subjective (e.g. subjective social class ranking) indicators. Bourdieu (1987), however, argues that objective measures, such as income, are only a rough measure of social class and therefore also supports the use of a subjective assessment of class membership derived from self-identification of class status (Adler et al., 2000). Based on these classifications as well as the noted linkages between social class, occupation and cultural consumption, it can be presumed that individuals in higher social classes and occupation levels would have prior experience with cultural heritage which in turn may lead to greater understanding of and concern over the potential damage that can be caused by congestion and over-crowding while also acknowledging the economic benefits that tourism may provide.

Therefore, drawing from the literature presented, the following research questions are proposed:

RQ1: The location of cultural heritage plays an important role both in the perception of overtourism and positive economic impact.

RQ2: The perception of overtourism as a threat and the local economic benefits of cultural sites are not independent of each other.

RQ3: Perceptions of both overtourism as a threat and local economic benefits are higher among respondents in higher skilled occupations and higher social classes.

RQ4: The perception that too many tourists are a threat to cultural heritage, while recognising tourism's positive role in job creation, is more widespread among respondents living in countries with strong cultural heritage tourism industries.

Methodology

The empirical model simultaneously identifies the perception of overtourism as a threat to cultural heritage in Europe and the perceived employment prospects as a function of socio-economic and demographic variables, including country of residence and proximity of said residence to cultural heritage sites. As most anti-tourism protests have occurred predominantly in Western European countries, separate results are provided for a subsample of residents.

The determinants of the two perceptions are modelled by a Bivariate Probit model (or seemingly unrelated probit model) which involves two latent perception variables that are assumed to be a linear function of a set of explanatory variables X. By use of a Probit model with a standard normal cumulative distribution function, Φ, the probability of perceiving that too many tourists pose a threat to Europe's cultural heritages $TOURISMTHREAT_i^*$ and the probability of perceiving positive effects on the local economy in terms of new jobs ($NEWJOBS_i^*$) are specified as follows:

$$P(TOURISMTHREAT_i^* = 1|X) = \Phi(\alpha_1 + X_i\beta_1) \tag{1}$$

$$P(NEWJOBS_i^* = 1|\text{X}) = \Phi(\alpha_2 + X_i\beta_2) \qquad\qquad (2)$$

Where i denotes the individual respondent, α_1 and α_2 are the constants and β_1 and β_2 are the

two vectors of parameters to be estimated. The relationship between the latent and observed

perception variables (measured as perceptions of either "totally agree" or "tend to agree") is

expressed as follows:

$$TOURISMTHREAT_i = \begin{cases} 1 & TOURISMTHREAT_i^* > 0 \\ 0 & otherwise \end{cases}$$

$$NEWJOBS_i = \begin{cases} 1 & NEWJOBS_i^* > 0 \\ 0 & otherwise \end{cases}.$$

Given that the both perceptions are correlated, the two equations can be written as a system

where the correlation between the error terms ε_1 and ε_2 is captured by coefficient ρ:

$$\begin{cases} TOURISMTHREAT_i^* = \alpha_1 + X_i\beta_1 + \varepsilon_1 \\ NEWJOBS_i^* = \alpha_2 + X_i\beta_2 + \varepsilon_2 \end{cases} \qquad\qquad (3)$$

$$\begin{bmatrix} \varepsilon_1 \\ \varepsilon_2 \end{bmatrix} \sim N\left(\begin{bmatrix} 0 \\ 0 \end{bmatrix}, \begin{bmatrix} 1 & \rho \\ \rho & 1 \end{bmatrix} \right),$$

The Seemingly Unrelated Bivariate Probit model is employed to estimate the two equation

model (Greene, 2018). Based on the estimates, marginal effects with four different

combinations can be calculated. The Bivariate Probit model is estimated by Maximum

Likelihood.

Thus, based on the theoretical and conceptual considerations outlined above, the probability

of considering the two perceptions is specified as a function of location of the residents and

several socio-demographic factors X:

$$Y_i^*$$
$$= \alpha_0 + \sum_{O=1}^{9} \beta_{O} = Occupation_{Oi} + \sum_{S=1}^{3} \beta_S Socialclass_{Si} + \sum_{A=1}^{10} \beta_A Ageclass_{Ai} + \beta_W$$
$$Women_{Wi} + \sum_{H=1}^{3} \beta_H Householdsize_{Hi} + \sum_{C=1}^{28} \beta_C Country_{Ci}$$
$$+ \sum_{L=1}^{2} \beta_l Popdensity_{Li} + \sum_{P=1}^{3} \beta_P Proxmity\_culture_{Pi} + u_i,$$

where i is the respondent, Y_i^* is the latent response variable representing different perceptions

of cultural heritage, α_0 is the constant and u_i is the error term. $Occupation$ are a set of

dummy variables measuring occupation of the respondents. $Socialclass$ are a set of dummy

variables measuring social class of the individuals. $Ageclass$ is a set of dummy variables

measuring age of the individuals, and $Women$ is a dummy variable equal to one for women

and zero otherwise. $Householdsize$ is a set of dummy variables measuring household size.

$Country$ is the set of country dummy variables based on the residence of the respondent, and

$Popdensity$ consist of two dummy measures population density of the respondent (Towns

and suburbs/ small urban area, Cities/ large urban area with rural areas as the reference

group). $Proxmity\_culture$ measures proximity of the respondents to cultural attractions.

Three different variables are available: i) Residence in a historical environment area/city that

is considered to be of cultural value, ii) Residence near historical monuments or sites (palaces,

castles, churches, archaeological sites garden) and iii) Residence near museums and galleries.

Since the three cultural proximity variables are highly correlated, they are not included

together. Only the first is included, and the others are used as robustness tests.

Data and Descriptive Statistics

The data for this analysis originates from the Eurobarometer 88.1 survey from September 2017, which provides information on citizens aged 15 and over in the 28 member states of the European Union and two other European countries.[1] The first underlying dependent variable is based on the question as to what extent the respondents agree or disagree that the "number of tourists visiting certain areas poses a threat to Europe's cultural heritage". The second is based on the question whether "Europe's cultural heritage or cultural heritage related activities create jobs in the EU". In principle, the ordered probit model can be used to model the four response categories. However, the assumption that the coefficients of probability of falling into categories 1 ("Totally agree") and 2 ("Tend to agree") are the same as those between 2 ("Tend to agree") and 3 ("Tend to disagree") is unrealistic. Therefore, the explanatory variables are measured as dummy variables (either "Tend to agree" or "Totally agree" equal to one, zero otherwise).

Table 1 illustrates the different combinations of perceptions regarding the threat of tourism and the expected positive employment effects. The most common combination of perceptions is that the number of tourists does not pose a threat to European cultural heritage and that cultural heritage also creates jobs. On average, 46 per cent of respondents share this view. This is an optimistic perception of the impact of cultural heritage. The second most common perception is somewhat more pessimistic. Some 33 per cent of respondents believe that cultural heritage creates jobs, but at the same time the number of tourists is a threat to European cultural heritage. The third most common perception also reflects a mixed attitude. About 16 per cent of respondents believe that cultural heritage does not create new jobs and that there is also no tourism threat. The most pessimistic perception, which is no positive

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[1] https://www.gesis.org/eurobarometer-data-service/survey-series/standard-special-eb/study-overview/ (accessed 2 February 2019).

employment effects combined with a perceived tourist threat, is less pronounced at only 6 per cent. Further descriptive statistics show that the perceptions vary widely across proximity to cultural heritage sites, location and socio-economic characteristics. Table 5 in the appendix contains sample means of the explanatory variables.

<<INSERT TABLE 1 HERE>>

<< INSERT TABLE 2 HERE>>

Empirical Results

Results of the Bivariate Probit model show that the perception that the number of tourists visiting certain areas pose a threat to European cultural heritage and the perception that cultural heritage related activities create jobs depend significantly on place of residence, proximity to cultural sites and a mix of socio-demographic factors as well as the country of residence of the respondent (Table 3). A Wald test of the hypothesis that the two perceptions are unrelated can be rejected at the 1 per cent significance level. This means that separate Univariate Probit models are rejected in favour of the Bivariate Probit model. Based on the joint estimations of two different perceptions, different marginal effects are calculated for: (i) Perception that the number of tourists visiting certain areas does not pose a threat to European cultural heritage and positive employment expectations (*optimistic view*), (ii) Perception that the number of tourists visiting certain areas poses a threat to European cultural heritage and positive employment expectations (*mixed view*) and (iii) Perception that the number of tourists visiting certain areas poses a threat to European cultural heritage and no positive employment expectations (*pessimistic view*). The marginal effects of the remaining combination are not calculated because they are implicitly given by the residual of the other three.

As has been stated, the most common combination of perceptions is the first (i), with 45 per

cent of all respondents believing that the number of tourists does not pose a threat to

European cultural heritage and, at the same time, that cultural heritage creates jobs. The

likelihood of this perception is significantly higher for respondents living close to an

historical environment area or in a city that is considered to be of cultural and historical value.

The marginal effect is 0.05 and is significant at the 1 per cent level, which means that the

probability of this perception is 5 percentage points higher for residents living near cultural

heritage sites. This perception is also very different depending on the profession. In particular,

unemployed, unskilled workers, farmers and fishermen and supervisors have a lower

combined probability of indicating that there is no threat from tourism but that, at the same

time, jobs are created because of the local cultural heritage. Within this group, farmers and

fishermen are the most sceptical with a marginal effect of -0.139. The perception of no tourist

threat and positive employment effects also varies greatly from country to country. In

particular, those living in certain Eastern European countries (SK, PL, CZ, RO and EE) are

less likely to share this perception, with marginal effects ranging from -0.13 to -0.22, which

are quite large. People in countries that are rich in cultural heritage sites, such as Italy, are

also less likely to have this perception, with a marginal effect of -0.14. Age plays a role as

well. Younger people are more sceptical about cultural heritage's role as a job-creating

machine and that there is no danger from too many tourists. The joint perception does not

vary between rural areas, cities and areas with medium population density and does not differ

much across the other socioeconomic characteristics.

Continuing the discussion of marginal effects, about 35 per cent of respondents say that

cultural heritage is important for job creation, but, at the same time, too many tourists pose a

threat to cultural heritage, making this the second most common perception. Within the

context of this work, this is considered an ambivalent perception. The marginal effects for this

ambivalent perception illustrate, once again, that living close to a cultural heritage plays an

important role. Residents close to cultural heritage areas are 3.5 percentage points more likely

to share this view. In addition, the population density of the place of residence is significant.

City dwellers are 3 percentage points more likely to share this perception than people living in

rural areas. In contrast to the most common perception, the second most common is

dependent on social class. The members of the upper class are more likely to share the mixed

view that there are positive employment effects on the one hand but tourism threats on the

other. The marginal effects of the upper middle class and the upper class are 0.060 and 0.072,

respectively, which are relatively large. Similarly, people with higher skilled occupations

have a higher probability of this perception, wherein professionals and middle management

have a 4 percentage points higher probability.

The country of residence is also significant, but here the signs contrast with the most common

(optimistic) perception. In some countries rich in cultural heritage sites (ES, HR, IT and PT),

there is a stronger tendency to share this mixed view that too many tourists pose a threat the

heritage while acknowledging that heritage plays a positive role in job creation. The marginal

effects are quite large, ranging between 0.16 and 0.25, and Poland is most likely to share this

view (marginal effect of 0.30). This is probably driven by the exceptionally high growth rate

of overnight stays in Poland's cultural cities (Krakow and Torun), averaging more than 7 per

cent per year (source: Statistics Poland).[2]

Finally, the least widespread view is that tourism is a threat to heritage and that there are no

job effects. This assessment is shared by 5.6 per cent of respondents and is the most

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[2] Statistics Poland, tourist accommodation establishments and their occupancy, nights spent by powiats (districts), regions or subregions and cities. https://stat.gov.pl/en/

pessimistic view. Residents living near a cultural site have a low probability of sharing this

perception. The marginal effects of -0.024 are quite large when compared to the proportion of

respondents who share this view. Among the different professions, farmers and fishermen are

much more likely to share this viewpoint, potentially as they benefit least from the cultural

tourism boom, which is concentrated in urban areas. Country of residence also plays a role

wherein residents of some Eastern European countries (PL, EE, RO, CZ, SK) are more likely

to share this view, as are those living in culturally rich countries as measured by the number

of UNESCO World Heritage Sites (IT, HR).

<<INSERT TABLE 3 HERE>>

Several robustness checks have been undertaken. First, additional estimations are conducted

with alternative proximity to cultural sites variables that are more broadly defined. Table 4

shows that proximity to cultural sites is a significant predictor of the perceptions towards

cultural heritage effects independent of the measure of proximity (residence near historical

monuments/sites or residence near museums). Second, separate estimations have been

conducted for the former EU-15. These results reveal that the magnitude and significance of

the marginal effects do not change substantially (Table 6 in Appendix). In an additional

robustness check, separate estimations have been performed for residents in cities. Again, the

results are stable (results are available upon request). A Bivariate Probit model with random

effects is estimated as the final robustness test. This model allows the error term to vary

across country-region pairs. Estimates show that the coefficients are almost similar to the

main specification (results are available upon request). However, given the small differences

in estimates, the interpretation of the marginal effects focuses on the standard bivariate model.

<<INSERT TABLE 4 HERE>>

Discussion and Conclusions

This study examines the characteristics of perceptions of the effects of cultural heritage in Europe, i.e. 1) those who perceive the number of tourists from cultural sites as too high and 2) those who see the positive impact of cultural heritage on the local economy. The data are based on a stratified random sample of around 28,000 European citizens in 2017. Descriptive statistics show that positive perceptions prevail. Almost half of the respondents do not believe that the number of tourists to cultural heritage sites is too high and that tourism has positive employment effects. However, a significant proportion (33 per cent) believe that there are too many tourists while also agreeing that cultural heritage has a positive impact on the local economy. The results from a Bivariate Probit model show that the probability of the mixed perception (tourism threat and positive employment effects) is significantly higher for residents living close to cultural heritage sites and city residents as well as citizens from Italy, Spain, Portugal, Croatia and some Eastern European countries.

Interestingly, those with higher level occupations and social class membership also were more likely to have a similar view. This supports Bourdieu's (1984) assertions as to the importance of social capital as a determinant of cultural participation and consumption. More specifically, due to the assumed higher level of cultural involvement, these individuals are more perceptive of the threat posed by tourism congestion while also implicitly affirming the importance of investment in cultural heritage as a benefit to the local economy and community. The influence of social class also appears within the local communities in the vicinity of cultural heritage sites which suggests that this group may also be more likely to question local policies that push for cultural heritage-centred tourism growth without implementing appropriate preservation measures. A potential policy solution would be to ensure that appropriate site

management and tourism development plans are set in place which are sensitive to the requirements of the site and local community.

These empirical findings illustrate that the problem of overtourism is not, in fact, tied to residents' antagonism to all tourism activity but instead the result of a pro-growth, and therefore locally hostile, tourism planning environment. Thus, this paper provides empirical support for the assertions made previously that "tourism *per se* is not the problem" (Cheer, Milano and Novelli, 2019a: 227), and instead there is a need for "governance that prioritises local well-being" (Cheer, Milano and Novelli, 2019b: 560). This is particularly relevant for communities in the vicinity of cultural heritage sites in Europe, especially given the aforementioned policy focus on economic regeneration and growth (Estol and Font, 2016; Lähdesmäki, 2016). Through this work's empirical support for the statements made in previous works, this paper provides an evidence base from which policy makers can draw when undertaking planning development in heritage rich areas.

In particular, these findings indicate that measures which would spread the number of tourists across the year, provide longer opening hours at heritage sites and allow for greater digital cultural activities could potentially alleviate some of the noted problems with tourism at heritage sites. Additionally, when conducting surveys (e.g. on behalf of the local tourist office) on the perception of overtourism at cultural sites, it is important to ask simultaneously about the possible effects on the local economy and to consider the positive and negative effects together, which allows for a more nuanced understanding of local communities' perceptions of tourism. As can be seen, the continued positive view of cultural heritage's value for the local economy in the face of overtourism further stresses Hall's (2019) challenge to the current growth paradigm as tourism in and of itself is not the villain.

It should be noted that this study is affected by several limitations. For example, there is a lack of panel data, which means that changes in the relationships over time cannot be measured. However, with access to this panel data, the analytical opportunities would greatly improve. Additionally, while this was an EU-wide survey, the smallest geographic grouping was national which did not permit regional or more localized analyses of resident perceptions. Future research should seek to collect this data which would allow for a much richer analysis and provide greater insight into areas currently suffering more heavily from overtourism effects. For instance, separate estimates could be provided for each country, grouping by socioeconomic characteristics, such as specific occupational groups or age categories. Another avenue for future work is the estimation of more sophisticated bivariate probit models such as the Bayesian bivariate probit model. Finally, it would be of interest to analyse the same responses in non-European contexts to understand if the overtourism phenomenon is particular to the socio-political and socio-cultural environment of the EU.

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Table 1: Perceptions towards cultural heritage: tourism threat and positive employment effects (number of observations and per cent)

tourism threat:	Number of observations positive employment prospects:			Percentages positive employment prospects:		
	no	yes	Total	no	yes	Total
No	4,456	12,790	17,246	16.0	45.9	61.9
Yes	1,566	9,069	10,635	5.6	32.5	38.1
Total	6,022	21,859	27,881	21.6	78.4	100.0

Source: Eurobarometer 88.1 Sept-Oct 2017, own calculations.

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Table 2: Perceptions towards cultural heritage: tourism threat and positive employment effects by location, proximity to cultural heritage sites and socio economic characteristics

	no	yes	no	yes
Tourism threat	no	yes	no	yes
Positive employment prospects	yes	yes	no	no
Location variables				
Residence in a historical environment area/city that is considered to be of cultural value: no	45.7	31.1	17.4	5.7
Residence in a historical environment area/city that is considered to be of cultural value: yes	53.6	33.3	8.9	4.2
Residence near historical monuments or sites (palaces, castles, churches, archaeological sites garden): no	39.9	31.6	21.6	6.9
Residence near historical monuments or sites (palaces, castles, churches, archaeological sites garden): yes	51.7	31.4	12.2	4.6
Residence near museums or galleries: no	44.8	31.3	18.1	5.9
Residence near museums or galleries: yes	52.0	32.0	11.4	4.6
Rural area	43.5	30.7	19.5	6.3
Towns and suburbs/small urban area	48.1	30.8	15.9	5.2
Cities/ large urban area	48.2	32.7	13.9	5.3
Occupation/labour market status (ref retired)				
Homework	44.5	31.8	17.9	5.8
Student	53.3	28.8	14.0	3.9
Unemployed	40.9	29.8	21.4	7.9
Retired	44.7	29.1	20.1	6.0
Professionals	53.8	32.6	10.6	2.9
Middle managment employed	49.7	34.0	11.8	4.5
Unskilled worker	42.9	28.2	21.1	7.8
Shop owner	48.3	32.5	14.1	5.1
Farmer fisherman	27.9	41.2	17.5	13.4
Supervisor skilled worker	43.6	33.4	15.8	7.2
Lower class	44.6	29.5	19.8	6.1
Middle class	48.9	33.2	12.8	5.1
Upper middle class	52.3	31.5	11.8	4.4
Upper class	41.1	50.9	5.7	2.3
Other socioo economic and demographic characteristics				
Age class				
15-19	49.0	29.1	18.2	3.7
20-24	49.4	27.7	17.2	5.8
25 -29	51.2	31.3	11.6	5.9
30 -34	47.9	35.0	13.2	3.9
35 -39	46.2	34.6	13.7	5.4
40 -44	48.3	34.2	12.7	4.7
45 -49	46.0	32.3	15.3	6.4
50 -54	49.6	32.2	12.7	5.5
55 -59	46.2	32.7	16.1	5.0
60-64	47.4	30.8	16.8	5.0
>=65	44.0	29.5	20.1	6.4
Men	47.6	31.3	15.3	5.8
Woman	46.5	31.7	16.6	5.2
Children no	46.4	31.4	16.5	5.6
Children yes	49.8	31.7	13.6	4.8
Household size 1	44.3	31.0	18.2	6.4

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Household size 2	47.9	31.6	15.2	5.4
Household size 3	45.9	33.8	14.7	5.5
Household size 4+	50.0	29.2	16.5	4.3
Country of residence				
FR - France	49.4	25.2	18.0	7.4
BE - Belgium	40.8	36.8	13.8	8.6
NL - The Netherlands	52.9	28.0	13.1	6.0
DE-W - Germany - West	56.5	20.7	18.5	4.3
IT - Italy	38.0	38.0	18.3	5.7
LU - Luxembourg	45.8	35.7	13.2	5.3
DK - Denmark	55.7	24.5	16.0	3.8
IE - Ireland	43.3	42.2	11.4	3.2
GB-GBN - Great Britain	51.4	27.1	17.3	4.2
GB-NIR Northern Ireland	48.1	28.9	17.9	5.1
GR - Greece	57.8	20.3	16.8	5.1
ES -Spain	50.1	34.1	10.4	5.4
PT - Portugal	46.3	38.1	12.6	3.0
DE-E Germany East	61.2	19.0	16.8	3.1
FI - Finland	34.3	46.2	11.1	8.3
SE - Sweden	58.1	31.9	7.3	2.7
AT - Austria	45.5	29.7	13.9	10.9
CY - Cyprus (Republic)	52.4	24.7	19.1	3.8
CZ - Czech Republic	38.3	31.6	19.8	10.3
EE - Estonia	41.9	30.2	20.4	7.5
HU - Hungary	46.8	32.6	15.0	5.7
LV - Latvia	51.4	21.7	22.2	4.6
LT - Lithuania	49.0	26.5	19.8	4.6
MT - Malta	51.3	36.6	10.4	1.7
PL - Poland	31.1	53.9	10.7	4.3
SK - Slovakia	29.3	42.6	20.6	7.5
SI - Slovenia	44.9	30.3	19.5	5.3
BG - Bulgaria	50.9	25.1	20.6	3.4
RO - Romania	35.9	37.7	19.0	7.3
HR - Croatia	35.7	46.8	11.2	6.3

Source: Eurobarometer 88.1 Sept-Oct 2017, own calculations.

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Table 3: Probability of perceived tourism threat of cultural heritage and positive employment effects (Bivariate Probit estimation - marginal effects)

Perceptions:

	Tourists pose **no** threat to cultural heritage & positive employment prospects		Tourists pose a threat to cultural heritage & positive employment prospects		Tourists pose a threat to cultural heritage & **no** positive employment prospects	
	dy/dx	z-stat	dy/dx	z-stat	dy/dx	z-stat
Residence in a historical environment area, city that is considered to be of cultural value	0.050 ***	6.66	0.035 ***	5.30	-0.024 ***	-9.63
Small city (rural)	0.008	1.11	0.010	1.43	-0.004 *	-1.94
Large city	-0.003	-0.49	0.027 ***	4.14	-0.003	-1.21
Occupation/labour market status (ref retired)						
Homework	-0.005	-0.32	0.010	0.70	0.000	0.07
Student	0.039 *	1.94	0.025	1.32	-0.018 ***	-2.84
Unemployed	-0.048 ***	-3.24	0.008	0.59	0.017 ***	3.61
Professionals	0.023	1.60	0.045 ***	3.47	-0.015 ***	-3.24
Middle managment employed	0.009	0.77	0.039 ***	3.74	-0.009 **	-2.44
Unskilled worker	-0.038 **	-2.13	0.024	1.42	0.011 *	1.93
Shop owner	0.027	1.43	-0.002	-0.12	-0.010	-1.64
Farmer fisherman	-0.139 ***	-4.67	0.035	1.10	0.048 ***	5.15
Supervisor skilled worker	-0.030 **	-2.32	0.036 ***	3.00	0.006	1.47
Middle class (ref lower)	0.010	1.59	0.052 ***	9.17	-0.011 ***	-5.84
Upper middle class	0.014	1.16	0.060 ***	5.44	-0.014 ***	-3.53
Upper class	0.021	0.61	0.072 **	2.51	-0.019	-1.58
Age class						
20-24 (ref 15-19)	0.045 **	2.31	-0.010	-0.53	-0.016 **	-2.51
25 -29	0.040 *	1.85	0.019	0.90	-0.018 ***	-2.59
30 -34	0.051 **	2.30	0.018	0.85	-0.022 ***	-3.10
35 -39	0.037 *	1.69	0.017	0.79	-0.017 **	-2.36
40 -44	0.058 ***	2.64	0.018	0.86	-0.025 ***	-3.51
45 -49	0.032	1.48	0.028	1.34	-0.016 **	-2.35
50 -54	0.049 **	2.25	0.022	1.04	-0.022 ***	-3.13
55 -59	0.043 **	1.97	0.021	0.99	-0.019 ***	-2.78
60-64	0.052 **	2.32	0.014	0.66	-0.022 ***	-3.04
>=65	0.038 *	1.69	0.007	0.33	-0.016 **	-2.16
Woman	0.000	0.02	0.002	0.34	0.000	-0.17
Children	0.018 **	2.14	-0.018 **	-2.20	-0.004	-1.58
Household size 2	0.020 ***	2.87	0.007	1.11	-0.008 ***	-3.88
Household size 3	0.025 ***	2.67	-0.009	-1.04	-0.008 ***	-2.70
Household size 4+	0.036 ***	3.35	-0.020 **	-1.98	-0.011 ***	-3.11
Country of residence						
AT	-0.151 ***	-7.31	0.127 ***	7.02	0.039 ***	5.86
BE	-0.156 ***	-7.70	0.189 ***	10.15	0.032 ***	4.85
BG	-0.028	-1.36	0.053 ***	2.74	0.003	0.42
CY	-0.005	-0.21	0.028	1.19	-0.002	-0.27
CZ	-0.179 ***	-8.95	0.116 ***	6.22	0.051 ***	7.99

DE-E	0.056	**	2.13	-0.007		-0.28	-0.020	**	-2.45
DK	-0.021		-1.02	0.038	**	1.99	0.002		0.37
EE	-0.129	***	-6.47	0.095	***	4.99	0.035	***	5.57
ES	-0.058	***	-2.78	0.155	***	8.20	-0.001		-0.08
FI	-0.205	***	-10.26	0.247	***	13.25	0.042	***	6.48
FR	-0.063	***	-3.06	0.055	***	2.91	0.016	**	2.46
GB	-0.049	***	-2.59	0.078	***	4.34	0.007		1.22
GR	0.014		0.67	0.030		1.54	-0.010		-1.47
HR	-0.177	***	-8.81	0.246	***	13.08	0.031	***	4.81
HU	-0.082	***	-4.08	0.141	***	7.50	0.010		1.64
IE	-0.090	***	-4.46	0.200	***	10.48	0.005		0.76
IT	-0.144	***	-7.33	0.164	***	8.65	0.030	***	4.89
LT	-0.043	**	-2.12	0.067	***	3.46	0.007		1.03
LU	-0.112	***	-4.53	0.161	***	7.03	0.019	**	2.34
LV	-0.035	*	-1.69	0.010		0.50	0.012	*	1.84
MT	-0.008		-0.32	0.134	***	5.56	-0.017	**	-2.04
NL	-0.073	***	-3.47	0.085	***	4.53	0.015	**	2.26
PL	-0.188	***	-9.43	0.293	***	15.32	0.028	***	4.37
PT	-0.064	***	-3.19	0.180	***	9.49	-0.002		-0.34
RO	-0.171	***	-8.65	0.157	***	8.32	0.042	***	6.64
SE	0.014		0.65	0.107	***	5.61	-0.021	***	-2.97
SI	-0.090	***	-4.52	0.100	***	5.23	0.019	***	3.09
SK	-0.222	***	-11.67	0.219	***	11.69	0.052	***	8.59

Notes: Asterisks ***, ** and * denote statistical significance at the 1, 5, and 10 per cent level. Standard errors are based on robust standard errors. The marginal effects (dy/dx) are calculated based on sample means. The number of observations is 28000.

Table 4: Probability of perceived tourism threat of cultural heritage and positive employment effects, alternative proximity variables (Bivariate Probit estimation - marginal effects)

	Tourists does not pose a threat to cultural heritage & positive employment prospects		Tourists pose a threat to cultural heritage & positive employment prospects		Tourists pose a threat to cultural heritage & no positive employment prospects	
	dy/dx	z-stat	dy/dx	z-stat	dy/dx	z-stat
Residence near historical monuments/sites	0.067 ***	12.06	0.024 ***	4.51	-0.029 ***	-15.80
Residence near museums	0.046 ***	7.63	0.026 ***	4.69	-0.021 ***	-10.69
Control variables	Yes		Yes		yes	

Notes: Asterisks ***, ** and * denote statistical significance at the 1, 5, and 10 per cent level. Standard errors are based on robust standard errors. The marginal effects (dy/dx) are calculated based on sample means. The number of observations is 28000.

Appendix

Table 5: Descriptive statistics of the explanatory variables (percentages- unweighted)

Occupation/labour market status		Country of residence	
Homework	5.1	AT	3.7
Student	5.7	BE	3.6
Unemployed	5.7	BG	3.7
Retired, out of labour force	32.8	CY	1.8
Professionals	7.3	CZ	3.6
Middle managment employed	26.7	DEE	1.8
Unskilled worker	3.1	DEW	3.7
Shop owner	2.9	DK	3.6
Farmer fisherman	0.7	EE	3.6
Supervisor skilled worker	9.9	ES	3.6
15-19	3.4	FI	3.6
20-24	5.0	FR	3.6
25 -29	6.0	GB	4.9
30 -34	6.8	GR	3.6
35 -39	8.0	HR	3.7
40 -44	7.8	HU	3.8
45 -49	8.4	IE	3.6
50 -54	8.0	IT	3.7
55 -59	9.0	LT	3.6
60-64	9.2	LU	1.8
>=65	28.6	LV	3.6
Women	55.2	MT	1.8
Living in a hist. environment with cultural value	18.2	NL	3.6
Living nearby historical monuments/sites	62.4	PL	3.6
Living nearby works of art (museum)	32.2	PT	3.8
Social class		RO	3.7
Middle class (ref. lower)	46.0	SE	3.7
Upper middle class	6.9	SI	3.7
Upper class	0.7	SK	3.9
Having children	17.3	Rural areas	29.9
Household size 1	24.8	Small city	33.1
Household size 2	49.4	Large city	37.0
Household size 3	14.6		
Household size 4+	11.2		

Source: Eurobarometer 88.1 survey.

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Table 6: Probability of perceived tourism threat of cultural heritage and positive employment effects (Bivariate Probit estimation - marginal effects), Sample EU 15

	Tourists pose **no** threat to cultural heritage & positive employment prospects		Tourists pose a threat to cultural heritage & positive employment prospects		Tourists pose a threat to cultural heritage & **no** positive employment prospects	
	dy/dx	z-stat	dy/dx	z-stat	dy/dx	z-stat
Residence in a historical environment area, city that is considered to be of cultural value	0.043 ***	4.38	0.046 ***	5.20	-0.024 ***	-7.44
Small city (rural)	0.031 ***	3.11	0.007	0.71	-0.013 ***	-4.16
Large city	-0.011	-1.04	0.050 ***	5.17	-0.004	-1.33
Occupation/labour market status (ref. retired)	0.004	0.20	0.006	0.34	-0.003	-0.42
Homework	0.087 ***	3.19	0.000	0.01	-0.034 ***	-3.87
Student	-0.036 *	-1.74	0.004	0.22	0.013 **	2.04
Unemployed	0.028	1.41	0.056 ***	3.15	-0.020 ***	-3.10
Professionals	0.026	1.70	0.035 **	2.49	-0.016 ***	-3.27
Middle managment employed	-0.027	-1.15	0.023	1.04	0.007	0.90
Unskilled worker	0.039	1.47	0.006	0.26	-0.016 *	-1.89
Shop owner	-0.106 **	-2.27	-0.010	-0.17	0.043 ***	3.07
Farmer fisherman	-0.037 **	-2.00	0.033 *	1.91	0.009	1.50
Supervisor skilled worker						
Middle class (ref. lower)	0.015 *	1.74	0.041 ***	5.06	-0.013 ***	-4.66
Upper middle class	0.028 *	1.84	0.048 ***	3.48	-0.019 ***	-3.84
Upper class	0.024 *	0.48	0.053	1.32	-0.018	-1.12
Age class						
20-24 (ref. 15-19)	0.013	0.46	0.012	0.46	-0.007	-0.80
25 -29	0.014	0.44	0.047	1.63	-0.013	-1.37
30 -34	0.015	0.46	0.061 **	2.03	-0.016	-1.59
35 -39	-0.025	-0.78	0.074 **	2.47	-0.003	-0.29
40 -44	0.008	0.27	0.070 **	2.36	-0.015	-1.52
45 -49	-0.012	-0.41	0.065 **	2.25	-0.006	-0.64
50 -54	0.019	0.62	0.048 *	1.66	-0.016	-1.60
55 -59	-0.004	-0.14	0.056 *	1.90	-0.008	-0.80
60-64	0.011	0.34	0.040	1.33	-0.011	-1.10
>=65	-0.012	-0.38	0.042	1.39	-0.002	-0.24
Woman	-0.006	-0.79	-0.004	-0.55	0.003	1.23
Children	0.024 *	1.91	-0.028 **	-2.47	-0.005	-1.12
Household size 2 (ref. 1)	0.018 **	1.99	0.009	0.99	-0.008 ***	-2.94
Household size 3	0.001	0.09	0.007	0.52	-0.002	-0.37
Household size 4+	0.011	0.68	0.001	0.06	-0.004	-0.86
Country of residence	yes		yes		yes	

Notes: Asterisks ***, ** and * denote statistical significance at the 1, 5, and 10 per cent level. Standard errors are based on robust standard errors. The marginal effects (dy/dx) are calculated based on sample means. The number of observations is 28000.