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Visitors' expenditure behaviour at cultural events: the case of Christmas markets

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This paper examines the determinants of visitors' expenditure behaviour at cultural events. The authors analyse visitors' expenditure at the micro-level, dividing it into expenditure on accommodation and expenditure on food and beverages. The explicative variables taken into account are socio-demographic, economic, psychological and trip–related attributes. An *ad hoc* survey was conducted on the three most famous Christmas markets in the north of Italy in December 2008 and 2009. To achieve their aims, the authors use the robust double-hurdle model. The results indicate that travel purpose, region of origin, perception of the event, length of stay and age are significant factors influencing both the propensity to spend and the amount of money actually spent during visits. The findings will provide destination managers and tourism businesses with practical knowledge useful for destination marketing, event development and customer service.

Keywords: visitors' expenditure; cultural event; double-hurdle model; spending behaviour

JEL Codes: C19; D12; L83

Tourism has long been recognized as an instrument for local economic development and regeneration of rural areas, due to its ability to increase profits and generate economic benefits to host regions and communities (Craggs and Schofield, 2009). As suggested by Lim (2006), tourism demand is mainly measured in terms of the number of tourism arrivals and/or departures, tourist expenditures and/or receipts. Further variables commonly used in the literature

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are travel exports and/or imports, tourist length of stay, and number of nights spent at tourism accommodation.

Tourist expenditure and visitor spending behaviour can play a crucial role for a better understanding of the economic benefits that a destination may experience when engaging in tourism. The analysis of these measures is an essential step for tourism decision makers to set adequate planning strategies and to stimulate an increase in visitors' expenditure at the destination.

For this purpose, it is necessary to analyse micro-data in which individuals, households or firms are the principal unit of analysis. Despite this, international tourism demand is nowadays principally analysed at the macro-level, in which the unit of analysis is aggregated data (such as total arrivals, nights spent at tourist accommodation and total tourist receipts) and little is known about individual spending behaviour and the socio-demographic and economic factors that affect spending patterns; that is, the micro-level (Crouch, 1994; Fredman, 2008; Wang and Davidson, 2010).

In this context, this paper aims to determine the profile of tourists that tend to spend more at the destination when attending a cultural event. More specifically, this study will identify which independent variables significantly influence individual tourism expenditure and to what degree.

The results of such analysis are essential for cultural event organizers to have a clear understanding of visitors' characteristics related to different expenditures. This information provides destination managers and private tourism businesses with practical knowledge useful for destination marketing, event development and customer service. Understanding the expenditure patterns and activities of tourists during their visit to a given event is a key factor in the strategic planning and packaging of accommodation, facilities and attractions. In the competitive tourism market, policy makers try to expand their market share by seeking visitors who spend money for as many services as possible at the destination.

This study investigates visitors' expenditure divided into spending for accommodation and spending for food and beverages. The data for the study were collected from an *ad hoc* survey conducted at the three most important Christmas markets (CMs) in northern Italy, in 2008 and 2009.

After a brief review of the literature on micro-data studies, we present the data and structure of the questionnaire and describe the econometric model. We then provide the descriptive statistics and results of the models, with insights into visitors' expenditure behaviour. The paper ends with a discussion of the results, including their practical implications, the limitations of the research and future perspectives.

Literature review

Visitors' expenditure

There is a substantial body of literature relating to tourism's economic impact at the macro-level, but less is known about visitors' expenditure at a micro-scale. In the past, most economic studies have tended to investigate economic impacts of festivals or events on a destination by employing methodologies such

as input–output models and computable general equilibrium modelling. A limitation of these methodologies is that they exclude important demand issues – visitors' characteristics – as determinants of actual individual expenditure.

When conducting a review of the literature, Lim (2006) found only nine studies, among the 124 analysed, in which *ad hoc* designed surveys were employed to take into account individual economic units. More recently, Wang and Davidson (2010) identified and analysed 27 studies that used expenditure as the measure of individuals' demand for tourism. These studies clearly support the idea that the micro-level needs to be studied further to fill a gap in the literature.

Visitors' expenditure is influenced by a wide range of socio-demographic and economic variables, by psychological variables, and also by trip-related and destination-related variables (Gyte and Phelps, 1989; Godbey and Graefe, 1991; Davies and Morgan, 1996; Oppermann, 1997; Legoherel, 1998; Mok and Iverson, 2000; Agarnal and Yochum, 2000; Downward and Lumsdon, 2000; Downward and Lumsdon, 2003; Ryan, 2003; Lehto *et al*, 2004; Jang *et al*, 2004; Laesser and Crouch, 2006; Craggs and Schofield, 2009; Wang and Davidson, 2010).

An improved knowledge of how these factors influence an individual's expenditure pattern will lead to define the characteristics of different typologies of visitors in terms of expenditure and can be used to better target high market spenders, and to improve visitor satisfaction, motivation and likelihood of returning.

Most of the micro-data studies presented in the tourism literature used multiple regression models or general linear models, such as binary regression models (Wang and Davidson, 2010). Only a few studies (Leones *et al*, 1998; Lee, 2001; Barquet *et al*, 2011; Kim *et al*, 2011) use the Tobit regression model (Tobin, 1958) arguing that this model is more adequate than the regression model, as a large number of observations were clustered at zero expenditure (Jang and Ham, 2009).

In this study, the authors adopted a generalization of the Tobit model known as 'double-hurdle' (Cragg, 1971), estimated by means of the Heien and Wessells two-step estimator (Heien and Wessells, 1990). This model allows researchers to split the decision making process into two natural stages, or decisions: (i) the decision to spend and (ii) the choice of how much to spend. This adds a further step to the Tobit model, which analyses only the amount of money spent.

The double-hurdle model has been widely used to analyse different economic fields, including: the economic-use valuation of a public good (Saz-Salazar and Rausell-Köster, 2008; López-Mosquera and Sánchez, 2011; Marzetti *et al*, 2011), the evaluation of food expenditure (Newman and Matthews, 2001; Möser, 2010; Bai *et al*, 2010) and the analysis of consumption (Jones, 1989; Jones and Yen, 2000; Aristei and Pierani, 2008).

In the context of tourism expenditure, only Hong *et al* (1999) and Jang and Ham (2009) used the double-hurdle model, estimated by means of the traditional Heckman two-step estimator, to examine the socio-demographic and economic determinants of leisure travel expenditure. Regarding the analysis of visitors' spending behaviour during festivals and special events, only Kim *et al* (2010) examined the impact of visitors' socio-demographic and festival experience-related variables on expenditure levels comparing the results

obtained from three statistical models (including Logit, multiple regression and Tobit models), but without using the double-hurdle approach.

Christmas markets and their cultural value

Christmas markets have a very long tradition and draw their origins from German culture. The first CM was held in Berlin in the 18th century and its primary function was to create a place for families to buy presents for children. In 1970 the formula of CMs was adopted by Innsbruck, the provincial capital of Tyrol (Austria), and in 1991 CMs were established also in the major towns of South Tyrol (northern Italy): Bolzano, Merano and Bressanone. In the years following 1998 two more South Tyrol towns, Vipiteno and Brunico, opened their CMs; Trento (capital city of the neighbouring province of Trentino in northern Italy) set up its own CM in the late-1990s. Nowadays the two CMs in Trento and Bolzano attract around 500,000 visitors (tourists, as well as day-visitors and local residents) each winter (Lechner and Lun, 2008). The CM in Brunico is smaller and no statistics are available on the number of visitors. With around 80 stalls, the CM in Bolzano is the largest, the Trento market hosts around 70 stalls and the one in Brunico around 45 (Perkmann, 2007). In general CMs are open for the four weeks of Advent from the end of November until Christmas Eve. This is the case for the CMs in Trento and Bolzano; the one in Brunico stays open until 6 January. The market stalls sell typical local products, including food and drink, Christmas decorations, small gifts, and presents and local artefacts.

The term 'market' may bring to mind the idea of a trade and shopping event. However, Christmas markets are much more than just a shopping experience. In fact, shopping for Christmas presents has become just a side-product. The entire organization of Christmas markets in the 1970s, 1980s and 1990s was about creating an event at which people could experience the Christmas atmosphere in the best German tradition.

Trentino–South Tyrol (the region of our investigation) was the first area of northern Italy to organize and celebrate CMs according to German culture. In fact, Trentino–South Tyrol was part of Austria until 1919, and still today around three-quarters of the inhabitants of South Tyrol speak German as their first language and belong to the German–Austrian culture. For this reason, the Christmas markets in Trentino–South Tyrol are advertised as genuine and authentic representations of Christmas according to German culture and attract thousands of Italian tourists, eager to experience the German atmosphere of Christmas festivities. As our investigation also shows, experiencing the Christmas atmosphere is a much more important motive for visiting the event than mere shopping. Besides, the opportunity to taste local food and drinks, and amusement and relaxation, appear to be more important factors than shopping.

Data and structure of the questionnaire

The survey was conducted during the four weeks of Advent (from 30 November to 24 December) in 2008 and 2009. A total of 1,193 visitors to northern Italian

CMs were interviewed in three different cities: Trento (Trentino), Bolzano and Brunico (South Tyrol). For the purposes of this paper, visitors are classified as tourists (that is, people who visit the destination for no less than 24 hours and no more than one year) and day-visitors (who visit the destination but return home for the night). We did not include local residents visiting the CM in this study.

Interviews were held in the most visited areas of the three CMs, on selected working days and weekends, in particular during late afternoon and early evening. The objective was to interview visitors just as they were leaving the event.

The questionnaires were self-administered – although a research team member was present to respond to any question or doubt from respondents – and anonymity was guaranteed. A haphazard or convenience sampling method, a non-probability sampling method (Cochran, 1977), was used as it was not physically possible to employ a probability sampling approach in an open venue. Only one person for each household or travelling group passing through the selected event areas was interviewed.

In order to encourage cooperative behaviour, respondents were informed that the research had exclusively scientific aims, and that impartiality in the data analysis was guaranteed. Furthermore, in order to avoid biases related to the questionnaire structure and wording, a pilot survey was carried out to test the questionnaire before conducting the full survey.

The questionnaire began with questions related to the number of past visits to the same CM and other visits to other CMs in Italy or abroad in the previous five years. The rest of the questionnaire was divided into three sections:

A) information on the trip (number of nights and type of accommodation, accommodation expenditure per night, food and drink expenditure per day, motives of the trip);
B) information about the CMs such as reasons for visiting, perceptions of authenticity towards the event, expected shopping expenditure;
C) socio-demographic and economic characteristics of interviewees and their families.

In order to measure the importance of motivational and perception factors, respondents were asked to rate the specific statements on the perception of authenticity, motives of the trip and the visit to the event on a six-point Likert scale.

Furthermore, section A of the questionnaire included two separate questions: one on accommodation expenditure per night, and the other one on expenditure for food and drink per day. These were aggregate measures per group; we further computed them using the number of members in the travelling group in order to obtain the corresponding expenditures per person. This resulted in a loss of data as not every interviewee provided all the required information.

The econometric model

In order to evaluate tourism demand at CMs in the three selected cities, we

analysed which independent variables could affect visitors' expenditure on accommodation and, separately, on food and beverages. With this aim in mind, the most suitable model is the Tobit model (Tobin, 1958), or one of its generalizations, because this model is applied to a non-negative dependent variable that is essentially continuous over strictly positive values but that takes on a zero value with positive probability (that is, a non-trivial fraction of the population takes zero value). In this situation using Ordinary Least Square (OLS) regression is inappropriate, because it results in biased and inconsistent estimates due to the fact that the standard OLS assumption (that the error term and the independent variables are uncorrelated) is violated (Maddala, 1983; Amemiya, 1984).

In fact, expenditure on accommodation per person per day is a non-negative variable in which a large proportion (52.25%) of visitors, the day-visitors, stated a zero value. It is necessary to stress that tourists who stay at friends or relatives or in second homes stated a zero value for accommodation and were not used in the model or to determine any average value in accommodation expenditure. This is a small proportion of the sample (4.98%).

The expenditure on food and beverages per person per day is also a non-negative variable in which a zero value is possible (11.66%).

Another important characteristic of the expenditure is that the monetary value declared by the individual is the result of two possible processes: the individual decides whether or not to purchase something (selection stage) and then decides how much to spend on that purchase (outcome stage). Therefore, to observe a positive level of shopping expenditure, two distinct hurdles must be passed. In this context, it is preferable to adopt a two-equation generalization of the Tobit model, the well-known double-hurdle model (Cragg, 1971), in order to study the two natural steps of decision making. This model is performed through the estimation of two separate regression models: the selection stage is estimated by the Probit model; the outcome stage is estimated by the OLS regression model. In this way, throughout the estimation of the double-hurdle model we can obtain two different sets of relevant explicative variables in the two stages, whereas the estimation of the standard Tobit model identifies a single set of variables to measure the effect of the participation decision (selection stage) and level decision (outcome stage).

Finally, to avoid the sample selection problem, defined as an omitted variable problem (Heckman, 1976), we have used the estimator proposed by Heien and Wessells in the early 1990s (Heien and Wessells, 1990; see, for some application, Byrne *et al*, 1996; Manrique and Jensen, 1997) that allows using all of the observations in each stage, whereas the traditional Heckman two-step estimator omits zero observations for the second stage. This estimator is called inverse Mills Ratio (MR) and is calculated on the basis of the estimations obtained through the Probit model (selection stage). The MR variable is then added to the vector of the independent variables used in the OLS regression model (outcome stage). Only when the coefficient on MR is not significant are the decision to purchase (selection stage) and the decision on how much money to spend (outcome stage) independent and then the Tobit model can be used instead of the double-hurdle model.

The following section provides a technical description of the double-hurdle model.

The double-hurdle model

As regards the first stage, assume that $\mathbf{y}_1^*$ is a latent variable; that is, a variable that cannot be observed directly, in which the y_{1i}^* value is the propensity or willingness of the ith respondents ($i = 1,\ldots, n$) to make an expenditure; $\mathbf{X}_1$ is a matrix with n rows and $(1 + K)$ columns, in which the first column consists of a column of 1s, that represents an artificial variable or dummy associated to the intercept of the model, and the remaining K columns contain the values of the independent variables. The Equation (1) explains the linear relation assumed between y_{1i}^* and $\mathbf{X}_{1i}$:

$$y_{1i}^* = \mathbf{X}_{1i}\boldsymbol{\alpha}_1 + u_i, \tag{1}$$

where $\boldsymbol{\alpha}_1$ is a vector of $(1 + K)$ coefficients to be estimated, which remains constant throughout the whole sample, and u_i is the error term distributed as $u_i \sim N(0, \sigma_1^2)$. Since, in practice, y_{1i}^* cannot be observed but we know if the ith respondent is willing to spend or not, we can define an observable dummy variable $\mathbf{y}_1$ in which each element (y_{1i}) is compared to the latent variable elements by means of the Relation (2):

$$y_{1i} = \begin{cases} 1 & \text{if } y_{1i}^* > 0 \\ 0 & \text{otherwise} \end{cases}. \tag{2}$$

This study compares the expenditure with a constant threshold equal to €0, because we are interested in analysing whether or not respondents are willing to make any purchase. Since the threshold is a constant, as indicated by Amemiya (1984), it can be modified without essentially changing the model, since it can be absorbed into the constant term of the regression model.

Given Equation (1), Relation (2) and the assumptions made about the error term, we found that the model that described the selection stage was the Probit model. As such, the probability that the ith respondent (drawn randomly) will be willing to spend anything can be expressed as follows (Maddala, 1983; Breen, 1996):

$$P(y_{1i} = 1) = P(\mathbf{X}_{1i}\boldsymbol{\alpha}_1 + u_i > 0) = \Phi[(\mathbf{X}_{1i}\boldsymbol{\alpha}_1)/\sigma_1], \tag{3}$$

where $\Phi(\bullet)$ is the standard normal distribution. The unknown parameters of the Probit model are typically estimated by the Maximum Likelihood (ML) method. In this research a positive (negative) sign of a coefficient in the estimated Probit model increases (decreases) the probability to spend on accommodation and on food and beverages during the visit to the CM.

In order to test multiple restrictions in the Probit model we used the well-known Wald test, asymptotically distributed as a Chi-square variable, with a degree of freedom equal to the number of restrictions being tested. Given that in the binary choice model the coefficient of determination, R^2, calculated for the linear regression model estimated with the OLS method, is not an appropriate statistic to evaluate the explicative capacity of the model, various goodness-of-fit measures have been proposed in the literature. Veall and

Zimmermann (1992) found that for the Probit regression, the measure which was most closely related to the R^2 was the McKelvey and Zavoina (1975) pseudo-R^2. We noted that a pseudo-R^2 index is a measure that has the same kind of interpretation as the R^2 of the OLS regression, and therefore it is at least within the [0, 1] interval (Windmeijer, 1995).

As mentioned in the above section, the estimates obtained in the first stage are then used to compute the values of the **MR** variable for each respondent (MR_i) on the basis of the following Rule (4):

$$MR_i = \begin{cases} \phi(z_i)/[1 - \Phi(z_i)] & \text{if } y_{1i} = 1 \\ \phi(z_I/\Phi(z_I) & \text{otherwise} \end{cases}, \tag{4}$$

where $z_i = (\mathbf{X}_{1i}\boldsymbol{\alpha}_1)/\sigma_1$, and $\phi(\bullet)$ is the density function for a standard normal variable.

With regard to the outcome stage, let us assume that $\mathbf{y}_2^*$ is a latent variable in which the y_{2i}^* value is the amount that the ith respondent is willing to spend; $\mathbf{X}_2$ is a matrix similar in composition to the $\mathbf{X}_1$ matrix, in which the J independent variables can differ from the K independent variables used in the selection stage. The Equation (5) explains the linear relation assumed between y_{2i}^* and $\mathbf{X}_{2i}$:

$$y_{2i}^* = \mathbf{X}_{2i}\boldsymbol{\alpha}_2 + v_i, \tag{5}$$

where $\boldsymbol{\alpha}_2$ is a vector of $(1 + J)$ parameters to be estimated, and v_i is the error term distributed as $v_i \sim N(0,\sigma_2^2)$. Since $\mathbf{y}_2^*$ is a latent variable its elements (y_{2i}^*) are not observable, but it is possible to observe the $\mathbf{y}_2$ variable, in which each element (y_{2i}) is linked to the elements of the latent variable by means of the following decision Rule (6):

$$y_{2i} = \begin{cases} y_{2i}^* & \text{if } y_{2i}^* > 0 \text{ and } y_{1i}^* > 0 \\ 0 & \text{otherwise} \end{cases}. \tag{6}$$

The second stage is defined as a linear regression Model (7), typically estimated through the OLS method:

$$y_{2i}^* = \mathbf{X}_{2i}\boldsymbol{\alpha}_2 + \beta MR_i + \varepsilon_i, \tag{7}$$

where ε_i is a random component with zero mean. The coefficient of the **MR**, β, represents the covariance between the error terms of the selection, u_i, and outcome stages, v_i (Heckman, 1976).

Descriptive analyses

Socio-demographic and economic profile of the visitor

The sample consists of 63.68% tourists – that is, people who declared a positive expenditure on accommodation – and 36.32% day-visitors. During the visit to

the city and to the CM, the great majority of the sample (88.35%) stated a positive expenditure on food and beverages (for the sake of brevity here called 'spenders'), while 11.66% stated zero expenditure ('non-spenders'). As regards the three different CMs, we can note that the percentage of tourists (87.43%) visiting the one in Brunico is higher than the percentage for the CMs in Trento and Bolzano, which attract a higher number of day-visitors, with 44.07% in Trento and 38.25% in Bolzano (χ^2 = 57.00, p-value < 0.01). This can be explained by two different reasons: first, Trento and Bolzano can be easily reached by both private and public transport, while Brunico is less accessible, and, second, Brunico is a typical destination for long-stay vacations in the snow.

Table A1 of Appendix A shows the percentage composition of day-visitors and tourists, and spenders and non-spenders on food and beverages disaggregated according to the main socio-demographic and economic characteristics of the respondents. Table A1 reports the results of the Chi-square (χ^2) test of independence. On average, day-visitors are younger than tourists – 35 and 38 years old, respectively (t-test = –3.68, p-value < 0.01), and the highest percentage of day-visitors is between 18 and 25 years of age. The major difference between spenders and non-spenders, on both accommodation and food and beverages, is the region of origin. As expected, the greater the distance from the CM, the higher the percentage of those spending on accommodation. Similarly, the greater the distance, the higher also the percentage of those spending on food and beverages.

Focusing on visitors' expenditure, we note that for only 52.12% of the tourists (393 of them) was it possible to calculate the correct expenditure on accommodation per person per day. We could calculate the amount spent on food and beverages for only 35.96% of the sample (405 tourists and 24 day-visitors). In the following discussion we consider only the sub-samples of positive expenditure on accommodation and on food and beverages.

The average (median) expenditure on accommodation is €36.55 (€35), while that on food and beverages is €22.99 (€20). Table 1 presents the average (median) expenditure for each category of expenditure and the different socio-demographic and economic characteristics of respondents. The results of the ANOVA test are reported to compare the mean expenditure levels related to the selected respondents' characteristics.

As we can note, the expenditure on accommodation is an increasing function of age, probably because older people tend to prefer more comfortable accommodation with more services than younger travellers. Furthermore, both expenditure on accommodation and on food and beverage are increasing functions of household income.

Factors that influence the visit

Table A2 of Appendix A shows the percentage composition of day-visitors and tourists, spenders and non-spenders on food and beverages according to the motivations that led visitors to visit the town and the CM; the agreement with specific characteristics of the event is also reported. Table A2 also reports the results of Chi-square (χ^2) test of independence. The most important factor that led people to undertake the trip was the chance to visit the CM. The second highest factor was relaxation. Another important factor that encourages tourists

Table 1. Average (median) expenditure (€) by characteristics of respondent, ANOVA.

Variables	Average (median) expenditure on Accommodation	ANOVA (p-value)	Food and beverages	ANOVA (p-value)
Sex		1.15 (0.28)		0.40 (0.53)
Female	34.96 (30.0)		22.27 (20.0)	
Male	37.61 (35.0)		23.49 (20.0)	
Age		2.96*		2.13 (0.10)
18–25	29.61 (25.0)		18.37 (15.0)	
26–33	36.82 (33.8)		21.85 (16.7)	
34–45	35.70 (35.0)		23.19 (15.0)	
46 and over	40.97 (38.3)		25.95 (20.0)	
Household annual income		3.19**		4.68**
0–15,000	35.93 (30.0)		23.02 (20.0)	
15,000–28,000	33.67 (30.0)		18.71 (15.0)	
28,000–55,000	34.82 (35.0)		24.05 (20.0)	
55,000–75,000	43.92 (41.3)		24.26 (20.0)	
> 75,000	52.67 (50.0)		37.95 (25.0)	
Missing income	38.32 (35.0)		26.77 (15.0)	
Origin of tourist		1.03 (0.39)		0.12 (0.98)
North-east Italy	31.98 (27.5)		23.31 (20.0)	
North-west Italy	36.38 (35.0)		21.94 (18.8)	
Centre of Italy	38.64 (35.0)		23.35 (15.0)	
South Italy	35.25 (30.0)		22.87 (20.0)	
Abroad	39.49 (40.0)		23.53 (20.0)	

Notes: All test results are not significant unless indicated otherwise: **Significant at $p \leq 0.01$; *significant at $p \leq 0.05$.

(more than day-visitors) to undertake the trip is the opportunity to visit the town. However, in general we can note that tourists are in proportion more interested than day-visitors in almost all factors that lead to the trip. In terms of the visit to the CM, the factor that is considered most important by both tourists and day-visitors is the opportunity to experience the Christmas atmosphere, followed by the opportunity to taste local food and drink and to enjoy themselves and relax (in particular for tourists and spenders). Finally, all visitors, without significant differences among the groups, believe that the CM offers authentic products; however, a higher percentage of tourists believe that it offers the opportunity to experience the local culture.

Table 2 shows the average expenditure on accommodation and food and beverages according to the motivations that lead spenders to visit the town and the CM, and the characteristics of the CM. As expected, tourists who come to the town for business spend on average more on accommodation than holiday tourists, and tourists who come to visit friends and relatives spend on average less on accommodation than other tourists; in fact, most of those coming to visit friends and relatives stay at zero cost. Tourists who consider it important to relax during the trip spend on average less than other tourists, perhaps

Table 2. Average expenditure (€) by motivation and characteristics of the visit, *t*–test.

Variables	Average expenditure on Accommodation	*t*-test (*p*-value)	Food and beverages	*t*-test (*p*-value)
Generally authentic (not authentic)	35.55 (39.92)	1.45 (0.15)	22.35 (25.09)	1.18 (0.24)
Would visit without CM (would not come)	36.11 (37.02)	0.36 (0.72)	23.79 (22.39)	–0.72 (0.47)
How important are the following factors for this trip?				
Visit town is important (not important)	37.03 (35.57)	–0.52 (0.60)	22.75 (23.90)	0.53 (0.60)
Museums are important (not important)	37.27 (36.20)	–0.41 (0.68)	21.77 (23.63)	0.93 (0.35)
Visit CM is important (not important)	36.00 (38.76)	0.88 (0.38)	23.32 (21.84)	–0.59 (0.55)
Sport is important (not important)	38.59 (35.72)	–0.94 (0.34)	22.41 (22.76)	0.15 (0.88)
Nature is important (not important)	36.09 (36.75)	0.26 (0.79)	22.27 (23.17)	0.47 (0.64)
Trentino/South Tyrol is important (not important)	34.25 (38.88)	1.82 (0.07)	22.84 (22.62)	–0.12 (0.91)
Friends and relatives are important (not important)	24.33 (39.23)	4.94**	20.46 (23.56)	1.20 (0.23)
Business trip is important (not important)	51.05 (34.94)	–3.75**	25.49 (22.97)	–0.74 (0.46)
Relaxation is important (not important)	35.15 (42.51)	2.15*	22.92 (23.52)	0.23 (0.82)
How important are the following factors in your visit to the CM?				
Shopping is important (not important)	37.73 (35.03)	–1.06 (0.29)	24.02 (21.27)	–1.37 (0.17)
Socializing is important (not important)	34.01 (37.82)	1.45 (0.15)	24.43 (21.70)	–1.36 (0.17)
Enjoyment/relaxation is important (not important)	36.00 (40.49)	1.27 (0.20)	22.53 (24.89)	0.87 (0.38)
Meeting new people is important (not important)	35.58 (36.95)	0.51 (0.61)	22.46 (23.04)	0.29 (0.77)
Experiencing something special is important (not important)	38.10 (33.74)	–1.67 (0.10)	24.85 (19.49)	–2.71**
Being nearby/having nothing else to do is important (not important)	34.34 (36.69)	0.53 (0.60)	24.11 (22.64)	–0.41 (0.68)
Staying with partner/family is important (not important)	37.44 (35.71)	–0.67 (0.50)	23.44 (21.83)	–0.83 (0.41)
Giving support to a community event is important (not important)	37.16 (36.17)	–0.32 (0.75)	22.71 (21.88)	–0.41 (0.68)
Tasting local food and drink is important (not important)	35.18 (42.33)	2.20*	23.19 (21.60)	–0.64 (0.52)
Experiencing the Christmas atmosphere is important (not important)	35.70 (40.15)	1.16 (0.25)	22.99 (17.21)	–2.18*

Table 2 continued.

Variables	Average expenditure on Accommodation	*t*-test (*p*-value)	Food and beverages	*t*-test (*p*-value)
Perception of authenticity of the CM:				
It offers (does not offer) authentic products	36.16 (37.22)	0.40 (0.69)	22.25 (24.36)	1.03 (0.31)
It offers (does not offer) the opportunity to experience local culture	37.39 (34.45)	–1.15 (0.25)	23.69 (21.33)	–1.20 (0.23)
It offers (does not offer) the opportunity to learn local customs	36.61 (36.20)	–0.16 (0.87)	24.66 (21.41)	–1.67 (0.10)
It offers (does not offer) the opportunity to interact with local people	35.83 (36.52)	0.26 (0.80)	23.23 (22.61)	–0.31 (0.76)
It is (is not) a purely tourist event	34.22 (39.06)	1.93 (0.06)	22.47 (23.25)	0.41 (0.69)

Notes: [a]Dummy variable equal to 1 when the original variable takes value between 4 and 6, 0 otherwise. All test results are not significant unless indicated otherwise: [**]Significant at $p \leq 0.01$; [*]significant at $p \leq 0.05$.

because they prefer to spend on other goods, like ski-lifts, entrance fees to swimming pools, museums and so on. The average expenditure on accommodation is lower if tourists rank the tasting of local food and drink during the visit to the CM as an important factor, perhaps because this group prefers to save on lodging and spend more on local culinary specialities. Finally, the average expenditure on food and beverages is higher if visitors rate highly the opportunity to experience both something special and the Christmas atmosphere.

Model results

We present the results of two robust (White, 1980) double-hurdle models: model A for the expenditure per person per day on accommodation; model B for the expenditure per person per day on food and beverages. As we have stressed above in illustrating the econometric model, tourists who stay at friends and relatives or those staying in second homes who stated zero expenditure for accommodation are not considered in model A.

The complete list of independent variables used in the regression models A and B are given in Appendix B, and the stepwise results are presented in Table 3. The set of independent variables includes not only socio-demographic and economic factors, but also psychological and trip-related variables for a better understanding of which factors have the greatest impact on tourism expenditure.

Note that the value of the income variable is the mean of each income class (when respondents specify them) while it is a zero value when this information

Table 3. Determinants of tourism expenditure.

Independent variables	Model A: Accommodation		Model B: Food and beverages	
	First stage[A*]	Second stage[A**]	First stage[B*]	Second stage[B**]
Year 2008	–0.46 (0.15)	–4.74 (1.72)		
Day-visitor	–	–		–12.81 (1.54)
Bolzano	–1.44 (0.31)			8.17 (2.28)
Trento	–1.35 (0.32)			6.42 (2.32)
Shop at the CM	0.01 (>0.01)			0.05 (0.02)
Shop at other shops			0.01 (>0.01)	
Would come anyway without CM			–0.51 (0.21)	
Nights		7.11 (1.56)	0.36 (0.12)	
How important are the following factors for this trip?				
Visit town	0.48 (0.14)			
Relax	0.65 (0.16)			
How important are the following factors in your visit to the CM?				
Socialize	–0.38 (0.13)			
Experience something special		3.91 (1.61)		4.39 (1.73)
Be nearby		–5.61 (2.62)		
Taste local food and drink			0.77 (0.24)	
Perception of authenticity of the CM				
Experience local culture			–0.74 (0.28)	
Socio-demographic and economic characteristics				
46 years old and over				4.57 (1.99)
North-west Italy	0.74 (0.15)			
Centre of Italy	2.61 (0.34)	17.62 (5.12)		
South Italy	1.21 (0.24)			
Abroad	1.33 (0.28)	10.07 (4.01)		
Missing income	–0.62 (0.30)		–0.77 (0.34)	
MR		10.64 (3.25)		–10.45 (1.19)
Constant	–0.22 (0.34)	2.08 (1.95)	0.53 (0.32)	9.86 (2.39)

Notes: [A*]Number of obs = 523; Wald chi^2(12) = 151.39; Prob > chi^2 = 0; Log pseudolikelihood = –242.4127; McKelvey and Zavoina's R^2 = 0.569. [A**]Number of obs = 517; $F(7,509)$ = 26.41; Prob > F = 0; Adjusted R^2 = 0.412. [B*]Number of obs = 295; Wald chi^2(6) = 30.00; Prob > chi^2 = 0; Log pseudolikelihood = –83.373586; McKelvey and Zavoina's R^2 = 0.508. [B**]Number of observations = 295; $F(7, 287)$ = 37.36; Prob > F = 0; Adjusted R^2 = 0.236. Dash indicates that the variable is not used in the model. Robust standard errors are in parentheses.

is missing. In addition, a dummy variable is created to represent those who do not state their income: it is equal to 1 when income is not stated; it is equal to 0 in all other cases (Alberini *et al*, 2005). In this way, the income is measured as a continuous variable, instead of a categorized continuous variable, and we do not reduce substantially the sample used in the models (9.81% of the sample are missing values).

It emerges from Table 3 that the MR coefficient is significant for each model, and this implies that the decisions to purchase (selection stage) and of how much to spend (outcome stage) are dependent on and are explained by a different set of variables. In this situation the double-hurdle model is more

appropriate than the Tobit model because it allows us to model the two stages separately, while keeping them linked, and it provides more information regarding the process of the expenditure decision.

In 2008 the propensity to spend and the estimated amount spent on accommodation (respectively the first and second stage of the model A) are less than in 2009. Day-visitors is an independent variable only in model B (obviously it cannot be considered in the model of accommodation expenditure) and we note that it affects negatively only the second stage of the model (that is, the estimated expenditure on food and beverages per person per day for day-visitors is less than for tourists). As regards the CM visited, we note that the propensity to spend on accommodation decreases, and the estimated amount of money spent on food and beverage (second stage of the model B) increases for visitors interviewed at the CMs of Bolzano or Trento rather than Brunico. This is probably because Brunico is a typical winter resort and some visitors to its CM are in town for a skiing break with half-board accommodation. An increase in spending on shopping at the CM produces an increase in the propensity to spend on accommodation and an increase in the estimated amount for food and beverages, while an increase in spending in other shops of the town only increases the propensity to spend on food and beverages.

Among the trip-related variables, the higher the number of nights spent away from home the higher the estimated amount spent on accommodation per person per night and the higher the propensity to spend on food and beverages.

Among the socio-demographic and economic characteristics of the interviewees, we decided to analyse the influence of gender, age, place of residence and income. Our results suggest that gender and income are not significant determinants of spending while age has a significant impact only on food and beverage expenditure: visitors who are 45 or older spend more than the younger visitors. Perhaps older visitors prefer to consume their meals in more comfortable bars or restaurants than the younger ones, who often choose lower-priced bars/restaurants. Finally, with regard to the place of residence, we note that those who came from the north-east of Italy are more likely to be day-visitors, perhaps due to the proximity to the destination.

The propensity and the estimated amount of money spent on accommodation depend positively on two factors that are important for the trip: visiting the town and relaxing. The propensity to spend on accommodation decreases if visitors consider socializing important, while the propensity to spend on food and beverage increases if visitors place a stronger importance in tasting local food and drink. The estimated expenditure on both accommodation and food and drink increases if visitors are interested in experiencing something special. In addition, the amount of money spent on accommodation decreases if visitors are nearby and visit the CM because they have nothing else to do.

Visitors who consider the CM an opportunity to experience the local culture have a lower propensity to spend on food and beverages than visitors who do not agree with this statement. Perhaps, the former group of visitors comes primarily to visit the CM and, possibly, to purchase traditional and local products, and therefore they are not particularly interested in spending on food and beverages.

Lastly, with the available data, it is possible to calculate both the estimated expenditure on accommodation and on food and drink per person per day

according to visitors' characteristics. To calculate the maximum and minimum values of the estimated expenditure on accommodation we used the average number of nights of the entire sample (2.7 nights).

The maximum value of the estimated expenditure per person per night on accommodation is about €43 for tourists who came from the centre of Italy, visited the CM to experience something special and were interviewed in 2009. The minimum value of the estimated expenditure per person per night on accommodation is about €11 for tourists who came from the north or south of Italy, visited the CM only because they were nearby and had nothing else to do, and were interviewed in 2008.

As regards the maximum value of the estimated expenditure per person per day on food and drink, it is about €30 for tourists and €16 for day-visitors who visit the CM in Bolzano to experience something special, and are 46 years old or older. The minimum value of the estimated expenditure per person per day on food and drink is about €13 for tourists and €0 for day-visitors who visit the CM in Brunico for no particular reason, and are under 46 years of age. For both maximum and minimum spenders the average expenditure on shopping at the CM is about €58 for tourists and €39 for day-visitors.

Findings and discussion

With the use of a double-hurdle model, we analysed the impact of different categories of independent variables on visitors' expenditure divided into spending on accommodation and spending on food and beverages.

The results of our study indicate that travel purpose, region of origin, perception of the CM, length of stay and age are significant factors influencing the expenditure patterns of CM attendees. These results are in line with those of previous studies. In fact, the relationship between travel purpose and expenditure patterns is supported by Laesser and Crouch (2006) and Craggs and Schofield (2009). The latter provide results very close to the findings of our study, including those on eating and drinking and destination attractions. The positive impact of length of stay on expenditure is supported by Agarnal and Yochum (2000), Downward and Lumsdon (2004), Jang *et al* (2004), Nicolau and Más (2005), and Pouta *et al* (2006). Visitor age is also a significant influence on expenditure: visitors who are 45 or older spend on average more than younger visitors. In the literature, Nicolau and Más (2005), Pouta *et al* (2006) and Wang and Davidson (2010) found that aged travellers spend more in general, while Jang *et al* (2004) and Craggs and Schofield (2009) found that older travellers spend more than younger travellers. In addition, origin is a significant variable, as also supported in studies by Nicolau and Más (2005) and Pouta *et al* (2006). However, in terms of other social characteristics of the individual, our findings show that visitor gender is not a significant variable in determining consumer expenditure, as supported by Jang *et al* (2004).

Additional to the meta-analysis of 55 cross-sectional studies conducted by Marcussen (2011), our study also tested the influence of further variables such as the purpose of visiting a specific cultural event and the perception of authenticity of the CM. This paper reveals that motives of the visit to the event influence the estimated expenditure; in particular, the motivation to visit the

event in order to experience something different produces an increase in expenditure both on accommodation and on food and beverages. Furthermore, our research also suggests that the perception by visitors that the event is authentic by offering the opportunity to experience the local culture influences the propensity to spend on food and beverages.

The findings of this research identified visitors from the centre of Italy and middle-aged to elderly visitors as heavy spenders whom destination managers should aim to attract and towards whom they should direct their managerial and promotional efforts. In general, the attraction of heavy spenders to the CM will involve stronger advertising of the opportunities and range of products for mature people.

As visitors coming from the north-east of Italy are more likely to be day-visitors and have a low propensity to spend on accommodation, in order to obtain an increase in expenditure and induce this type of visitor to spend at least one night away from home, destination marketers need to increase their marketing activities in the north-east of Italy, including the creation of packages (such as, for example, transport, accommodation and an entrance ticket to local amenities).

On the other hand, given that some of these neighbouring Italian regions also organize CMs, the particular characteristics of the CMs in South Tyrol and Trentino, strongly connected to German traditions, must be emphasized, as this is their competitive advantage.

A comparison of the results in the two years studied shows that the propensity to spend and the expected average amount spent on accommodation was lower in 2008 than in 2009. In addition, a comparison of the results at the different locations of the CMs shows that the propensity to spend on accommodation is lower in Trento and Bolzano than in Brunico. In contrast, the expected amount of money spent on food and beverages is higher in Bolzano and Trento than in Brunico. This is probably because Brunico is a typical winter resort with skiing facilities, and the CM is only one of several attractions and activities available at the destination. Tourists come to Brunico principally to relax, enjoy themselves and/or ski and only secondarily to visit the CM; therefore they tend to stay for more than one day and select half-board accommodation. On the other hand, in Bolzano and Trento (capital cities of two provinces and typically cultural destinations), the CM is the main attraction of the season and acts as a countercyclical tourism policy. The organization of a cultural event such as the CM in Bolzano and Trento has attracted visitors during the low season, but further steps must be taken to attract more tourists and heavy spenders staying at the destination for more than one day. For the image of Trentino–South Tyrol as a winter tourism destination, the CMs are enormously important. For the Italian market, CMs are now a real brand of the Trentino–South Tyrol region, whose value still has to be evaluated.

Our study offers to event organizers and local government representatives the estimated effects of a set of socio-demographic and economic variables on expenditure on both accommodation and food and drink, facilitating a deeper understanding of the composition of tourist spending. Furthermore, this study offers the opportunity to identify the type of visitors that are more profitable for each CM and provides information that could help organizers to improve their event.

With the expenditure per person per day that the econometric model has estimated for each socio-demographic group, event organizers and local governments are able to calculate easily the economic impact of the event. What is necessary now is to determine the number of visitors attending the event. For an open event, such as the CM, it is very difficult to obtain a realistic estimate of the number of visitors; the event has no entrance or exit gates and is staged in a typical square of a European city centre, with multiple streets and alleys leading to it. Therefore, the systematic count of visitors on the spot is almost impossible. For this reason, it is necessary for event organizers to find a way to determine a reliable estimation of visitor numbers. In the past, the number of visitors to CMs in South Tyrol was estimated through car exits of the toll-way, but this system did not provide an accurate estimate of CM visitors as it could not distinguish general tourists and skiers from CM visitors. The authors have experimented with the estimation of visitor numbers through a multiple collection of information: (i) including in the questionnaire a question about the means of transport (including cars); (ii) for those reaching the destination by car, including a question about the car park; (iii) placing an interviewer at the exit of the largest car park near to the CM to ask to each driver exiting the car park if they visited the CM and the number of people in the car. Through a representative sample of those interviewed at the CM, it is possible to determine the percentage of visitors arriving at the CM by car; through the official data of the car park it is possible to determine the number of those who visited the CM and parked there; through the percentage of those interviewed at the CM who stated that they parked at the car park where the interviewer was placed, it is possible to give an estimate of the number of visitors. This system has resulted in a more accurate estimate; however, it involves extensive data collection and the use of interviewers.

Conclusion

This study contributes to the academic literature on tourism as it reveals expenditure behaviour at the micro-level for visitors to a cultural event (the CM) by introducing a generalization of the Tobit model. Understanding the expenditure patterns and activities of tourists during their visit to the event is a key factor in the strategic planning and packaging of accommodation, facilities and attractions. In the competitive market of tourism, policy makers try to expand their market share by seeking visitors who spend money on as many services as possible at the destination.

The aim of this study was to discover visitors' characteristics related to different expenditures on visits to three different CMs in Bolzano, Brunico and Trento in northern Italy. Using data from a survey conducted at these three events in December 2008 and 2009, this study empirically quantified micro-level data on expenditure preferences in relation to their socio-demographic and economic characteristics, and also to trip motivations and attributes. Because of the measurability of these factors, the findings offer a better understanding of tourists visiting these cultural events. Such understanding provides destination managers and tourism businesses with practical knowledge useful for destination marketing, event development and customer service. Many of

the results of this study are supported by findings from previous research relating to influences on visitor expenditure. This may reflect general patterns and possible overall influences. A practical implication of the fact that older travellers spend more than younger travellers is that promotion strategies should aim to attract heavy spenders to the CMs in South Tyrol through stronger advertising of the diversity of products for mature people and to stimulate an increase in their length of stay in the region by offering specially designed activities and discount opportunities.

This study has some limitations as the analysis is based on a non-random sampling technique. Thus, in order to confirm the results, future research should include the repetition of this survey either for other CMs of the region in order to compare the results, or for other cultural festivals, in order to explore further factors relevant to expenditure patterns. For example, further research might examine the expenditure behaviour of repeat visitors: a comparative study of the expenditure patterns of first-time versus repeat visitors could be carried out. Further research is needed to determine deeper differences within the group of heavy spenders in terms of sources of travel information, psychographics, benefits sought and other attributes not measured in this study.

Furthermore, researchers can use four different ways to measure visitors' spending (per person per night, per person per stay, per travel party per night and per travel party per stay) in order to provide extra utility for the users, as suggested by Kozak *et al* (2008) and Marcussen (2011).

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Appendix A

Table A1. Socio-demographic and economic characteristics (%) of visitors and Chi-square tests.

Variables	Whole sample	Accommodation			Food and beverages		
		Non-spender	Spender	χ^2 (*p*-value)	Non-spender	Spender	χ^2 (*p*-value)
Sex				1.26 (0.26)			0.91 (0.34)
Female	48.90	50.93	47.54		54.00	46.83	
Male	51.10	49.07	52.46		46.00	53.17	
Age				21.11**			4.18 (0.24)
18–25	21.48	27.95	17.80		22.92	14.63	
26–33	31.32	31.08	31.52		29.16	30.32	
34–45	21.23	16.14	24.18		16.67	27.92	
46 and over	25.97	24.82	26.49		31.25	27.13	
Household annual income (€)				5.67 (0.23)			1.72 (0.79)
0–15,000	16.26	18.84	14.99		18.00	14.51	
15,000–28,000	33.95	34.42	33.55		30.00	35.09	
28,000–55,000	26.82	24.19	28.51		26.00	31.93	
55,000–75,000	7.04	6.05	7.69		10.00	7.39	
> 75,000	6.12	5.58	6.37		4.00	5.8	
Missing income	9.81	10.93	8.89		12.00	5.28	
Origin of tourist				188.27**			13.63**
North-east Italy	36.88	58.61	24.56		42.00	19.19	
North-west Italy	30.92	30.86	30.97		24.00	34.06	
Central Italy	14.59	1.44	22.10		18.00	22.16	
South Italy	7.94	4.07	10.23		8.00	10.81	
Abroad	9.67	5.02	12.14		8.00	13.78	

Notes: All test results are not significant unless indicated otherwise: **Significant at $p \leq 0.01$; *significant at $p \leq 0.05$.

Table A2. Motivation and characteristics (%) of the visit and Chi-square tests.

Variables[a]	Whole sample	Accommodation			Food and beverages		
		Non-spender	Spender	χ^2 (p-value)	Non-spender	Spender	χ^2 (p-value)
General authenticity	76.36	74.19	77.85	1.87 (0.17)	76.00	77.57	0.10 (0.75)
Would visit without CM	49.04	45.12	51.06	3.48 (0.06)	58.00	45.38	2.77 (0.10)
How important are the following factors for this trip?							
Visit town is important	66.55	59.77	70.56	12.58**	64.00	72.03	1.61 (0.21)
Museums are important	33.53	27.91	36.60	9.09**	32.00	35.62	0.29 (0.59)
Visit CM is important	78.71	79.53	78.25	0.88 (0.35)	66.00	80.21	5.00*
Sport is important	19.95	12.33	24.14	23.53**	22.00	19.79	0.05 (0.83)
Nature is important	44.93	31.16	52.65	51.36**	48.00	48.81	0.14 (0.71)
Trentino/South Tyrol is important	48.28	36.28	55.17	38.50**	46.00	51.45	1.05 (0.31)
Friends and relatives are important	19.20	17.67	20.03	0.88 (0.35)	28.00	16.36	4.23*
Business trip is important	11.32	11.40	10.88	0.10 (0.75)	12.00	8.71	0.47 (0.49)
Relax is important	69.07	60.47	73.74	26.45**	66.00	74.14	4.42*
How important are the following factors in your visit to the CM?							
Shopping is important	57.50	54.19	59.95	3.31 (0.07)	50.00	60.69	2.50 (0.11)
Socializing is important	40.32	45.12	37.53	6.65**	50.00	35.36	3.07 (0.08)
Enjoyment/relaxation is important	77.54	71.40	81.03	15.89**	80.00	82.32	0.68 (0.41)
Meeting new people is important	33.78	28.37	36.74	8.50**	46.00	34.30	1.92 (0.17)
Experiencing something special is important	57.08	51.40	60.21	10.27**	66.00	58.31	0.49 (0.49)
Being nearby/having nothing else to do is important	10.31	10.70	9.81	0.33 (0.57)	10.00	7.65	0.30 (0.59)
Staying with partner/family is important	47.44	43.02	49.87	5.11*	44.00	47.23	0.50 (0.49)
Giving support to a community event is important	24.14	23.49	24.27	0.07 (0.80)	34.00	20.32	4.17*
Tasting local food and drink is important	78.96	74.88	81.17	5.04*	66.00	79.95	5.55*
Experiencing the Christmas atmosphere is important	81.06	78.60	82.89	3.71 (0.06)	80.00	84.43	0.50 (0.48)
Perception of authenticity of the CM:							
It offers authentic products	68.23	67.44	68.57	0.35 (0.56)	64.00	65.44	0.02 (0.89)
It offers the opportunity to experience local culture	60.18	56.05	62.86	5.70*	72.00	61.21	1.71 (0.19)
It gives the opportunity to learn local customs	38.81	34.88	41.11	4.61*	50.00	37.99	2.34 (0.13)
It gives the opportunity to interact with local people	32.27	27.67	34.88	6.62**	36.00	32.98	0.12 (0.73)
It is a purely tourist event	56.50	57.21	56.23	0.02 (0.89)	58.00	55.15	0.03 (0.86)

Notes: [a]Dummy variable equal to 1 when the original variable takes value between 4 and 6, 0 otherwise. All test results are not significant unless indicated otherwise: **Significant at $p \leq 0.01$; *significant at $p \leq 0.05$.

Appendix B

List of independent variables.

Independent variables	Descriptions
Year 2008	1 = the observed year is 2008; 0 = otherwise
Brunico	1 = the CM visited is in Brunico; 0 = otherwise (reference category)
Bolzano	1 = the CM visited is in Bolzano; 0 = otherwise
Trento	1 = the CM visited is in Trento; 0 = otherwise
Shop at the CM	Shopping expenditure at the CM
Shop at other shops	Shopping expenditure at other shops in the town
Would come anyway without CM	1 = visitor would come to the town anyway without the CM; 0 = otherwise
Nights	Number of paid nights; 0 = day-visitor
How important are the following factors for this trip?	
Visit town	1 = Visiting the town is important; 0 = otherwise
Museums	1 = Visiting museums and historic sites is important; 0 = otherwise
Visit CM	1 = Visiting the CM is important; 0 = otherwise
Sport	1 = Doing sport activities is important; 0 = otherwise
Nature	1 = Staying in a natural environment is important; 0 = otherwise
Trentino/South Tyrol	1 = Visiting Trentino/South Tyrol is important; 0 = otherwise
Friends and relatives	1 = Visiting friends and relatives is important; 0 = otherwise
Business trip	1 = Making a business trip is important; 0 = otherwise
Relax	1 = Relaxing is important; 0 = otherwise
How important are the following factors in your visit to the CM?	
Shop	1 = Shopping is important; 0 = otherwise
Socialize	1 = Socializing is important; 0 = otherwise
Enjoyment/relaxation	1 = Enjoyment/relaxation is important; 0 = otherwise
Meet new people	1 = Meeting new people is important; 0 = otherwise
Experience something special	1 = Experiencing something special is important; 0 = otherwise
Be nearby	1 = Being nearby and having nothing else to do is important; 0 = otherwise
Stay with the partner/family	1 = Staying with partner/family is important; 0 = otherwise
Support community event	1 = Giving support to a community event is important; 0 = otherwise
Taste local food and drink	1 = Tasting local food and drink is important; 0 = otherwise
Christmas atmosphere	1 = Experiencing the Christmas atmosphere is important; 0 = otherwise
Perception of authenticity of the CM:	
Authentic products	1 = it offers authentic products; 0 = otherwise
Experience local culture	1 = it offers the opportunity to experience local culture; 0 = otherwise
Learn local customs	1 = it offers the opportunity to learn local customs; 0 = otherwise
Interact with local people	1 = it offers the opportunity to interact with local people
Purely tourist event	1 = it is a purely tourist event; 0 = otherwise
General authenticity	1 = the CM is generally authentic; 0 = otherwise

List of independent variables continued.

Independent variables	Descriptions
Socio-demographic and economic characteristics of respondent:	
North-east Italy	1 = tourist comes from a province of north-east Italy; 0 = otherwise (reference category)
North-west Italy	1 = tourist comes from a province of north-west Italy; 0 = otherwise
Centre of Italy	1 = tourist comes from a province of the centre of Italy; 0 = otherwise
South Italy	1 = tourist comes from a province of south Italy; 0 = otherwise
Abroad	1 = tourist comes from abroad; 0 = otherwise
Female	1 = female; 0 = male
15–25 years old	1 = 15–25 years old; 0 = otherwise (reference category)
26–33 years old	1 = 26–33 years old; 0 = otherwise
34–45 years old	1 = 34–45 years old; 0 = otherwise
46 years old and over	1 = 46 years old and over; 0 = otherwise
Missing income	1 = respondents do not state their income category; 0 = otherwise
Income	The mid-point of each income category is considered; 0 if respondents do not state their income category
MR	Inverse Mill's ratio
Independent variables used only in the model B.	
Day-visitor	1 = respondent is a day-visitor; 0 = respondent is a tourist