How does ICT influence residents' attitudes towards tourism as a driver of development? A generalised ordered logistic regression analysis

ICT for tourism as driver of development in lagging behind regions

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Abstract
This study investigates the residents' attitudes to tourism as a driver of regional development and the impact of digital technologies on these perceptions. This work considers a ‘lagging behind’ region of the EU and employs a generalised ordered logit regression. The main findings suggest that the positive attitude is affected by the digital technology use, education, non-job variables and touristic products such as landscape, food and wine and events. As a result, the digital technology and the enhancement of touristic products may serve as important factors for ‘lagging behind’ regions to meet a smart, sustainable and inclusive growth.

KEYWORDS
discriminant validity, generalised ordered logistic model, ICT, lagging behind regions, Residents' attitudes, tourism

1 | INTRODUCTION

The latest report of the World Travel & Tourism Council (WTTC, 2019) highlights the contribution of tourism to the GDP growth (+3.9% in 2018) and the formation of additional jobs (319 million). This latter figure represents the 10% of global employment and 1/5 of all global net jobs created in the past 5 years. Tourism is therefore recognised as a key driver for socio-economic growth.

Since the pioneering work by Buhais and Law (2008), an increasing interest in the studies of Information and Communication Technology (ICT) and tourism management has emerged by international scholars (Navío-Marco et al., 2018; Pourfakhimi et al., 2018; Ukpabi & Karjaluoto, 2017). ICT plays a crucial role in accelerating economic growth, particularly through the generation of new competitiveness in the tourist management, destinations and organisations (Benckendorff et al., 2019; Fernández et al., 2020). The process of digitalization of the economy is re-shaping the tourism industry in terms of market competition, cost optimization, marketing and distributional chain in view of a more sustainably-oriented society (Assaf and Tzionas, 2018). The same process is also affecting the personalization of the tourist offer by emphasising the tourist's motivation, his/her own desires and personal experiences (Kotiloglu et al., 2017; Sigala, 2012). For the above reasons, an increasing attention of the tourism literature is now being paid to the demand-side. First, the evolution of the concept of ‘value co-creation’ in tourism (Casais et al., 2020; Lin et al., 2017; Rihova et al., 2015) which contributes to the understanding of the social sphere of the sustainability paradigm (Font et al., 2021; Heinonen et al., 2010; Liang & Hui, 2016).

Second, the relevance of tourists’ attitudes in relation to several tourist activities (Crouch et al., 2016; Szopiński & Staniewski, 2016). Third, the residents' attitudes and behaviours in viewing tourism as a driver of sustainable development (Blasco López et al., 2018; De Lucia et al., 2020; Hsu et al., 2020). In consideration of this latter aspect, the following elements allow us to argue why it is relevant an understanding of the residents'
attitudes to consider tourism, driven by ICT use, a relevant factor for a sustainable regional development.

First, the limitations from low growth countries to enhance tourism and ICT developments with sustainability goals. On this aspect, Gössling and Hall (2019) emphasise the potential of the sharing economy, which, through the tourism (i.e., accommodation) industry, would contribute to fulfil the sustainable development goals (SDGs). Nonetheless, the authors argue that this potential could encounter drawbacks in terms of product transformation, ICT infrastructures, and ecological trade-offs particularly relevant in low growth countries.

Second, the issue of ICT and smart tourism specialisation in the context of regional sustainable development (Boschma, 2016; Encalada et al., 2017; Jucan & Baier, 2012). In particular, Jucan and Baier (2012) consider the contribution of ICT an important factor for inclusion in corporate social responsibility practises by tourism businesses in new emerging markets. A particular aspect is highlighted in the study by Boschma (2016). The author argues about the importance of the smart specialisation by regions endowed with diverse technologically related industries and diverse natural resources. This diversity would induce an increase in the degree of networking and creation of new capabilities in the tourism sector and would help the renovation of the local economy. This view integrates the role of ICT with a sustainable development approach. Furthermore, the smart specialisation in the tourism context also provides the basis of a knowledge-based innovation strategy, which in turn, promotes sustainable development processes at a regional level (Encalada et al., 2017).

Third, the social acceptance of ICT in tourism studies (Chunqing et al., 2019; Ukpabi & Karjaluoto, 2017). Based on the findings of Ukpabi and Karjaluoto (2017), three major study domains can be classified under this topic: (a) consumer adoption of web-based services in tourism. This field considers the services offered by various tourism websites to consumers (Kim et al., 2013; Kucukusta et al., 2015); (b) consumer adoption of social media in tourism. This domain takes into account how social media affects the travellers’ choice on their trips (Wand et al., 2014; Chen et al., 2015); and (c) consumer adoption of mobile transformation systems in tourism. This latter field of studies focuses on the way how increasing incremental innovation in tablets and mobile phones affects the consumer’s adoption of these devices for tourism purposes (Lai, 2015; Lu et al., 2015).

Given the above considerations, the issue of residents’ attitudes to tourism as a driver of sustainable regional growth lacks of a clear understanding of the resident perception in low growth regions in the EU. Our work intends to cover this gap and offers new insights for bottom up regional tourism and ICT policies to achieve sustainability goals in lagging behind regions of the EU. To do this, the present study uses a resident attitude approach to investigate the existence of the argumentations offered by the following papers: The work of Romão and Neuts (2017) argues three main points: the first one, in contrast with Benckendorff et al., (2019) and partially aligned with the considerations of Gössling and Hall (2019) highlighted earlier, argues that tourism offers a poor contribution to the achievements of the SDGs; the second one, highlights that regions endowed with natural resources are highly specialised in tourism. This high specialisation includes the concept of ‘smart tourism’ (Boes et al., 2016), where the term ‘smart’ implies the use of digital technologies in the tourism sector; and the third one, argues that the same regions experience, in contrast, high levels of unemployment and low growth. As a consequence, the tourism sector in these regions would not drive towards development paths.

In terms of methodological approach, our study adopts a survey analysis at regional level as key source of data and, based on the work by Brida et al. (2020), it employs a generalised ordered logistic model. The use of this model overcomes the limitation of the classical ordered logistic regression which assumes the rigid proportional odds assumptions between the categories of a categorical variable. In addition, based on the recent insights of Henseler et al. (2015), Voorhees et al. (2015), and Rönkkö and Cho (2020) and the suggestions offered by Lindell and Whitney (2001), our work investigates the issues of divergent validity and misspecification of data measurement arising from behavioural attitudes.

Our contribution to the above mentioned debate provides a focus on the following research questions:

RQ1. To what extent residents perceive tourism as a driver of regional development? What are the potential factors affecting this perception?

RQ2. To what extent residents recognise the ICT potential in the tourism sector and how this contributes to perceive tourism as a driver of regional development?

RQ3. How the residents’ perception in RQ1 and RQ2 can contribute to the advancements and adoption of sustainable regional development policies?

Inspired by the issues arising in the above papers and to respond to our research questions, we aim to deepen the understanding on ICT use as an important determinant of the resident’s perception of tourism as a driver of sustainable regional development in lagging behind regions. To do this we infer whether potential linkages between the residents’ perception of ICT use and tourism exist in regions with high levels of unemployment and low growth. The study considers a qualitative and quantitative approach carried out in the region of Puglia, in the south of Italy. This region is one of the ‘lagging behind’ regions of the EU with low growth performances and it is one of Italy’s most visited tourist destinations for its natural resources, beaches, cultural and local traditions. In 2014, it also appeared in the National Geographic’s best trips list (https://www.nationalgeographic.com/travel/best-trips-2014/). The choice of this region is also supported by the study of Romão and Neuts (2017) when they argue that regions endowed with natural resources are highly specialised in tourism. The present study provides quantitative evidence on the perception of tourism as driver of sustainable regional development caused, mostly, by the contribution of ICT use in planning tourism and recreational activities, other than other socio-economic determinants.
The present work is structured as follows: Section 2 illustrates a brief review of the literature; section 3 defines the methodology of the inferential analysis; section 4 describes an overview of the case study, the survey analysis, and the investigation of data measurement; section 5 presents the results of the stochastic model and the discussion; and finally, section 6 concludes the work.

2 | BACKGROUND

The understanding of residents’ attitudes is of great importance for local governments and policy makers to achieve the goals of the Europe 2020 strategy of a smart, sustainable and inclusive growth (European Commission, 2010b). Under a theoretical point of view, the most commonly accepted framework considering resident’s attitudes for tourism systems is that of the Social Exchange Theory (SET) (Blau, 1964; Emerson, 1976; Homans, 1961) which, according to Jonason and Middleton (2015), can be thought as the result of a ‘cost–benefit analysis’ that people do with their daily behaviours. When referred to tourism, residents generally compare the positive effects with the negative consequences of it. If the net effect produces positive impacts, then residents are likely to support tourism developments and all the potential relationships that are generated (Lee, 2013).

Recent literature on the perception of the linkages between ICT, tourism and regional development can be considered the modern view of the Social Exchange Theory applied to tourism as well as the pioneering Bjorklund and Philbrick’s (1972) host attitudinal model (HAM), in which the social sphere is essential to understand the needs of the local communities towards tourism systems. The literature can be classified under the following categories: (i) conceptual and theoretical issues, including the perceived needs, drivers and obstacles of innovation; (ii) perceived determinants and usefulness of innovation for tourism and systems; (iii) Tourism systems, ICT and regional development.

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The second category of literature refers to the works by Hall and Williams (2008), Orfila-Sintes and Mattsson (2009) and Qi et al. (2010). Hall and Williams (2008) offer the first attempt at a comprehensive review of innovation in tourism (including resident perception); and, at the same time, considers tourism as a driver of innovation. Orfila-Sintes and Mattsson (2009) focus on innovation perceived by the local host as driver of the hospitality sector. The authors emphasise, through a stochastic model, the incidence of additional services, booking through tour operators, the brand and owner-type of the hospitality infrastructure on the innovation decisions of the local host. The study by Qi et al. (2010) offer useful insights on the residents’ perception of web applications to shop for recreational travels. The authors use a survey analysis delivered to Hong Kong residents. Their main findings suggest that experienced residents are keen to use web technologies to plan their trips and appear more sensitive to price, payment security and website’s reputation variations.

The third category of literature deals with the works of Nunkoo and Ramkissoon (2012), Palafax-Muñoz et al. (2013) and Garau-Vadell et al. (2018). Nunkoo and Ramkissoon (2012) support the idea that ‘residents’ trust in government actors is a significant predictor of their support for tourism [...]’ (p. 1015), which assumes an important role to boost the regional economy. Palafax-Muñoz et al. (2013) emphasise the community perception on the quality and sustainability of tourism considered as a key factor for regional development. Also, the authors underline that the interrelationships and attitudes between the local resident and the tourist helps to understand the growth of a place in view of tourism development initiatives in the regional context. Garau-Vadell et al. (2018) offers an in-depth empirical work about the resident’s perception of the impact of tourism in the context of Mallorca, Spain, during economic crisis. The authors support the view that during an economic crisis, residents’ perceptions appear more benevolent towards tourism development and their attitudes show a strong support for the enhancement of touristic activities as a result of the future recovery of the economy.

Similar approaches to the SET and HAM theories above, are the well-known contributions provided by the Theory of Reasoned Action (TRA) and the Technology Acceptance Model (TAM) (Taherdoost, 2018; Ukpabi & Karjaluoto, 2017). The former is based on the pioneering work by Fishbein and Ajzen (1975) in the fields of Sociology and Psychology and subsequently used in tourism studies (Kim et al., 2011; Otieno et al., 2016); the latter is an extension of the TRA including three main user’s features such as the perceived usefulness of a technology, the user’s attitude towards its use, and the degree of easiness to use the technology (Amaro & Duarte, 2015; Nunkoo & Ramkisson, 2013; Sahli & Legoherel, 2015). The TRA model is based on three main components of the human cognitive sphere such as attitudes, social norms and behaviours, and the individual’s intentions. As such, we consider it, together with the SET and HAM theoretical models, as foundations providing a thorough vision of the resident attitude towards ICT, tourism and regional sustainability. On the other
| Author                          | Literature type, method, regional area                                                                 | Macro topic                                                                 |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| Homans (1961)                  | Theoretical                                                                                                                      | Framework considering attitudes for tourism systems                          |
| Blau (1964)                    | Theoretical                                                                                                                      | Framework considering attitudes for tourism systems                          |
| Emerson (1976)                 | Theoretical                                                                                                                      | Framework considering attitudes for tourism systems                          |
| Jonason and Middleton (2015)   | Theoretical                                                                                                                      | Framework considering attitudes for tourism systems (SET)                   |
| Bjorklund and Philbrick (1972) | Theoretical                                                                                                                      | Framework considering attitudes for tourism systems (HAM)                   |
| Nunkoo and Ramkissoon (2012)   | Theoretical                                                                                                                      | Framework considering attitudes for tourism systems (TRA)                   |
| Fishbein and Ajzen (1975)      | Theoretical                                                                                                                      | Framework considering attitudes for tourism systems (TRA)                   |
| Lai, 2015                      | Applied. Survey, Structural equation model (SEM). Low growth region case study outside EU (Macau, China)                           | Framework considering resident’s attitudes to ICT and tourism systems (TAM) |
| Lu et al., 2015                 | Applied. Survey, SEM Low growth regions in China                                                                                 | Framework considering resident’s attitudes to ICT and tourism systems (TAM) |
| Taherdoost, 2018               | Review                                                                                                                           | Framework considering attitudes to ICT (TRA, TAM)                           |
| Ukpabi & Karjaluoto, 2017      | Review                                                                                                                           | Framework considering attitudes to ICT for tourism systems (TRA, TAM)       |
| Kim et al., 2011               | Applied                                                                                                                          | Framework considering attitudes to tourism systems (TRA)                   |
| Kim et al., 2013               | Applied                                                                                                                          | Framework considering attitudes to tourism systems (TRA)                   |
| Otieno et al., 2016            | Theoretical                                                                                                                      | Framework considering attitudes to ICT (TRA)                               |
| Amaro & Duarte, 2015           | Applied. SEM model                                                                                                               | Framework considering resident’s attitudes to tourism systems (TRA, TAM)    |
| Sahli & Legopherel, 2015       | Applied. Survey. Low growth country case study outside the EU (Tunisia)                                                         | Framework considering resident’s attitudes to ICT and tourism systems (TAM) |
| Buhalıs and Law (2008)         | Review                                                                                                                           | ICT and tourism management                                                  |
| Navío-Marco et al., 2018       | Review                                                                                                                           | ICT and tourism management                                                  |
| Benckendorff et al., 2019      | Review                                                                                                                           | ICT and tourism management                                                  |
| Fernández et al., 2020         | Applied. Construction of a travel and tourism synthetic index                                                                     | ICT and tourism management                                                  |
| Rihova et al., 2015            | Theoretical                                                                                                                      | ICT and tourism management                                                  |
| Casais et al., 2020            | Applied. Survey Low growth region case study in the EU (Portugal)                                                                 | ICT and tourism management                                                  |
| Kucukusta et al., 2015         | Applied                                                                                                                          | ICT and tourism management                                                  |
| Chen et al., 2015              | Theoretical                                                                                                                      | ICT and tourism management                                                  |
| Boes et al. (2016)             | Applied. Survey                                                                                                                  | ICT and tourism management                                                  |
| Kotilıoglu et al., 2017        | Applied. Computer programming algorithm                                                                                         | ICT and tourism management                                                  |
| Heinonen et al., 2010          | Theoretical                                                                                                                      | ICT and tourism management                                                  |
| Chunqing et al., 2019          | Applied. Survey                                                                                                                  | ICT and tourism management                                                  |
| Szopiński & Staniewski, 2016  | Applied. Survey                                                                                                                  | ICT and tourism management                                                  |
| Hall and Williams (2008)       | Theoretical and applied                                                                                                          | ICT and tourism management                                                  |
| Benckendorff et al. (2019)     | Discursive and applied                                                                                                           | ICT and tourism management                                                  |
hand, we refer to the TAM model as a theoretical approach particularly relevant for supporting the resident attitude towards the ICT component of our analysis.

Table 1 summarises the literature review carried out in the present work. It highlights the lack of investigation to the issue of the resident attitude to tourism as a driver of regional sustainable development.
development and the perception of the ICT as a contributor to this view in lagging behind regions of the EU.

3 | METHODOLOGY OF THE INFERENTIAL ANALYSIS

The stochastic analysis conducted in this work is based on the use of a generalised ordered logistic regression model. The choice of this model is not random. Likert-scale ordinal type categorical dependent variables (e.g., 1 = strongly disagree; 4 = strongly agree) are generally modelled with ordered logistic regressions (Williams, 2006). These models assume that the order of responses of the dependent variable is known but the distance between categories is not. For this reason, this model is also known as Proportional odds/Parallel Line Model. The Brant test is generally used to check that the parallel lines assumption holds. The null hypothesis tests the hypothesis that the ordered logistic regression model is valid. In our case, the null hypothesis is rejected at 95% confidence interval. Based on this result, we relax the assumption of the parallel lines. This means that both the intercepts and the slopes of the regression lines are allowed to vary across the categories of the dependent variable. We employ the generalised ordered logistic regression model as described by Williams (2016). The model considers the following equation:

$$\Pr(Y_i > j) = \frac{\exp(\alpha_j + X_i \beta_j)}{1 + \exp(\alpha_j + X_i \beta_j)}, \quad j = 1, 2, 3, 4, 5$$  \hspace{1cm} (1)$$

where \( j \) represents the number of the categories of the ordinal dependent variable \( Y \), \( \alpha_j \) is the constant term of each category, \( X_i \)s are the explanatory variables with \( i = 1...N \), and \( \beta_j \) - the slopes - are the estimated coefficients of the explanatory variables for each category \( j \).

To estimate the generalised ordered logistic regression model we use STATA v.16 and the command gologit2 written by Williams (2016). This command fits a series of binary logistic regression equations. In our case, it fits four (i.e., \( J - 1 \)) binary equations. Therefore, the considered generalised ordered logistic regression model compares all the categories greater than the current category to those less than or equal to the current category (i.e., 1 vs. 2,3,4,5; 1,2 vs. 3,4,5; 1,2,3 vs. 4,5; 1,2,3,4 vs. 5).

How can the signs of the estimated coefficients of the explanatory variables be interpreted? Positive \( \beta \) coefficients increase the likelihood that higher values of the explanatory variable are associated with higher categories of the dependent variable than the category under consideration. On the other hand, negative \( \beta \) coefficients indicate that higher values of the explanatory variable increase the likelihood of being in the current or a lower category (Williams, 2006).

4 | CASE STUDY

This section illustrates the case study of our investigation. After providing a geo-location of the region of Puglia, the main economic information particularly related to its tourism sector are provided. The section also shows the descriptive statistics of the survey.

The region of Puglia is located in the South-East of Italy (Figure 1).

The region of Puglia is endowed with 1041 km of coasts and represents about 12% of the national shoreline (ISTAT, 2014). Seventy eight percent of the regional shoreline (700 km of coastal zone) constitutes the majority of beaches. The hinterland of the region is mostly flat and hilly and comprises seven macro-areas as shown in Figure 1: the ‘Gargano’ promontory, the ‘Daunia subappennine’ and the ‘Tavoliere delle Puglie’ (i.e., the second largest plain in Italy) in the north; the ‘Territory of Bari’ with the carsic uplands of Murge in the centre; the territory of ‘Salento’, one of the most suggestive baroque areas in Italy, in the south; the ‘Itria Valley’ in the south west; and finally, the ‘Itria Valley’ which hosts the Trulli\(^2\) in the south east.

The performance of tourism in 2018,\(^3\) compared to the year 2017, saw a +3.7% of arrivals (=4 mln) of which, +14% from abroad. The rate of internationalisation is in the figure of 25.6% with 2.4% increase compared to the year 2017 (Agenzia Regionale del Turismo, 2018). Finally, foreign visitors spent about 659 mln Euros to visit Puglia in 2016 and the spending rate increased by about 25% compared to the year 2015 (Istituto Guglielmo Tagliacarne, 2018).

4.1 | Survey design and sample descriptive statistics

Our analysis is based on the use of a set of information gathered through a questionnaire structured into three sections. The first section of the questionnaire is designed to elicit the demographic information of the respondents. The second section captures a general knowledge of tourism perception; and the third section refers to information on the general knowledge of ICT, tourism and regional development issues.
To compute the sample size of this study, we consider the standard statistics of a known population (4,048,242 according to the figures provided by the Institute of National Statistics, ISTAT, 2018) and the unknown standard deviation (Weiss & Weiss, 2012). By considering a 95% Confidence Level, a standard level of precision $p = 0.5$, the required minimum sample size is equal to 384 observations.

By recurring to the use of face to face interviews, the questionnaire was submitted between January and June 2018 to a total sample of 1414 respondents who live in Puglia. As a result of the above considerations, this sample size can be considered representative of the entire population of residents in the region of Puglia in 2018. It is worth noting that the final sample size comprises 1043 observations, thus obtaining a response rate of about 74%.

Figure 2 illustrates the descriptive statistics of the sample which copes with socio-demographic information. The sample size is characterised, on average, by respondents of 45 years old (st. dev = 18.80) and predominantly women (53%). Respondents mainly live in a family with 3 (20%) or 4 (22%) members. In terms of education, 26% of respondents hold a secondary school degree; while 24% hold a higher education degree; only 17% of the sample holds a post-graduate degree. Finally, 15% of respondents does not hold any degree.

The job type is heterogeneous. 20% of the sample works in the public and private sectors; 30% are employed as artisans, workers and freelance professionals; students represents 20% of the sample, while housewives are about 10%. Retired and unemployed people represent 11% and 9% of the sample, respectively. Income (gross) ranges between 12,001 and 20,000 Euros (21%), and 20,001 and 40,000 Euros (19%).

In terms of regional distribution of the residency, 48% of the sample is from the northern part of the Puglia region (20% from the province of Foggia and 18% from the province of Barletta-Andria-Trani), 29% from the centre of the region (17% from the province of Taranto and 13% from the capital of the region Bari), and 33% from the south (16% and 15% from the provinces of Brindisi and Lecce, respectively).
### Other descriptive statistics

| Visited areas of Puglia region | Freq | %   | Cumulative |
|--------------------------------|------|-----|------------|
| Ionic Arc                      | 127  | 12.18 | 12.18      |
| Gargano                        | 186  | 17.83 | 30.01      |
| Salento                        | 261  | 25.02 | 55.03      |
| Daunia subappennine            | 96   | 9.20  | 64.24      |
| Tavoliere delle Puglie         | 118  | 11.31 | 75.55      |
| Territory of Bari              | 118  | 11.31 | 86.86      |
| Itria Valley                   | 137  | 13.14 | 100        |

| Frequency of participation in touristic events | Freq | %   | Cumulative |
|-----------------------------------------------|------|-----|------------|
| Never                                         | 242  | 23.20 | 23.20      |
| < 1 time / yr                                 | 179  | 17.16 | 40.36      |
| 1–3 times / yr                                | 226  | 21.67 | 62.03      |
| 4 times / yr                                  | 240  | 23.01 | 85.04      |
| > 4 times / yr                                | 156  | 14.96 | 100        |

| Touristic products |   |   |   |
|--------------------|---|---|---|
| Heritage           |   |   |   |
| Not important      | 160 | 15.34 | 15.34 |
| Slightly important | 203 | 19.46 | 34.80 |
| Moderately important | 234 | 22.44 | 57.24 |
| Important          | 195 | 18.70 | 75.93 |
| Very important     | 251 | 24.07 | 100   |
| Landscape          |   |   |   |
| Not important      | 172 | 16.49 | 16.49 |
| Slightly important | 179 | 17.26 | 33.75 |
| Moderately important | 226 | 23.20 | 56.95 |
| Important          | 240 | 18.02 | 74.98 |
| Very important     | 156 | 25.02 | 100   |
| Infrastructures    |   |   |   |
| Not important      | 208 | 19.94 | 19.94 |
| Slightly important | 225 | 21.57 | 41.51 |
| Moderately important | 248 | 23.78 | 65.29 |
| Important          | 182 | 17.45 | 82.74 |
| Very important     | 180 | 17.26 | 100   |
| Food and wine      |   |   |   |
| Not important      | 154 | 14.77 | 14.77 |
| Slightly important | 196 | 18.79 | 33.56 |
| Moderately important | 201 | 19.27 | 52.83 |
| Important          | 200 | 19.18 | 72.00 |
| Very important     | 292 | 28.00 | 100   |
| Recreational activities |   |   |   |
| Not important      | 182 | 17.45 | 17.45 |
| Slightly important | 207 | 19.85 | 37.30 |
| Moderately important | 218 | 20.90 | 58.20 |
| Important          | 231 | 22.15 | 80.35 |
| Very important     | 205 | 19.65 | 100   |
| Touristic events   |   |   |   |
| Not important      | 166 | 15.92 | 15.92 |
| Visited areas of Puglia region | Freq | %    | Cumulative |
|-------------------------------|------|------|------------|
| Slightly important           | 214  | 20.52| 36.43      |
| Moderately important         | 223  | 21.38| 57.81      |
| Important                     | 247  | 23.68| 81.50      |
| Very important                | 193  | 18.50| 100        |
| **Hospitality**               |      |      |            |
| Not important                 | 185  | 17.74| 17.74      |
| Slightly important           | 196  | 18.79| 36.53      |
| Moderately important         | 207  | 19.85| 56.38      |
| Important                     | 210  | 20.13| 76.51      |
| Very important                | 245  | 23.49| 100        |
| **Services**                  |      |      |            |
| Not important                 | 192  | 18.41| 18.41      |
| Slightly important           | 206  | 19.75| 38.16      |
| Moderately important         | 240  | 23.01| 61.17      |
| Important                     | 207  | 19.85| 81.02      |
| Very important                | 198  | 18.98| 100        |
| **Holiday variables**         |      |      |            |
| **Accommodation**             |      |      |            |
| Other                         | 142  | 13.61| 13.61      |
| B&B                           | 193  | 18.5 | 32.12      |
| House                         | 169  | 16.2 | 48.32      |
| Hotel                         | 212  | 20.33| 68.65      |
| Camping/village               | 145  | 13.9 | 82.55      |
| Resort                        | 182  | 17.45| 100        |
| **Holiday time**              |      |      |            |
| 1 day                         | 226  | 21.67| 21.67      |
| 2 days                        | 214  | 20.52| 42.19      |
| 1 week                        | 52   | 4.99 | 47.17      |
| 1–2 weeks                     | 229  | 21.96| 69.13      |
| > weeks                       | 322  | 30.87| 100        |
| **Holiday features**          |      |      |            |
| Accessibility                 | 98   | 9.40 | 9.40       |
| Quality of infrastructures    | 127  | 12.18| 21.57      |
| Landscape care                | 90   | 8.63 | 30.20      |
| Museums’ opening times        | 102  | 9.78 | 39.98      |
| General events                | 101  | 9.68 | 49.66      |
| Hospitality                   | 103  | 9.88 | 59.54      |
| Historical-cultural heritage  | 112  | 10.74| 70.28      |
| Recreational activities       | 121  | 11.60| 81.88      |
| Quality of touristic guides   | 100  | 9.59 | 91.47      |
| Gastronomy                    | 89   | 8.53 | 100        |
| **ICT variables**             |      |      |            |
| **ICT tools for touristic events** |    |    |            |
| Word of mouth                 | 170  | 16.30| 16.30      |
| Radio                         | 181  | 17.35| 33.65      |
| Web                           | 204  | 19.56| 53.21      |
The second section of the survey is illustrated in Table 2. The most visited areas for holiday reasons are: Salento (25%), Gargano (38% comprising the areas of Gargano, Daunia, Subappennine and Tavoliere) and the Itria Valley (13%). The frequency of respondent’s participation in touristic events presents a bimodal distribution with a group of residents which do not take part in touristic events (23%) and another group which generally participates in touristic events ‘4 times/yr’ (23%). Also, the relevance of the touristic products for the resident is the following (average figures in parenthesis): level of infrastructures (12%), recreational activities (11%), historical and cultural (11%) and resident hospitality (10%).

Similarly, we asked respondents which of the following touristic products the region of Puglia is best endowed with (Tables 3): heritage (24% very important), landscape (25% very important), infrastructures (24% moderately important), food and wine (28% very important), recreational activities (22% important), touristic events (24% important), hospitality (24% very important), services (23% moderately important).

Finally, the last section of the survey deals with a general perception on tourism, ICT, and regional development and captures the following aspects (average figures in parenthesis): perception of ICT for the promotion of tourism (26% very important; 22% important), perception of tourism as a driver of regional development (30% very important). Also, the majority of the sample generally perceives social network (28%), web (20%) and TV (19%) as

### Table 2 (Continued)

| Visited areas of Puglia region | Freq | %    | Cumulative |
|-------------------------------|------|------|------------|
| Social                        | 292  | 28.00| 81.21      |
| TV                            | 196  | 18.79| 100        |

**ICT use**

|                | Freq | %    |
|----------------|------|------|
| No             | 445  | 42.67|
| Yes            | 598  | 57.33|

**ICT frequency**

| Frequency       | Freq | %    | Cumulative |
|-----------------|------|------|------------|
| Never           | 212  | 20.33| 20.33      |
| < 1 times / month | 270  | 25.89| 46.21      |
| 1–3 times / month | 182  | 17.45| 63.66      |
| 4 times / month  | 160  | 15.34| 79.00      |
| Always          | 219  | 21.00| 100        |

**ICT satisfaction for holiday planning**

| Satisfaction   | Freq | %    | Cumulative |
|----------------|------|------|------------|
| Very dissatisfied | 176  | 16.87| 16.87      |
| Dissatisfied    | 188  | 18.02| 34.90      |
| Neither/nor     | 219  | 21.00| 55.90      |
| Satisfied       | 233  | 22.34| 78.24      |
| Very satisfied  | 227  | 21.76| 100        |

**ICT promotes tourism**

| Importance      | Freq | %    | Cumulative |
|-----------------|------|------|------------|
| Not important   | 169  | 16.20| 16.20      |
| Slightly important | 181  | 17.35| 33.56      |
| Moderately important | 197  | 18.89| 52.44      |
| Important        | 229  | 21.96| 74.40      |
| Very important   | 267  | 25.60| 100        |

Note: Our elaborations.

### Table 3

| Variable                                             | KMO   |
|------------------------------------------------------|-------|
| ICT satisfaction for holiday planning                | 0.75  |
| ICT promotes tourism                                  | 0.71  |
| Heritage                                             | 0.76  |
| Landscape                                            | 0.71  |
| Infrastructures                                      | 0.61  |
| Food and wine                                        | 0.77  |
| Hobby                                                | 0.79  |
| Events                                               | 0.69  |
| Hospitality                                          | 0.76  |
| Service                                              | 0.75  |
| Tourism promotes sustainable regional development     | 0.68  |
| Overall KMO                                          | 0.74  |

Bartlett’s Test of Sphericity (Chi2 = 609) $p = 0.000$

Note: Our elaborations.
tools to gather information on touristic events. Similarly, respondents appear keen to use web tools to plan their holidays and book their accommodation (57%). In terms of the frequency of ICT use for holiday planning, respondents are distributed according to a tri-modal distribution. There exists a group of people which does not use ICT resources (20%); a group of respondents which uses ICT resources less than a month/yr (25%) and a final group of people which always use ICT tools (21%). Finally, relatively to the people using ICT resources to plan their holidays, about 47% appear ‘satisfied’ and ‘very satisfied’.

4.2 | Data measurement

The present section deals with data measurement and reliability of constructs from multi-item scales of Likert-type variables of our survey (Bacharach, 1989). To this end, the above issues will be tested on our sub-set of 11 psychometric variables related to the attitudinal aspects towards:

- the touristic products of the region of Puglia such as ‘Heritage’, ‘Landscape’, ‘Infrastructures’, ‘Food and wine’, ‘Recreational activities’, ‘Touristic events’, ‘Hospitality’ and ‘Services’;
- the ICT issue such as: ‘ICT satisfaction for holiday planning’ and ‘ICT promotes tourism’; and
- the resident attitude’s variable to perceive tourism as a driver of development: ‘Tourism promotes sustainable regional development’.

The reliability of the above multi-scale constructs is provided through the use of the recent insights offered by the disattenuated correlation using parallel reliability i.e., heterotrait-monotrait ratio of the correlations (Henseler et al., 2015). Potential data mis-specification is investigated through the use of the Confirmatory Factor Analysis with Marker Variable method illustrated by Lindell and Whitney (2001).

4.2.1 | Discriminant validity of multi-scale items

The heterotrait-monotrait ratio (HTMT) of the correlations (Henseler et al., 2015; Voorhees et al. (2015); Rönkkö and Cho (2020) assesses the geometric-mean correlation among indicators across psychometric variables relative to the geometric-mean correlation among indicators within the same psychometric variables. The obtained HTMT values are interpreted as estimates of inter-construct correlations. To compute the HTMT values we use the open source version of the Rstudio software (rstudio.com).

To determine the validity of the attitudinal constructs in our study, the above method is based on factor loadings in factor analysis. Therefore, before computing the HTMT ratios, we check for sample adequacy with the use of the Kaiser–Meyer–Olkin (KMO) test and whether data are normally distributed with the Bartlett’s Test of Sphericity (Hayton et al., 2004; Horn, 1965; Thompson & Daniel, 1996).

The KMO test (0.74) indicates sampling adequacy and suggests that the sample is adequate for a factor analysis. Bartlett’s test of sphericity (Chi2 = 609) is significant (<0.001) and therefore suggests that data are normally distributed.

Figure 3 illustrates the Horn’s Parallel analysis (Horn, 1965) to identify the number of factors (if greater than 1) in our sub-sample. We notice that the maximum number of factors to extract to carry out the factor analysis is 2. We run the factor analysis with the
oblique rotation method, since the factor correlation matrix in Table 4 presents values larger than the 0.30 threshold (Hinkle et al., 2003).

Finally, Tables 5 and 6 show the factor loading matrix and the HTMT ratio computations. In particular, the correlation squared value between components in Table 6, indicate that the r squared value of 0.16 is lower than the variance extracted of 0.18. This means that divergent validity has been established between our psychometric constructs, and therefore our attitudinal variables are measuring separate concepts.

4.2.2 | Testing for mis-specification bias (marker variable method)

With reference to the work of Lindell and Whitney (2001), we carry out a data mis-specification investigation through a Confirmatory Factor Analysis (CFA) with Marker Variable (MV) method.\(^6\) Due to low correlation values among our psychometric type variables in Table 7,\(^7\) we proceed with the use of the classical one factor model in CFA. From Table 8, the CFI indicates a 0.90 value. The closer the CFI is to 1, the better the fit of the model. In addition, the Root Mean Square Error of Approximation (RMSEA), which measures the degree of mis-specification, has a value of 0.036. Since it is lower than 0.05 (the cut-off point for close-fit models), we can argue that our psychometric-type model is not biased.

5 | GENERALISED ORDERED LOGISTIC MODEL RESULTS

Table 9 illustrates the results obtained from the generalised ordered logistic regression model. The dependent variable of our inferential model is the resident attitude to perceive ‘tourism as a driver of sustainable regional development’. This is a psychometric Likert-scale (1 = totally disagree 5 = totally agree) categorical variable.

The output of this model is analogous to a sequence of binary regressions and can be detailed as follows: the first panel of binary models comprises class 1 which is run against 2, 3, 4 and 5; the second panel of binary regressions 1 & 2 is run against 3, 4 & 5; the third one 1, 2 & 3 is run against 4 & 5; and finally, the last panel of binary regression 1, 2, 3 & 4 is run against category 5. The interpretation of the output in Table 9 may look odd; nonetheless, a positive coefficient indicates a higher value of the independent variable and therefore it is more likely that the respondent’s attitude will favour higher categories of the dependent variable than lower ones.

We can argue that the panel of regression 1, 2, 3 & 4 run against 5 (Panel 4), presents the highest number of estimated factor variables with statistically significant coefficients using 95% (*** and **) of confidence interval. Among these, we find two socio-demographic variables such as ‘Education’; and ‘Job’; three variables representing touristic products of the region such as ‘Landscape’, ‘Food and wine’ and ‘Events’; and three variables considered ICT proxies such as: ‘ICT tools for touristic events’, ‘ICT satisfaction for holiday planning’ and ‘ICT promotes tourism’.

Given the above, it is clearly evident a general positive attitude (i.e., categories 4 = agree and 5 = totally agree) that tourism is a driver of sustainable regional development. Based on this result, we next present the analysis of predicted probabilities for category 5 = totally agree.

5.1 | Analysis of predicted probabilities

Table 10 illustrates the results of the analysis of predicted probabilities. The analysis of margins is computed for the predictors with statistically significant coefficients using 95% (*** and **) of confidence interval.

As for the socio-demographic variable ‘Education’, we notice that respondents with higher education (41%) and secondary school degree (42%) mostly affect the probability to perceive tourism as a driver of sustainable regional development. Surprisingly, in terms of ‘Job’, housewives increase the above probability by +54%.

As for the touristic products ‘Food and wine’ and ‘Events’, the higher the importance of these two variables (=Very important) for the resident, the higher the probability to perceive tourism as a factor promoting sustainable regional development (+43% and + 49%, respectively). As for ‘Landscape’, it does not matter whether it is more or less favourably perceived by residents, its effect on the change of the probability value of the dependent variable remains the same. In other words, the particular and diverse landscape of the region of Puglia, enriched with cultural and historical traditions, would show a high intrinsic value which alone is a factor of both development and preservation. Finally, in terms of ICT variables, both ‘Social’ media and ‘Web’ used as tools for booking or gather information on touristic events affect the resident perception in the figure of 32% and 45%, respectively. Similarly, the higher the importance of ‘ICT promotes tourism’ and ‘ICT satisfaction for holiday planning’, the higher the

| Factor     | Average loading | Variance extracted | Correlation (r)* | r squared |
|------------|-----------------|--------------------|------------------|----------|
| PA1        | 0.34            | 0.11               | 1                | 1        |
| PA2        | 0.13            | 0.07               | 1                | 1        |
| Between PA1 and PA2 | 0.18          | 0.40               | 0.16             |          |

Note: Our elaborations.
*Values taken from the factor correlation matrix (pattern matrix) in Table 4. PA = pattern.
|                        | ICT satisfaction for holiday planning | ICT promotes tourism | Heritage | Landscape | Infrastructures | Food and wine | Hobby | Events | Hospitality | Service | Tourism promotes sustainable regional development |
|------------------------|--------------------------------------|----------------------|----------|-----------|-----------------|---------------|-------|--------|-------------|---------|--------------------------------------------------|
| ICT satisfaction for   | 1                                    |                      |          |           |                 |               |       |        |             |         |                                                  |
| holiday planning       |                                      |                      |          |           |                 |               |       |        |             |         |                                                  |
| ICT promotes tourism   | 0.1                                  | 1                    |          |           |                 |               |       |        |             |         |                                                  |
| Heritage               | 0.11                                 | 0.12                 | 1        |           |                 |               |       |        |             |         |                                                  |
| Landscape              | 0.08                                 | 0.14                 | 0.24     | 1         |                 |               |       |        |             |         |                                                  |
| Infrastructures        | -0.01                                | -0.06                | 0.08     | 0.06      | 1               |               |       |        |             |         |                                                  |
| Food and wine          | 0.15                                 | 0.13                 | 0.17     | 0.24      | 0.06            | 1             |       |        |             |         |                                                  |
| Hobby                  | 0.1                                  | 0.07                 | 0.16     | 0.14      | 0.06            | 0.11          | 1     |        |             |         |                                                  |
| Events                 | 0.05                                 | 0.03                 | 0.06     | 0.19      | 0.14            | 0.13          | 0.1   | 1      |             |         |                                                  |
| Hospitality            | 0.06                                 | 0.1                  | 0.19     | 0.18      | 0.05            | 0.16          | 0.15  | 0.12   | 1           |         |                                                  |
| Service                | 0.07                                 | 0.06                 | 0.15     | 0.15      | 0.07            | 0.13          | 0.11  | 0.06   | 0.14        | 1       |                                                  |
| Tourism promotes       | 0.1                                  | 0.22                 | 0.11     | 0.12      | -0.01           | 0.17          | 0.09  | 0.04   | 0.19        | 0.01    | 1                                               |
| sustainable regional   | development                          |                      |          |           |                 |               |       |        |             |         |                                                  |

Note: Our elaborations.
predicted probability (+59% and 42%, respectively) to have a strong perception of the relationship between tourism and sustainable regional development.

5.2 Discussion

Our findings provide evidence to argue against the debate that tourism offers a poor contribution to the achievements of the SDGs particularly in low growth regions endowed with natural resources and highly specialised in tourism activities.

The discussion is developed in light of the results obtained from the analysis of predicted probabilities and is structured according to theoretical contributions, managerial implications and limitations.

5.2.1 Theoretical contributions

In a society more oriented to adopt sustainable behaviours and economies, the benevolence of host communities and the investigation of residents’ attitudes are leading issues for recent literature on tourism and sustainable growth initiatives (Ribeiro et al., 2017; Wang, 2019; Zhang & Chan, 2019; Zhu et al., 2017). As the main beneficiaries of tourism developments, the resident’s perspective maximises the potential benefits and minimises the negative impacts of tourism development on the local host-communities. As such, our results contribute to the empirical evidence supported by a modern understanding of the theoretical insights offered by the SET theory and HAM models. In addition, the increasing diffusion and adoption of ICT infrastructures, including the tourism sector, contribute to balance off the residents’ attitudes in low growth regions towards the acceptance of favourable perceptions for sustainable growth patterns. As such our results also provide evidence in support of the TRA and TAM theories.

**General contribution to the SET theory**

The suggested results of our analysis point us towards a general positive attitude of the resident to perceive tourism as a driver of sustainable regional development. We can summarise the main factors affecting this general perception as socio-demographic, with particular reference to education and job, touristic products of the Puglia region and ICT. Although the latter two contribute to support the SET theory, we leave our reflections for these two main factors as specific contribution to the HAM, TRA, and TAM theories and concentrate our attention to the socio-demographic factors.

In terms of education, we believe that an increasing attention to educational and practical skills in an era of profound transformations of the economy particularly linked to the recent pandemic events, are of primary importance to accelerate sustainable practices in the tourism sector. We argue that the support of education to the SET theory lies behind the question of what the students should learn. In this respect, our vision is shared by the recently published paper of Phi and Balslev Clausen (2020) where the authors, based on Ruano-Borbélan (2019), discuss the extent to which the learning process should

| Table 8 Confirmedatory factor analysis estimated results: Marker variable method |
|---------------------------------|---------|---------|---------|---------|---------|---------|
| ICT satisfaction for holiday planning | 1.82    | 0.08    | 21.97   | 0.00    | 1.82    | 0.94    |
| ICT promotes tourism               | 1.85    | 0.09    | 21.56   | 0.00    | 1.85    | 0.92    |
| Heritage                          | 1.56    | 0.08    | 19.35   | 0.00    | 1.56    | 0.81    |
| Landscape                         | 1.49    | 0.08    | 17.99   | 0.00    | 1.49    | 0.75    |
| Infrastructures                   | 1.84    | 0.08    | 22.58   | 0.00    | 1.84    | 0.98    |
| Food and wine                     | 1.61    | 0.08    | 19.12   | 0.00    | 1.61    | 0.80    |
| Hobby                             | 1.71    | 0.08    | 21.22   | 0.00    | 1.71    | 0.9     |
| Events                            | 1.68    | 0.08    | 21.72   | 0.00    | 1.68    | 0.93    |
| Hospitality                       | 1.69    | 0.09    | 19.91   | 0.00    | 1.69    | 0.83    |
| Service                           | 1.74    | 0.08    | 21.55   | 0.00    | 1.74    | 0.92    |
| Tourism promotes sustainable regional development | 1.91    | 0.09    | 21.99   | 0.00    | 1.91    | 0.90    |
| Overall function                  | 0.11    | 0.04    | 3.02    | 0.00    | 1       | 1       |
| Obs                               | 1043    |         |         |         |         |         |
| Model test user model (over-identified) Chi2(44) | 102.031 |         |         |         |         | p-value = 0.00 |
| Model test baseline model (null model) Chi2(55) | 612.23   |         |         |         |         | p-value = 0.00 |
| Comparative Fit Index (CFI)       | 0.90    |         |         |         |         |         |
| RMSEA                             | 0.036   |         |         |         |         | p-value = 9.96 |

Note: Our elaborations.

*a* Co-variance of residual errors.

*b* Co-variance of the loadings.

*c* Co-variance of the latent factors.
| Tourism promotes sustainable regional development | Coef. Panel 1 | Std.err. Panel 1 | Coef. Panel 2 | Std.err. Panel 2 | Coef. Panel 3 | Std.err. Panel 3 | Coef. Panel 4 | Std.err. Panel 4 |
|------------------------------------------------|---------------|-----------------|---------------|-----------------|---------------|-----------------|---------------|-----------------|
| Sex                                             | -0.06         | 0.32            | 0.17          | 0.23            | -0.23         | 0.20            | -0.24         | 0.21            |
| Age                                             | -0.02         | 0.01            | 0.00          | 0.01            | -0.00         | 0.01            | -0.00         | 0.01            |
| Province                                        |               |                 |               |                 |               |                 |               |                 |
| Taranto                                         | -0.10         | 0.52            | 0.89<sup>b</sup> | 0.39            | 0.49          | 0.31            | 0.28          | 0.35            |
| BAT                                             | -1.65         | 0.49            | -0.72         | 0.40            | 0.77<sup>b</sup> | 0.32          | -0.05         | 0.35            |
| Bari                                            | -1.09         | 0.50            | -1.11         | 0.43            | 1.16<sup>b</sup> | 0.37          | -0.19         | 0.39            |
| Foggia                                          | -0.59         | 0.51            | -0.29         | 0.38            | 0.26          | 0.31            | 0.26          | 0.34            |
| Lecce                                           | -0.73         | 0.49            | -0.38         | 0.38            | -0.97         | 0.33            | 0.45          | 0.37            |
| N_family                                        |               |                 |               |                 |               |                 |               |                 |
| 2                                               | -0.13         | 0.55            | -0.20         | 0.41            | -0.51         | 0.35            | -0.92         | 0.38            |
| 3                                               | 0.08          | 0.51            | -0.55         | 0.39            | -0.13         | 0.34            | -0.21         | 0.36            |
| 4                                               | -1.22         | 0.55            | -0.03         | 0.42            | 0.51          | 0.34            | -1.01         | 0.36            |
| 5                                               | -0.81         | 0.53            | -0.37         | 0.41            | 0.32          | 0.38            | -0.47         | 0.39            |
| 6                                               | -1.04         | 0.52            | -1.03         | 0.43            | 0.64          | 0.38            | -0.05         | 0.38            |
| Education                                       |               |                 |               |                 |               |                 |               |                 |
| Primary                                         | 0.92          | 0.48            | 0.55          | 0.39            | 0.47          | 0.34            | 0.88<sup>b</sup> | 0.38            |
| Secondary                                       | 0.14          | 0.45            | 0.12          | 0.38            | 0.01          | 0.33            | 1.42<sup>a</sup> | 0.36            |
| Graduates                                       | -0.06         | 0.50            | 0.56          | 0.36            | 0.14          | 0.31            | 0.57          | 0.35            |
| Post-graduates                                  | -1.33         | 0.51            | -0.31         | 0.36            | -0.46         | 0.33            | 1.35<sup>a</sup> | 0.37            |
| Job                                             |               |                 |               |                 |               |                 |               |                 |
| Housewife                                       | 0.18          | 0.66            | 0.09          | 0.49            | 0.02          | 0.44            | 0.98<sup>b</sup> | 0.46            |
| Public employee                                  | -0.28         | 0.63            | -0.42         | 0.51            | 0.48          | 0.41            | 0.26          | 0.41            |
| Public executive                                | -1.09         | 0.65            | -0.04         | 0.47            | 0.42          | 0.42            | -1.01         | 0.49            |
| Unemployed                                      | 0.65          | 0.67            | 0.69          | 0.51            | 1.10<sup>b</sup> | 0.42          | -0.10         | 0.45            |
| Freelance                                       | 0.00          | 0.70            | -0.04         | 0.50            | 0.01          | 0.43            | -0.93         | 0.46            |
| Worker                                          | -0.11         | 0.63            | -0.32         | 0.47            | -0.41         | 0.41            | -0.29         | 0.42            |
| Retired                                         | -0.37         | 0.61            | 0.12          | 0.47            | 0.31          | 0.42            | 0.81          | 0.43            |
| Student                                         | 0.75          | 0.64            | 0.73          | 0.45            | 0.89<sup>b</sup> | 0.36          | -0.13         | 0.38            |
| Income                                          |               |                 |               |                 |               |                 |               |                 |
| 12,000–20,000 €                                 | -0.42         | 0.52            | -1.16         | 0.39            | -0.49         | 0.30            | 0.16          | 0.31            |
| 20,001–40,000 €                                 | -1.75         | 0.55            | -0.82         | 0.42            | 0.16          | 0.30            | 0.36          | 0.31            |
| 40,001–75,000 €                                 | -1.14         | 0.55            | -0.85         | 0.42            | -0.57         | 0.33            | -0.20         | 0.36            |
| 75,001–100,000 €                                | 0.07          | 0.52            | -1.41         | 0.42            | -0.56         | 0.33            | 0.64          | 0.35            |
| > 100,000 €                                    | -0.25         | 0.52            | -1.64         | 0.45            | -0.11         | 0.36            | 0.15          | 0.39            |
| Holiday features                                |               |                 |               |                 |               |                 |               |                 |
| Quality of infrastructures                      | 2.65<sup>a</sup> | 0.64         | -0.32         | 0.50            | -0.27         | 0.42            | -0.20         | 0.41            |
| Landscape care                                  | -0.12         | 0.66            | 0.11          | 0.54            | 0.64          | 0.45            | -0.53         | 0.47            |
| Museum’s opening times                          | 1.34<sup>b</sup> | 0.62         | -0.91         | 0.54            | 0.39          | 0.47            | -0.10         | 0.44            |
| Events                                          | 1.02          | 0.64            | -0.01         | 0.55            | 0.04          | 0.46            | 0.30          | 0.43            |
| Hospitality                                    | 0.88          | 0.63            | -0.21         | 0.52            | 0.26          | 0.47            | -0.84         | 0.45            |
| Historical-cultural heritage                    | 0.93          | 0.67            | 0.25          | 0.53            | 0.08          | 0.42            | 0.46          | 0.42            |
| Recreational activities                         | -0.78         | 0.65            | -0.10         | 0.53            | -0.33         | 0.44            | -0.09         | 0.43            |
| Quality of touristic guides                     | 0.75          | 0.62            | -1.14         | 0.52            | 0.83          | 0.46            | -0.39         | 0.46            |
| Gastronomy                                      | 1.15          | 0.67            | -0.20         | 0.51            | -0.46         | 0.44            | -0.34         | 0.46            |

(Continues)
TABLE 9 (Continued)

| Tourism promotes sustainable regional development | Coef. Panel 1 | Std.err. Panel 1 | Coef. Panel 2 | Std.err. Panel 2 | Coef. Panel 3 | Std.err. Panel 3 | Coef. Panel 4 | Std.err. Panel 4 |
|--------------------------------------------------|--------------|-----------------|--------------|-----------------|--------------|-----------------|--------------|-----------------|
| 1 vs 2, 3, 4, 5                                  |              |                 |              |                 |              |                 |              |                 |
| House                                            | 1.58<sup>b</sup> | 0.57            | 0.98<sup>b</sup> | 0.44            | 0.46          | 0.36            | 0.16          | 0.38            |
| Hotel                                            | 1.19<sup>b</sup> | 0.49            | 0.78<sup>b</sup> | 0.37            | 0.80          | 0.34            | −0.26         | 0.36            |
| Camping village                                  | 0.94          | 0.54            | 0.28          | 0.40            | 0.55          | 0.36            | 0.25          | 0.39            |
| Resort                                           | 0.68          | 0.50            | −0.67         | 0.41            | 0.86<sup>b</sup> | 0.37          | 0.45          | 0.38            |
| Holiday areas                                    |              |                 |              |                 |              |                 |              |                 |
| Gargano                                          | −0.67         | 0.55            | 0.25          | 0.42            | −0.34         | 0.36            | 0.34          | 0.39            |
| Salento                                          | −0.67         | 0.58            | 0.25          | 0.42            | −0.37         | 0.34            | 0.05          | 0.36            |
| Daunia Sub-Appenine                              | 0.24          | 0.60            | −0.10         | 0.48            | 0.63          | 0.42            | −0.40         | 0.47            |
| Tavoliere                                        | −0.75         | 0.62            | 0.88          | 0.46            | −0.17         | 0.39            | 0.46          | 0.43            |
| Terra di Bari                                    | −0.48         | 0.64            | 1.22          | 0.48            | −0.03         | 0.39            | 0.40          | 0.42            |
| Itria Valley                                     | −0.47         | 0.54            | −0.40         | 0.43            | 0.08          | 0.39            | 0.22          | 0.39            |
| Frequency of touristic events                    |              |                 |              |                 |              |                 |              |                 |
| < 1 time / yr                                    | −0.46         | 0.49            | −0.98         | 0.38            | −0.91         | 0.31            | −0.12         | 0.31            |
| 1–3 times / yr                                   | −0.45         | 0.46            | −0.61         | 0.35            | −0.47         | 0.28            | −0.12         | 0.28            |
| 4 times / yr                                     | 0.48          | 0.48            | −1.53         | 0.36            | −0.57         | 0.28            | −0.02         | 0.27            |
| > 4 times / yr                                   | 0.85          | 0.52            | −1.77         | 0.38            | 0.06          | 0.32            | −0.11         | 0.33            |
| Holiday cost                                     |              |                 |              |                 |              |                 |              |                 |
| 501–1000 €                                       | −1.85         | 0.39            | −0.82         | 0.51            | 0.24          | 0.47            | 0.76          | 0.44            |
| > 1000 €                                         | −1.12         | 0.45            | 0.45          | 0.34            | −0.04         | 0.29            | 0.26          | 0.29            |
| Holiday time                                     |              |                 |              |                 |              |                 |              |                 |
| 2 days                                           | 0.27          | 0.47            | −0.61         | 0.34            | −0.39         | 0.31            | 0.12          | 0.32            |
| 1–2 weeks                                        | −3.70         | 1.04            | 0.72          | 0.76            | −0.75         | 0.62            | −0.15         | 0.57            |
| > 2 weeks                                        | −4.15         | 0.90            | 1.19<sup>b</sup> | 0.51          | −0.83         | 0.47            | −0.91         | 0.43            |
| Heritage                                         |              |                 |              |                 |              |                 |              |                 |
| Slightly important                               | 1.06<sup>b</sup> | 0.49            | 0.65          | 0.35            | 0.22          | 0.32            | −0.01         | 0.36            |
| Moderately important                             | 0.95<sup>b</sup> | 0.46            | −0.22         | 0.35            | −0.32         | 0.32            | 0.19          | 0.34            |
| Important                                        | 1.33<sup>b</sup> | 0.49            | 0.14          | 0.38            | 0.54          | 0.35            | −0.52         | 0.36            |
| Very important                                   | 1.24<sup>b</sup> | 0.46            | 0.35          | 0.34            | 0.08          | 0.32            | −0.13         | 0.35            |
| Landscape                                        |              |                 |              |                 |              |                 |              |                 |
| Slightly important                               | −1.08         | 0.47            | 0.12          | 0.37            | −0.31         | 0.32            | 0.81<sup>b</sup> | 0.37            |
| Moderately important                             | −0.13         | 0.46            | 0.41          | 0.38            | −0.25         | 0.32            | 0.80<sup>b</sup> | 0.35            |
| Important                                        | −1.03         | 0.52            | 0.16          | 0.38            | −0.45         | 0.32            | 0.80<sup>b</sup> | 0.35            |
| Very important                                   | −0.20         | 0.51            | 0.28          | 0.38            | −0.75         | 0.33            | 0.44          | 0.44            |
| Infrastructures                                  |              |                 |              |                 |              |                 |              |                 |
| Slightly important                               | −0.87         | 0.46            | −0.66         | 0.34            | −0.37         | 0.29            | 0.22          | 0.31            |
| Moderately important                             | −2.07         | 0.51            | 0.26          | 0.35            | 0.18          | 0.30            | −0.23         | 0.31            |
| Important                                        | −0.93         | 0.47            | −0.58         | 0.35            | −0.20         | 0.32            | 0.15          | 0.35            |
| Very important                                   | −1.82         | 0.52            | −0.45         | 0.37            | 0.03          | 0.32            | 0.25          | 0.33            |
| Food and wine                                    |              |                 |              |                 |              |                 |              |                 |
| Slightly important                               | −1.02         | 0.47            | 0.21          | 0.34            | 0.28          | 0.33            | −0.10         | 0.38            |
| Moderately important                             | 0.35          | 0.47            | 0.12          | 0.38            | 0.75<sup>b</sup> | 0.34          | −0.07         | 0.37            |
| Tourism promotes sustainable regional development | Coef. | Std.err. | Coef. | Std.err. | Coef. | Std.err. | Coef. | Std.err. |
|------------------------------------------------|-------|----------|-------|----------|-------|----------|-------|----------|
| | Panel 1 | 1 vs 2, 3, 4, 5 | Panel 2 | 1 & 2 vs 3, 4, 5 | Panel 3 | 1, 2, 3 vs 4, 5 | Panel 4 | 1, 2, 3 & 4 vs 5 |
| Important | -0.24 | 0.47 | -0.02 | 0.39 | 0.54 | 0.33 | 0.07 | 0.37 |
| Very important | -0.15 | 0.48 | -0.29 | 0.36 | 0.86 | 0.32 | 0.74 | 0.36 |
| Hobby | | | | | | | | |
| Slightly important | 1.59 | 0.47 | -0.09 | 0.37 | -0.36 | 0.31 | -0.28 | 0.36 |
| Moderately important | -0.10 | 0.54 | 0.56 | 0.37 | 0.00 | 0.31 | -0.05 | 0.35 |
| Important | 1.83 | 0.51 | 0.84 | 0.37 | -0.06 | 0.30 | 0.35 | 0.34 |
| Very important | 0.71 | 0.52 | -0.37 | 0.38 | -0.07 | 0.32 | 0.34 | 0.34 |
| Events | | | | | | | | |
| Slightly important | -1.05 | 0.49 | 0.27 | 0.37 | 0.19 | 0.32 | -0.48 | 0.34 |
| Moderately important | 0.11 | 0.45 | 0.29 | 0.37 | 0.44 | 0.33 | 0.11 | 0.34 |
| Important | -1.42 | 0.45 | 0.27 | 0.38 | 0.41 | 0.32 | -0.40 | 0.34 |
| Very important | 0.60 | 0.48 | 0.17 | 0.38 | 0.46 | 0.34 | 0.78 | 0.36 |
| Hospitality | | | | | | | | |
| Slightly important | 0.83 | 0.45 | 1.29 | 0.38 | -0.10 | 0.33 | -0.01 | 0.37 |
| Moderately important | 0.81 | 0.43 | 0.57 | 0.37 | -0.40 | 0.34 | 0.12 | 0.36 |
| Important | 1.10 | 0.45 | 1.43 | 0.39 | -0.02 | 0.33 | -0.26 | 0.36 |
| Very important | 0.25 | 0.43 | 0.87 | 0.36 | 0.68 | 0.33 | 0.50 | 0.35 |
| Service | | | | | | | | |
| Slightly important | -1.07 | 0.47 | -0.56 | 0.33 | 0.14 | 0.31 | -0.58 | 0.33 |
| Moderately important | -0.08 | 0.46 | 0.00 | 0.35 | -0.15 | 0.30 | -0.51 | 0.32 |
| Important | 0.64 | 0.54 | 0.07 | 0.39 | 0.07 | 0.33 | -0.34 | 0.33 |
| Very important | 0.01 | 0.48 | 0.15 | 0.36 | 0.19 | 0.33 | -1.77 | 0.36 |
| ICT tools for touristic events | | | | | | | | |
| Radio | -1.52 | 0.52 | -0.16 | 0.38 | 0.19 | 0.32 | 0.55 | 0.36 |
| Web | -0.19 | 0.49 | -0.80 | 0.36 | -0.33 | 0.31 | 1.16 | 0.35 |
| Social | -0.68 | 0.50 | 0.11 | 0.37 | 0.80 | 0.30 | 0.61 | 0.33 |
| TV | -1.01 | 0.48 | -0.38 | 0.34 | 0.33 | 0.30 | 0.05 | 0.34 |
| ICT use | -0.22 | 0.32 | 0.09 | 0.23 | -0.27 | 0.20 | 0.13 | 0.22 |
| ICT frequency | | | | | | | | |
| < a month | 0.18 | 0.46 | 0.33 | 0.35 | 0.17 | 0.30 | -0.18 | 0.32 |
| 1–3 times/month | 0.17 | 0.47 | -0.92 | 0.40 | -0.12 | 0.32 | 0.24 | 0.33 |
| 4 times/month | 1.33 | 0.48 | -0.41 | 0.39 | -0.76 | 0.33 | 0.61 | 0.38 |
| always | 1.16 | 0.46 | 0.70 | 0.40 | 0.09 | 0.29 | -0.64 | 0.32 |
| ICT satisfaction for holiday planning | | | | | | | | |
| Dissatisfied | -1.19 | 0.48 | 0.60 | 0.34 | 0.47 | 0.32 | 0.16 | 0.35 |
| Neither nor | -1.55 | 0.49 | 0.70 | 0.38 | 0.36 | 0.32 | 0.69 | 0.33 |
| 4 Satisfied | -0.43 | 0.47 | 0.39 | 0.37 | 0.60 | 0.32 | 0.33 | 0.33 |
| Very satisfied | 0.11 | 0.45 | 0.40 | 0.36 | 0.30 | 0.32 | 0.98 | 0.34 |
| ICT promotes tourism | | | | | | | | |
| Slightly important | -0.17 | 0.46 | -0.66 | 0.34 | -0.87 | 0.34 | -0.06 | 0.38 |
| Moderately important | 0.79 | 0.51 | -0.25 | 0.36 | -0.41 | 0.31 | 0.56 | 0.34 |
| Important | 0.51 | 0.50 | 0.13 | 0.37 | -0.07 | 0.32 | 0.11 | 0.34 |
| Very important | -0.48 | 0.57 | 0.10 | 0.39 | 0.56 | 0.33 | 1.76 | 0.34 |
| Constant | 2.15 | 1.54 | 1.23 | 1.14 | -0.71 | 1.00 | -3.33 | 1.15 |

(Continues)
Tourism promotes sustainable regional development

| Predictors                          | Margin * (Delta method)                      |
|-------------------------------------|----------------------------------------------|
| Education                          | +34% (Education = Primary)                   |
|                                     | +42% (Education = Secondary)                 |
|                                     | +41% (Education = Post-graduates)            |
| Job                                 | +54% (Job = Housewife)                       |
| Landscape                           | +35% (Landscape = Slightly important)        |
|                                     | +35% (Landscape = Moderately important)      |
|                                     | +35% (Landscape = Important)                 |
| Food and wine                       | +43% (Food and wine = Very important)        |
| Events                              | +49% (Events = Very important)               |
| ICT tools for touristic events      | +45% (ICT tools for touristic events = Web)   |
|                                     | +32% (ICT tools for touristic events = Social)|
| ICT satisfaction for holiday planning | +35% (ICT satisfaction = Neither/nor)       |
|                                     | +42% (ICT satisfaction = Very satisfied)     |
| ICT promotes tourism                | -59% (ICT promotes tourism = Totally agree)  |

*Margins are all statistically significant at 99% C.I.

be considered as a mixture of academic, tacit and indigenous knowledge, including social norms and behaviours and personal outcomes. The authors investigate how design-based learning – a problem-solving practise – and value-based learning – preferences for certain outcomes based on social norms and code of practises – affect students’ knowledge within a course delivered for a postgraduate programme in Tourism at the University of Copenhagen (Denmark). The authors conclude how the students’ final projects provided a viable reflection for the commercial, social and environmental sphere of the tourism sector which, intertwined with cultural and social norms and local knowledge favourably account for responsible and sustainable practices.

In addition, the current literature also recognises the role played by the digital technologies as a mean to transforming traditional tourism education into new branch of activities. Adukaite et al. (2016) emphasise the significant growth of practically and vocationally oriented disciplines in South Africa taught through grades 10–12 such as Tourism Sectors, Tour Planning, Information Technology, Green Tourism, to cite a few. A more recent study by Ndou et al. (2019) point out to the investigation of entrepreneurship. The authors conducted a web-based content analysis to assess the above curricula at the higher education level (i.e., universities) in Europe. The study found 10 master courses delivered from across eight EU countries and suggested that the implementation of these courses may help accelerate entrepreneurial attitudes in the tourism sector ‘by helping students to develop capacity, competence, and the right attitude to transform new ideas, technologies, and inventions into commercially viable products and services to create economic and social value’ (Ndou et al., 2019, p. 8).

In recent years, several professional education initiatives in the region of Puglia, particularly aimed at unemployed people, have been implemented throughout the region. The majority of these educational initiatives are aimed at favouring the interlinkages between tourism, innovation, and marketing studies. Other initiatives, which are particularly focused on digital marketing and tourist destination management studies, are successfully implemented by the Higher Technical Institute for Hospitality and Broader Tourism Industry (https://www.itsturismopuglia.gov.it/foreign-students/). The curricula are practice-oriented and offer about 50% of the learning hours as internships in order to guarantee a constant learning-by-doing process and knowledge co-creation between apprentices, professionals, the community and the visitors (Clausen & Andersson, 2018). We argue that the recent rise of the not-for-profit economy as well as the social economy at regional and international level can be a source of inspiration for new forms of education. Undoubtedly, this new pedagogical training and education activities, would increase the exchange of tacit and local knowledge between the host and the tourist thus providing a contemporary application of the SET theory to the resident attitude for a sustainable growth.

The second of our results is somewhat surprisingly. We refer to the incidence of housewives to affect the resident attitude. This unexpected outcome also finds evidence by the international literature. In a pioneering resident survey report of the Department of Business, Economic, Development and Tourism of the State of Hawaii (Knox and
dent attitude to gastronomy and events. (Halling, 2011). Arguably, a similar view can be expressed for the resi-

The landscape is perceived by its hosts as tan-

the dwelling places (i.e., the landscapes) in his/her daily life (Jung &

go back his/her own identity with the experiences and relationships of

that other than its traditional morphological concept, the resident rec-

point out that the contribution of

these variables are extensively investigated as touristic products of a

place (Fytopoulou et al., 2021; Lee, 2013, 2020; Stylidis et al., 2014;

Vukovic et al., 2019). In the context of our findings, we share the view

in the Philippines. The study uses an integrated approach with focus

groups, participatory workshops and in-depth interviews. According to

the authors many local residents, in particular housewives, express posi-

tive beliefs, and perceptions for tourism developments because the

presence of visitors in their area is an indicator of the beauty of their

island. In a recent study by Blasco López et al. (2018), the authors use a

structural equation model to assess, using a sample of mainly employees

and housewives, the resident attitude as determinant of tourism sus-

tainability. Their findings suggest a series of factors such as affective

attachment, community involvement, economic, market and social sus-

tainability, cultural and place identity benefits, and tourism sustainability

which are considered statistically significant proxies to determine posi-

tive perceptions of the resident attitude.

Specific contribution to the HAM theory
We argue that the positive outcome of the estimated coefficients for

‘Landscape’, ‘Food and wine’ and ‘Event’ to the probability of the resident attitude to tourism can be seen as a contribution in support

of the HAM model. As already mentioned in the previous sections, these variables are extensively investigated as touristic products of a

place (Fytopoulou et al., 2021; Lee, 2013, 2020; Stylidis et al., 2014;

Vukovic et al., 2019). In the context of our findings, we share the view

that the concept of landscape from the resident point of view is more

conceived as a dwelling place than the classical ‘land expert’ defini-

tion (Lee, 2020). Of course our reflections go beyond the diverse per-

spectives, definitions, and treaties on the meaning of landscape. We

point out that the contribution of ‘Landscape’ to the HAM theory, is that

other than its traditional morphological concept, the resident rec-

ognises his/her own identity with the experiences and relationships of

the dwelling places (i.e., the landscapes) in his/her daily life (Jung &

Han, 2015). As a result, the landscape is perceived by its hosts as tan-

gible and intangible assets in which human and eco-systems interact,

exchange and experience their social and cultural dimensions

(Halling, 2011). Arguably, a similar view can be expressed for the resi-

dent attitude to gastronomy and events. ‘Food and wine’ or gastron-

omy in general, provides the opportunity for the host to present the

richness of the regional culinary traditions to the visitor (Avieli, 2013;

Brulotte & Di Giovinle, 2014; Kim et al., 2013; Pérez Gálvez et al., 2017;

Salgueiro Rachão et al., 2021). Manniche and Larsen (2013) recognises the importance of the culinary product as an

element of tourism attractiveness which should be conceived from a

knowledge perspective. This view looks into the ‘experience’ of the

visitor based on the socio-cultural heritage of the community to visit.

The knowledge perspective through the ‘experience’ of the commu-
nity is seen as an innovative factor which contributes to create rele-

vant exchange of cultural values across the visitor and the resident as

well as to co-design new opportunities for growth, particularly in mar-
ginal and rural areas. As a result, the culinary tradition becomes a link

between the resident and the visitor, a way to share and exchange
cultures and traditions, and enhance the social dimension of the visit

(Bruwer & Rueger-Muck, 2019; Campos et al., 2018; Chien et al., 2018; Wassler et al., 2019). Similarly, a touristic event can be

considered as the contribution to both hosts and tourists to an unfor-

gettable and pleasing experience, an intense interaction of emotions

and shared behaviours (Ouyang et al., 2019). In addition, the per-
ceived positive impacts for traditional events, such as exhibitions and

festivals, can have significant beneficial effects on the resident atti-

dudes and on his/her quality of life in the long term (Gursoy et al., 2017; Gursoy & Kendall, 2006; Schnitzer et al., 2020).

Specific contribution to the TRA and TAM theories
In our analysis we find a positive effect of ICT tools for touristic

events’, ‘ICT satisfaction for holiday planning’, and ‘ICT promotes
tourism’ to the resident attitude. We argue that these findings com-
plement the research and strengthen the existing results supported by

the TRA and TAM theoretical models. According to one of the

founding work by Schiffman and Kanuk (1987), human’s behaviours

are formed by the intentions to act. This is true particularly when ICT

tools are used to get information (e.g., search, contents, transactions)
on touristic events or to plan for holidays or recreational activities.

Therefore, the residents’ attitudes to use ICT tools and its satisfaction

can be seen as a function of the quality and speed of the circulation

of information provided by the same tools (i.e., Web and Social)

(Jiménez-Barreto & Campo-Martínez, 2018; Lin et al., 2019; Shafiee

et al., 2013), and the quality of services offered for recreational activi-
ties (Gretzel, 2011; Yoo et al., 2017). As a result, the above tools help

discover attractive destinations, schedule activities with accurate

custom-made information (Esztergár-Kiss & Csizsár, 2015; Ho &

Bodoff, 2014; Phaosathianphan & Leelasantitham, 2020) and enhance

the positive resident’s belief to view ICT a viable mean to promote

sustainable tourism and growth (Borseková et al., 2017; Fernández-

Portillo et al., 2020), particularly for low growth regions such as Puglia

(Del Vecchio & Passiante, 2017).

5.2.2 | Managerial implications
The adoption and use of ICT tools in the tourism sector is widely

recognised as the driver for innovation thus contributing to a constructive

competition between businesses (Berné et al., 2015; Rastrollo-Horrillo &

Rivero Díaz, 2019) and the creation of new forms of entrepreneurship,
such as digital start-ups, that help to co-create and co-design marketing

adoption, integration and knowledge transfer (Alford & Jones, 2020;
Ateljevic & Page, 2017; Jones et al., 2017). To support long-term competitiveness, tourist firms have to adapt to the changes that characterise the latest generation of tourists (Angeloni, 2016; Choi et al., 2019; Fan et al., 2019). At firm level, ICT tools help to contribute to the marketing and distribution chains, as well as to strengthen the customer service and increase the efficiency of a tourism destination management (Buhalıs & O’Connor, 2005; Khalilzadeh & Wang, 2018; Zhou et al., 2019). In addition, web services enable to analyse the performance of competitive destinations and visitors feedback. By doing so, the local entrepreneur delivers value to customers and reduces the boundaries (i.e., cultural, geographical, political) between the resident and the visitor (Berhanu & Raj, 2020; Niavis & Tsiotas, 2019).

The advancement of ICT tools and constant innovation is also targeted to positively impact the firm’s financial performance and profitability. These intangible effects enable firms to differentiate and to meet the requirements of a segmented touristic demand and increase value-added to help firms stay competitive in the tourism market (García & Tugores, 2013; Martínez-Román et al., 2015). The development and use of new ICT tools and social media have also brought several changes in the tourism industry in terms of the reduction or the elimination of brokers, the introduction of new figures that facilitate the balancing of touristic demand and supply and increase of social capital through networking activities (Hernández-Carrión et al., 2017; Lee & Hallak, 2020; Sanz-Ibáñez et al., 2019). Tourists, nowadays, have access to a wide range of information such as for example on-line reviews, photographs of the sites, and accommodation type (Bufquin et al., 2020; Jeon et al., 2018); they can compare among several suppliers and buy via internet by direct service booking (Boto-García et al., 2021; San-Martín et al., 2020).

These demand-side innovations favour the entrepreneur to meet the needs of consumers with a faster and easier touristic production chain, thus building trusting relationships (Agag & El-Masry, 2017; Kellieher et al., 2018) and a better cooperation with his/her customers, the local stakeholders, and institutions. The implementation and development of this virtuous cycle, produces, in turn, a beneficial effect on the financial and economic performance of the touristic firm (Kallmuenzer et al., 2019; Martínez-Román et al., 2015; Sainaghi et al., 2017). In support of this view, the study by Berné et al. (2015) confirms the relationship between the increasing use of ICT by tourism intermediate firms and their business performances. These performances, the authors argue, would contribute to increase employment opportunities and sustain the economy in the long-run.

The increasing impact of tourism on the structure of the economy makes tourism a dynamic system. The competitive advantages arising in this sector are often based on the role of the destination management. Touristic demand and supply depend both on resources and skills which are typical of the place, other than skills and competences of individual firms, networks, and communities. Nowadays, the dynamics of tourism strongly depend on: (i) the globalisation process and its repercussions in terms of competitiveness of the touristic product; (ii) the actual tourism policies. There is no doubt that since Europe is the no.1 destination worldwide (UNTWO, 2019), its new tourism policy (European Commission, 2010a) may also affect other economic sector’s policies; and (iii) The actual changes of the touristic demand. As for this latter aspect, the literature identifies at least three types of tourist’s generations: the first one is the tourist which is eager to have some free time to dedicate to his/her leisure activities (Cohen, 1979); the second one, is the mass tourist, which identifies the touristic destination as rooted in his/her own identity (Cohen, 1972); and the third one, defined as the post-modern tourist (Sohrabi et al., 2020; Xu et al., 2019), uses modern technology tools to participate, share and conform his/her own needs to demand the touristic destination. The degree of diffusion of new ICT tools offers, in the actual society, new opportunities for the socio-economic growth of a region and appears particularly relevant in terms of decision support systems for the local policy maker (Bonzanigo et al., 2016; Shafiee et al., 2019; Lazoglou & Angelides, 2020). New digital techniques, such as Geographic Information System (GIS), are powerful resources that contribute to the development of adequate tourism policies by making a proper use of all the resources (i.e., cultural, natural, human, economic) that a region is endowed with. GIS techniques display the retrieved information in a clear way to support the policy maker and provide the identification of the spatial relationships between socio-economic and environmental ecosystems (Jeong et al., 2016; Wolf et al., 2018). In a recent paper by Sevilla-Sevilla et al. (2020) the authors discuss the strategic role of satellite technologies, seen as the latest ICT applications, and their interlinkages with the environment and tourism.

Based on this approach and the positive residents’ attitudes to use ICT for tourism purposes, we can argue the usefulness of the latest technology to enhance tourism in particular ‘lagging behind’ regions of the EU such as the region of Puglia, and to meet the need of environmental protection. In the region of Puglia, for example, eco-tourism activities can be particularly strengthened in the rural areas and meet the needs of marginalised residents. The recent Rural Development Programme (RDP, Regione Puglia, 2019) recognises the rural tourism as a driving force to contribute to the sustainable development of the local communities. Also, the RDP considers rural tourism as a mean to enhance specific regional features. In particular, the implementation of detailed actions targeted to develop cooperation among stakeholders and network creation for rural tourism would aim at integrating biodiversity into the different landscapes across the region, and at preserving traditional agricultural products.

A further important issue is that of smart specialisation. Romão and Neuts (2017) explore the case of ICT (among other factors) as element that can contribute to the sustainable development of EU regions; in particular the authors also suggest the creation of positive synergies between smart development (i.e., digital tourism experience) and smart tourism specialisation which would affect long-term economic growth. This issue assumes particular relevance for the region of Puglia, in terms of strategic role for future growth (Asheim, 2019; Biagi et al., 2020; Polido et al., 2019). In recent years, the regional institution of Puglia is adopting an ad-hoc policy namely Puglia365.⁸ Puglia365 is a strategic plan of tourism for the period 2016–2025. This strategic plan has been conceived as a participatory approach across various stakeholders to determine future guidelines of the regional tourism and support
sustainable tourism entrepreneurs and managers. The regional tourism strategy focuses on six main priority areas such as touristic products, marketing, innovation, infrastructures, hospitality, and continuing education. More than two meetings, per each priority area, are regularly organised per year throughout the region. The participatory approach, thus, determines specific marketing and advertising actions in order to increase networking activity across stakeholders and competitiveness towards neighbouring areas and regions. This will help entrepreneurs and young start-ups to innovate and the policy practitioner to find adequate solutions to promote sustainable growth beyond 2020 (European Commission, 2019) through adequate regional ICT and tourism policies in the years to come.

5.2.3 | Limitations

The present work is not without limitations. First, although generalised ordered logistic regression models allow to relax the rigid assumption of the parallel lines for Likert scale variables, they are more difficult to interpret than the parallel lines ordered logistic regression model (Williams, 2006, 2016).

Second, the analysis is developed in a low growth region in the south of Italy and lacks of comparisons of using a resident attitude approach with other regional contexts. Further research should address a comparative analysis across other low growth regions in Italy with a tourism vocation such as Sicily or Campania; alternatively, the comparative case study could address an investigation across a panel of low growth regions across the EU endowed with natural resources and touristic traditions.

Finally, the literature has extensively investigated the ICT factors affecting the resident attitude to tourism. Further studies should go beyond ‘the what’ and explore the (direct and indirect) reasons of why residents behave, feel or act according to what they perceive.

6 | CONCLUDING REMARKS

The present work explored residents’ attitudes to consider tourism as a driver of sustainable regional development and the perceived role of ICT to emphasise this view.

We performed a case study in the region of Puglia in the south of Italy, one of the ‘lagging behind’ regions of the EU which suffers from low growth. Nonetheless, tourism performances of this region have shown increasing trends recorded during the 2008–2018 economic recession period. We applied both qualitative and quantitative analyses. The former one is carried out through a survey analysis of the regional resident investigating socio-demographic, touristic products, and ICT use. The latter is performed through an inferential analysis employing a generalised ordered logistic regression model. This type of model is currently receiving international attention due to the relaxation to the parallel lines assumption generally used for Likert-scale type categorical dependent variable models. In addition, we performed divergent validity and confirmatory factor analysis with marker variable method to our psychometric-type variables to test for data measurement and validity. These additional analyses provided to argue for the validity and existence of unbiased psychometric-type variables in our dataset.

Main findings from the generalised ordered logistic model suggested that ICT mostly contributes to perceive tourism as a driver of development by the residents of a EU region which is particularly endowed with traditions and natural resources but with low income growth and high unemployment rates. As a result, the regional governance may foresee challenging socio-economic implications driven by the development of the digital technologies to implement future sustainable development policies.

CONFLICT OF INTEREST

The authors have no conflict of interest.

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ENDNOTES

1 In this work we will not present the estimates of the ordered logit regression model. The interested reader may require the ordered logit regression model’s output to the authors.

2 Trulli are an ancient drywall limestone construction with typical conical roofs. Since 1996, the Trulli are inscribed in the UNESCO world heritage list (http://whc.unesco.org/en/list/787).

3 We consider pre-Covid available data.

4 Figure 2 does not contain information on the descriptive statistics of the variable ‘age’. This is the only continuous variable in our dataset with mean = 45.02, st.dev = 18.80, min = 18, max = 81.

5 The description of the theoretical insights of the HTMT ratio are beyond the scope of the present work. The interested reader may deepen his/her knowledge on the above issues by referring to the main literature on the topic. Therefore, only the description on the use of the HTMT ratio to check for discriminant validity of our psychometric type variables is illustrated.

6 The description of the theoretical insights of the CFA with MV method are beyond the scope of the present work. The interested reader may deepen his/her knowledge on the above issues by referring to the main literature on the topic. Therefore, only the description on the use of the CFA with MV to check for data mis-specification of our psychometric type variables is illustrated.

7 Correlation values range from |0.01| to |0.24| in Table 7.

8 http://www.puglia365.it/

REFERENCES

Adukaite, A., van Zyl, I., & Cantoni, L. (2016). The role of digital technology in tourism education: A case study of South African secondary schools. Journal of Hospitality, Leisure, Sport & Tourism Education, 19, 54–65.

Agag, G. M., & El-Masry, A. A. (2017). Why do consumers trust online travel websites? Drivers and outcomes of consumer trust toward online travel websites. Journal of Travel Research, 56(3), 347–369.
European Commission. (2010a). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - Europe, the world’s No 1 tourist destination – A new political framework for tourism in Europe. COM/2010/0352 final. https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52010DC0352&from=EN

European Commission. (2010b). Communication from the Commission EUROPE 2020 A strategy for smart, sustainable and inclusive growth. COM(2010) 2020 final. https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52010DC2020&from=en

European Commission. (2019). Communication from the Commission, Reflection Paper. Towards a Sustainable Europe by 2030. COM(2019) 22 final. https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=COM%3A2019%3A22%3AFIN

Fan, D., Buhaldis, D., & Lin, B. (2019). A tourist typology of online and face-to-face social contact: Destination immersion and tourism encapsulation/decapsulation. Annals of Tourism Research, 78, 102757.

Fernández, J. A., Azevedo, P. S., & Martin, J. M. (2020). Determinants of tourism destination competitiveness in the countries most visited by international tourists: Proposal of a synthetic index. Tourism Management Perspectives, 33, 100582.

Fernández-Portillo, A., Almodóvar-González, M., & Hernández-Mogollón, R. (2020). Impact of ICT development on economic growth. A study of OECD European union countries. Technology in Society, 63, 101420.

Fishein, M., & Ajzen, I. (1975). Belief, attitude, intention, and behavior. Addison-Wesley.

Font, X., English, R., Gkritzali, A., & Tian, W. (S.). (2021). Value co-creation in sustainable tourism: A service-dominant logic approach. Tourism Management, 82, 104200.

Fytopoulos, E., Tampakis, S., Galatsidas, S., Karasmanaki, E., & Tsantopoulos, G. (2021). The role of events in local development: An analysis of residents’ perspectives and visitor satisfaction. Journal of Rural Studies, 82, 54–63.

Garau-Vadell, J. B., Gutiérrez-Taño, D., & Díaz-Armas, R. (2018). Economic crisis and residents’ perception of the impacts of tourism in mass tourism destinations. Journal of Destination Marketing & Management, 7, 68–75.

García, D., & Tugores, M. (2013). Differentiation in the tourism sector: An evolutionary analysis. Tourism Economics, 19(5), 1107–1122.

Gössling, S., & Hall, C. M. (2019). Sharing versus collaborative economy: How to align ICT developments and the SDGs in tourism? Journal of Sustainable Tourism, 27(1), 74–96.

Gretzel, U. (2011). Intelligent systems in tourism: A social science perspective. Annals of Tourism Research, 38(3), 757–779.

Gursoy, D., & Kendall, K. W. (2006). Hosting mega events: Modeling locals’ support. Annals of Tourism Research, 33(3), 603–623.

Gursoy, D., Yolal, M., Ribeiro, M. A., & Netto, A. P. (2017). Impact of trust on local residents’ mega-event perceptions and their support. Journal of Travel Research, 56(3), 393–406.

Hall, C. M., & Williams, A. M. (2008). Tourism and innovation. Routledge.

Halling, S.-I. (2011). Tourism as interaction of landscapes. Opportunities and obstacles on the way to sustainable tourism development in Lamu Island, Kenya. Forskarskolan i Geografi, Kulturgeografiska institutionen, Uppsala universitet. 118 pp. Uppsala. English text. http://www.diva-portal.org/smash/get/diva2:440444/FULLTEXT01.pdf

Hayton, C. J., Allen, D. G., & Scarpello, V. (2004). Factor retention decisions in exploratory factor analysis: A tutorial on parallel analysis. Organizational Research Methods, 7(2), 191–205.

Heinonen, K., Strandvik, T., Mickelsson, K. J., Edvardsson, B., Sundström, E., & Andersson, P. (2010). A customer-dominant logic of service. Journal of Service Management, 21(4), 531–548.

Henseler, J., Ringle, C. M., & Sarstedt, M. A. (2015). New criterion for assessing discriminant validity in variance-based structural equation modeling. Journal of the Academy of Marketing Science, 43, 115–135.

Hernández-Carrion, C., Camarero-Izquierdo, C., & Gutiérrez-Cillán, J. (2017). Entrepreneurs’ social capital and the economic performance of small businesses: The moderating role of competitive intensity and entrepreneurs’ experience. Strategic Entrepreneurship Journal, 11(1), 61–89.

Hinkle, D. E., Wiersma, W., & Jurs, S. (2003). Applied statistics for the behavioral sciences (5th ed.). Houghton Mifflin.

Ho, S. Y., & Bodoff, D. (2014). The effects of web personalization on user attitude and behavior: An integration of the elaboration likelihood model and consumer search theory. MIS Quarterly, 38(2), 497–520.

Homans, G. (1961). Social behavior. It’s elementary forms. Harcourt Brace Jovanovich.

Horn, J. L. (1965). A rationale and test for the number of factors in factor analysis. Psychometrika, 30, 179–185.

Hsu, C.-Y., Chen, M.-Y., Nyaupane, G. P., & Shin-Huei Lin, S.-H. (2020). Measuring sustainable tourism attitude scale (SUS-TAS) in an eastern Island context. Tourism Management Perspectives, 33, 106617.

ISTAT. (2014). Annuario Statistico Italiano 2014. https://www.istat.it/it/files/2014/11/C01.pdf

ISTAT. (2018). Popolazione residente al 1 Gennaio: Puglia. http://dati.istat.it/index.aspx?DataSetCode=DCIS_POPRES1

Istituto Guglielmo Tagliacarne. 2018. https://www.tagliacarne.it/

Javier, H. H. (2012). An ethnographic evaluation of local residents’ perceptions of tourism in the pre-tourism phase: The case of Burdeos, Philippines. https://scholarworks.unmass.edu/cgi/viewcontent.cgi?article=17576&context=trr

Jeon, H., Jang, J., & Barrett, E. B. (2018). Linking website interactivity to consumer behavioral intention in an online travel community: The mediating role of utilitarian value and online trust. Journal of Quality Assurance in Hospitality & Tourism, 18(2), 125–148.

Jeong, J. S., García-Moruno, L., Hernández-Blanco, J., & Sánchez-Ríos, A. (2016). Planning of rural housings in reservoir areas under (mass) tourism based on a fuzzy DEMATEL-GIS/MCDA hybrid and participatory method for Alange, Spain. Habitat International, 57, 143–153.

Jiménez-Barreto, J., & Campo-Martínez, S. (2018). Destination website quality, users’ attitudes and the willingness to participate in online co-creation experiences. European Journal of Management and Business Economics, 27(1), 26–41.

Jonason, P. K., & Mitchell, J. P. (2015). Dark triad: The “dark side” of human personality. In International encyclopedia of the social & behavioral sciences. Elsevier ISBN: 978-0-08-097087-5.

Jones, R., Morris, S., Deacon, J. D., & Miles, M. (2017). Entrepreneurial marketing in small enterprises. In Blackburn, R. D. De Clercq, J. & Hartley, D. (2018). Strategic Entrepreneurship Journal, 9(2), 39–57.

Kallmuenzer, A., Kraus, S., Peters, M., Steiner, J. C., & Cheng, C.-F. (2019). Entrepreneurship in tourism firms: A mixed-methods analysis of performance driver configurations. Tourism Management, 74(October), 319–330.

Kelliker, F., Rein, L., Johnson, T. G., & Joppe, M. (2018). The role of trust in building rural tourism micro firm network engagement: A multi-case study. Tourism Management, 68, 1–12.
Khallilzadeh, J., & Wang, Y. (2018). The economics of attitudes: A different approach to utility functions of players in tourism marketing coalitional networks. Tourism Management, 65, 14–28.

Kim, Y.-G., Eves, A., & Scarles, C. (2013). Empirical verification of a conceptual model of local consumption at a tourist destination. International Journal of Hospitality Management, 33(2013), 484–489.

Kim, Y. H., Kim, M. C., & Goh, B. K. (2011). An examination of food tourist’s behavior: Using the modified theory of reasoned action. Tourism Management, 32, 1159–1165.

Knox J. M and Associates, Inc. (2004). Planning for sustainable tourism. Knox J. M and Associates, Inc.

Najda-Janoszka, M., & Kopera, S. (2014). Exploring barriers to innovation and Regional Studies knowledge: The case of Bornholm culinary products.

Kotiloglu, S., Lappas, T., Pelechrinis, K., & Repoussis, P. (2017). Personalization of multi-period tour recommendations. Tourism Management, 62, 76–88.

Kucukusta, D., Law, R., Besbes, A., & Legoherel, P. (2015). Re-examining perceived usefulness and ease of use in online booking: The case of Hong Kong online users. International Journal of Contemporary Hospitality Management, 27(2), 185–198.

Lai, I. K. W. (2015). Traveler acceptance of an app-based mobile tour guide. Journal of Hospitality and Tourism Research, 39(3), 401–432.

Lazoglu, M., & Angelides, D. C. (2020). Development of a spatial decision support system for land-use suitability assessment: The case of complex tourism accommodation in Greece. Research in Globalization, 2, 100022.

Lee, C., & Hallak, R. (2020). Investigating the effects of offline and online social capital on tourism SME performance: A mixed-methods study of New Zealand entrepreneurs. Tourism Management, 80, 104128.

Lee, T. H. (2013). Influence analysis of community resident support for sustainable tourism development. Tourism Management, 34(2013), 37–46.

Lee, T. H. (2020). Understanding rural landscape for better resident-led management: Residents’ perceptions on rural landscape as everyday landscapes. Land Use Policy, 94, 104565.

Li, Z.-X., & Hui, T.-K. (2016). Residents' quality of life and attitudes toward tourism development in China. Tourism Management, 57, 56–67.

Lin, C. Zhao, G., Yu, C., & Wu, Y. J. (2019). Smart city development and residents' well-being. Sustainability, 11, 676.

Lin, Z. Chen, Y., & Filieri, R. (2017). Resident-tourist value co-creation: The role of residents' perceived tourism impacts and life satisfaction. Tourism Management, 61, 436–442.

Lindell, M., & Whitney, D. (2001). Accounting for common method variance in cross-sectional research design. The Journal of Applied Psychology, 86, 114–121.

Lu, J., Mao, Z., Wang, M., & Hu, L. (2015). Goodbye maps, hello apps? Exploring the influential determinants of travel app adoption. Current Issues in Tourism, 18(11), 1059–1079.

Manniche, J., & Larsen, K. T. (2013). Experience staging and symbolic knowledge: The case of Bornholm culinary products. European Urban and Regional Studies, 20(4), 401–416.

Martínez-Román, J. A., Tamayo, J. A., Gamera, J., & Romero, J. E. (2015). Innovativeness and business performances in tourism SMEs. Annals of Tourism Research, 54, 118–135.

Najda-Janoszka, M., & Koper, S. (2014). Exploring barriers to innovation in tourism industry – The case of southern region of Poland. Procedia – Social and Behavioral Sciences, 110, 190–201.

Navio-Marco, J., Ruiz-Gómez, L. M., & Sevilla-Sevilla, C. (2018). Progress in information technology and tourism management: 30 years on and 20 years after the internet - Revisiting Buhalís & Law’s landmark study about eTourism. Tourism Management, 69, 460–470.

Ndou, V., Mele, G., & Del Vecchio, P. (2019). Entrepreneurship education in tourism: An investigation among European universities. Journal of Hospitality, Leisure, Sport & Tourism Education, 25, 100175.
Rihova, I., Buhalis, D., Moital, M., & Gouthro, M. B. (2015). Conceptualising customer to customer value co-creation in tourism. International Journal of Tourism Research, 17(4), 356–363.

Romão, J., & Neuts, B. (2017). Territorial capital, smart tourism specialization and sustainable regional development: Experiences from Europe. Habitat International, 68, 64–74.

Rönnkö, M., & Cho, E. (2020). An updated guideline for assessing discriminant validity. Organizational Research Methods. https://doi.org/10.1177/1094428120968614

Ruano-Borbálan, J.-C. (2019). Pluridisciplinary programmes for innovation: Realities and limits of a promising form of learning. European Journal of Education, 54(4), 538–551.

Sahlí, A. B., & Leghozere, P. (2015). The tourism web acceptance model: A study of intention to book tourism products online. Journal of Vacation Marketing, 22, 179–194. https://doi.org/10.1177/1356766715607589

Sainaghi, R., Phillips, P., & Zavarrone, E. (2017). Performance measurement in tourism firms. Tourism Management, 59, 36–56.

Salgueiro Rachão, S. A., de Jesus Breda, Z., de Oliveira Fernandes, C., & Joukes, V. N. P. M. (2021). Drivers of experience co-creation in food-and-wine tourism: An exploratory quantitative analysis. Tourism Management Perspectives, 37, 100783.

San-Martín, S., Jiménez, N., & Liébana-Cabanillas, F. (2020). Tourism value VS barriers to booking trips online. Journal of Retailing and Consumer Services, 53(March), 101957.

Sanz-Ibáñez, C., Lozano, S., & Clavé, S. A. (2019). Brokers in a destination’s knowledge networks. Journal of Destination Marketing & Management, 11(March), 120–129.

Schliffman, L. G., & Kanuk, L. L. (1987). Consumer behavior (3rd ed.). Prentice-Hall.

Schnitzer, M., Kössler, C., Schlemmer, P., & Peters, M. (2020). Influence of Schiffman, L. G., & Kanuk, L. L. (1996). Factor analytic evidence for the construct validity of scores: A historical overview and some guidelines. Educational and Psychological Measurement, 56, 197–208.

Unkab, D. C., & Karjaluo, H. (2017). Consumers’ acceptance of information and communications technology in tourism: A review. Telematics and Informatics, 34(5), 618–644.

UNTWO. (2019). International tourism highlights. 2019 ed.

Voorhees, C., Brady, M., Calantone, R., & Ramirez, E. (2015). Discriminant validity testing in marketing: An analysis, causes for concern, and proposed remedies. Journal of the Academy of Marketing Science., 44, 1–16.

Vukovic, D. B., Maiti, M., Vujko, A., & Shams, R. (2019). Residents’ perceptions of wine tourism on the rural destinations development. British Food Journal., 122, 2739–2753.

Wand, D., Xiang, Z., Fesenmaier, D. R. (2014). Adapting to the mobile world: A model of smartphone use. Annals Tourism Research, 48(Sep-tember), 11–26.

Wang, W.-C. (2019). The effect of early-life outdoor experiences on residents’ attitudes towards sustainable tourism within an urban context. Journal of Outdoor Recreation and Tourism, 25, 1–9.

Wassler, P., Nguyen, T. H. H., Mai, L. Q., & Schuckert, M. (2019). Social representations and resident attitudes: A multiple-mixed-method approach. Annals of Tourism Research, 78, 102740.

Weiss, N. A., & Weiss, C. A. (2012). Introductory statistics (9th ed.). Pearson Education.

Williams, R. (2006). Generalized ordered logit/partial proportional odds models for ordinal dependent variables. Stata Journal, 6(1), 58–82.

Williams, R. (2016). Understanding and interpreting generalized ordered logit models. Journal of Mathematical Sociology, 40(1), 7–20.

Wolf, I. D., Brown, G., & Wohlfart, T. (2018). Applying public participation GIS (PPGIS) to inform and manage visitor conflict along multi-use trails. Journal of Sustainable Tourism, 26(3), 470–495.

WTTC. (2019). Travel & tourism economic impact 2019 World. https://www.wttc.org/-/media/files/reports/economic-impact-research-regions-2019/world2019.pdf

Xu, F., Nash, N., & Whitmarsh, L. (2019). Big data or small data? A methodological review of sustainable tourism. Journal of Sustainable Tourism, 28(2), 144–163.

Yoo, C. W., Goo, J., Derrick Huang, C., Nam, K., & Woo, M. (2017). Improving travel decision support satisfaction with smart tourism technologies: A framework of tourist elaboration likelihood and self-efficacy. Technological Forecasting and Social Change, 123, 330–341.

Zhang, S., & Chan, E. S. W. (2019). A modernism-based interpretation of sustainable tourism. International Journal of Tourism Research, 22, 223–237. https://doi.org/10.1002/jtr.2330

Zhou, S., Yan, Q., Yan, M., & Shen, C. (2019). Tourists’ emotional changes and eWOM behavior on social media and integrated tourism websites. International Journal of Tourism Research, 22, 336–350.

Zhu, H., Liu, J., Zongcai, W., Weiheng, L., & Lei, W. (2017). Residents’ attitudes towards sustainable tourism development in a historical-cultural village: Influence of perceived impacts, sense of place and tourism development potential. Sustainability, 9(1), 61. https://doi.org/10.3390/su9010061

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