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Factors determining cultural city tourists' length of stay

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ABSTRACT

This study aims to provide guidelines for decision makers of cultural cities in relation to the determinants of tourists' length of stay, a critical variable of the success of a tourist destination, and a guide for the correct urban planning of the destination. For this purpose, a zero-truncated negative binomial model and a zero-truncated Poisson model with data from 1152 surveys were used. The work reaffirms the use of counting models for this type of study and attempts to discover patterns in tourist destinations to increase the length of stay of tourists. Interesting findings are obtained, such as the causal relationship between being a tourist woman and the length of stay. Also, loyal visitors to the destination and the knowledge of the tourist will be factors that have an impact on a longer length of stay. This will lead to an integral perspective of tourism that includes territorial planning and management.

1. Introduction

Length of stay has a direct relationship with tourist income (Wang et al., 2018) because it has an effect on the levels of occupation of the destination (Alegre & Pou, 2006). It is related to tourist expenditure (Cannon & Ford, 2002; Downward & Lumsdon, 2000; Kastenholz, 2005) and to variables such as tourist experience and behavioural intentions, which are concepts that arise after consumption (Pérez-Cabañero et al., 2017). However, the general trend at the global level is the decrease of the length of stay (Gössling et al., 2018) and therefore the number of arrivals must be increased to maintain overnight stays, with an obvious environmental cost (Jacobsen et al., 2018). Most tourist destinations have tried to increase the number of tourists, while few of them have taken into account the carrying capacity of a destination with the consequent irritations among visitors and residents (Cheung & Li, 2019). Some urban areas, unable to cope with the increase in international tourists, have experienced negative economic, social and cultural effects, such as overcrowding and tourist gentrification (Bobic & Akhavan, 2022). Given the importance of length of stay in revenue for the hotel industry, some authors (Weatherford, 1995) advocate its inclusion in the revenue management procedure because of its importance in this area. Therefore, as the length of stay is a factor of great importance at destinations for decision makers and policy makers (Prebensen et al., 2015), it is an essential element in tourism planning (Alegre & Pou, 2006).

Destinations with longer stays could create a greater and more varied tourism offer, promoting and mixing major and minor tourism resources, while diversifying social, economic, and environmental impacts (Barros & Machado, 2010). Furthermore, consumption patterns have shifted, providing a greater emphasis on traits such as differentiation, aesthetics, and symbolic meaning (Li, 2020). These changes have favoured the efforts of some destinations to change their strategic destination positioning from Fordism to post-Fordism (i Baidal et al., 2013) offering an alternative to mass tourism (Hernández et al., 2016). In this new era, urban spaces have had to be reconditioned (Harvey, 1987). An example of this transformation is the increasing pedestrianization of cities, which favours the sales of businesses located in pedestrian environments (Yoshimura et al., 2022). Through urban planning, many public spaces have undergone extensive transformation to serve as promotional images that enable their cities to compete globally (Mandeli, 2019) and iconic buildings have become a key part of a global urban competition strategy (Ponzini et al., 2016). In this regard, culture, and cultural facilities such as museums, concert halls, cinemas or theatres have been key elements in urban regeneration, improving the attractiveness of some destinations (Bayliss, 2004; Krivý, 2013). However, there may be different profiles of cultural tourists (du Cros & McKercher, 2020) and their demands will differ according to the role culture plays in their trip (Galí-Espelt, 2012).

The destination proposal must be aligned with these different demands (Cetin & Bilgihan, 2016). Particularly when, the restructuration of the places as centres for consumption and as places themselves

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suitable for consumption turns the city's architectural heritage; e.g. historic buildings and districts; into a valuable, distinctive and identity asset (Li, 2020). The commodification of culture has sometimes provoked well-founded doubts by excluding the social milieu (Fainstein, 2008; Gunay & Dokmeci, 2012). Hence, in many cases these new environments have not been able to reflect local values (Mandeli, 2019). For example, cruise tourism has favoured the development of cultural and historical tourism (Castillo-Manzano et al., 2014). However, it stands to assume that cruise-based tourism favours short stays. As mentioned above, this kind of tourism may favour the consumption of major resources and goes against the social, economic, and environmental diversification. In what could be interpreted as a return to the Fordist model.

This mass cultural growth can be a threat to the preservation of the identity heritage of cities (García-Hernández et al., 2017) and therefore it is important to delve into this dichotomy between the fast cultural consumption of the main tourist resources and those seeking diversification, it is necessary to understand what conditions are conducive to both types of trips. That is why the purpose of this article is to analyse the determinants of the length of stay in an international destination, but with a clear orientation towards culture, urban lifestyle and urban planning. The originality of the present study is that it shows the need to analyse the length of stay to help in urban planning. The case of the city of Malaga can be extrapolated to any coastal city with moderate temperatures and very focused on tourism. The contribution is not so much to understand what happens in Malaga but to demonstrate that its study is interesting in any destination to provide data to the urban planner.

The rest of the paper is organized as follows. Firstly, this introduction is followed by a review of the literature for the variables that might be used to reproduce the estimation of length of stay at holiday destinations. The hypotheses are also proposed. Secondly, we explain the data concerning length of stay obtained from surveys and the methodology used. In the third section, we show the results obtained. Finally, the paper concludes with a discussion of the main findings.

2. Literature review and hypothesis development

2.1. Cultural tourism

Although tourism and culture have always been inseparable concepts, it is only in recent decades that this link has been more explicitly identified, giving rise to what is known today as cultural tourism (Richard, 2018). Several authors have defined cultural tourism in various ways (Richards, 2003; Silberberg, 1995), but they all agree in defining it as the displacement of people for cultural purposes. As the OECD (2009) says, "Culture and tourism are linked because of their obvious synergies and their growth potential. Cultural tourism is one of the largest and fastest growing global tourism markets..." (p. 10). Currently, it is considered an important element in most urban destinations (Cetin & Bilgihan, 2016), assisting the in reducing seasonality in Andalucía (Cisneros-Martínez & Fernández-Morales, 2015). This growth has also led to a fragmentation of cultural tourism into emerging niches such as heritage, arts, gastronomic, or city tourism, among others (Richard, 2018).

Heritage tourism, understood as a tourist activity that makes use of socio-cultural assets (Fyall & Garrod, 1988) has become a popular form of tourism (Chen et al., 2016). This tourism is one of the most important types of tourism globally (Poria et al., 2006) and it has long been one of the cornerstones of cultural tourism (Richard, 2018). This type of tourism is strongly linked to the culture, identity and conditions of the community and the context of the destination (Ballesteros & Ramírez, 2007). It is also responsible for the growth of cultural tourism initiated during the 1980s and the orientation towards mass tourism that transformed cultural tourism during the 1990s (Richard, 2018).

Within cultural tourism, the museum tourist is very important to revitalizing cities from an economic and tourist point of view. There are many examples of this, such as Bilbao in Spain (Plaza, 2000), where the Guggenheim Museum serves as an iconic building and city attraction in its own right (Ponzini et al., 2016), Manchester in the United Kingdom (Evans & Shaw, 2004), Amsterdam and Berlin (Aalst Van & Boogaarts, 2004). Museum visitors are the prototype of tourists interested in culture who are fascinated by the authentic and unique character of cultural attractions. Museums have been defined as an effective marketing tool for city tourism and as the driving force behind urban development (Jansen-Verbeke & van Rekom, 1996). Despite the weight that cultural tourism is having in many destinations, the variable length of stay has been analysed in depth in mainly sun and beach destinations and few authors have clearly defined the formation of length of stay as it applies to cultural tourism (Brida et al., 2013), even in eminently cultural destinations such as Spain, and more specifically the city of Malaga, which has undergone an unprecedented transformation in the last 15 years that has made it an exponent of cultural tourism worldwide.

2.2. Impact of tourism in the urban planning of the city

The appearance of tourism as the main activity that generates wealth for many cities implies solving important urban policy challenges. That is why it must face conflicts such as the overexploitation of urban resources or the congestion and overcrowding of city streets. In addition, for each specific city, its topography should be considered (Barrera-Fernández et al., 2016).

Cultural tourism in cities has important benefits. The economic benefit since it generates income when tourism demand increases. That is why there is an economic justification for the conservation of the heritage of monuments. Another benefit is the maintenance of infrastructures such as cultural and leisure facilities, hotels and restaurants, as well as the maintenance of public roads (Marin-Pantalescu et al., 2022).

The growing industry of cultural tourism in the main cities of the world also offers a good opportunity for the reorganization and renewal of urban space. The growth of cities, both in terms of inhabitants and visitors and tourists, must be planned. To build an ideal urban space, historical and cultural elements must be integrated, while the city must respond to the development of the cultural tourism industry by providing, in the cities, the spaces and transport lines that are needed (Feng et al., 2019).

The management of the tourist destination is a factor of economic development and therefore has to be considered in the planning of the city's infrastructures. For this, it is very useful to know the demographic profile of the tourist as well as their motivations or the length of stay, among others. And it is that the flow of visitors is increasing in the main cities of the world. It is necessary more than ever to understand the tourist, especially those who enjoy longer stays (Marin-Pantalescu et al., 2022).

The importance of the cultural tourist's length of stay is especially important (Brida et al., 2013). That is why the study of visitor behaviour will provide a lot of relevant information for the design of future city spaces. Length of Stay (LOS) is a key factor in destination management with implications for revenue generation and designing the city to be more comfortable for visitors and more liveable for residents (Gössling et al., 2018).

Some authors have investigated the polarization of the economic structure as a reflection of the specialization in tourism, in cities such as Las Vegas or Macao. These works confirm that the sustainable polarized growth of casinos accentuates the construction of new tourist infrastructures, forcing these cities to reorient their urban planning (Gu et al., 2022).

2.3. Length of stay

As a result of the development of the literature in relation to length of stay, we find research that has focused on different types of consumers:

older tourists (Alén et al., 2014; Esiyok et al., 2018); student travellers (Thrane, 2016); international tourists in Spain (Aguilar & Díaz, 2019) or in Norway (Jacobsen et al., 2018); inland tourism (Soler et al., 2018); golf tourism in the Algarve (Barros et al., 2010); and tourists of Portuguese nationality travelling to Latin America (Barros et al., 2008), among others. It should be noted that in recent years, the study of length of stay in relation to sustainability and the environment has been gaining importance. Thus, Gössling et al. (2018) study the implications of the length of stay in relation to destination management regarding climate change, or the relationship between environmental pollution and tourism income, taking into account the length of stay (Qiang et al., 2020).

Research on the length of stay is frequently focused on the study of different destinations, such as the Balearic Islands (Alegre et al., 2011; Alegre & Pou, 2006); Maderia (Barros & Machado, 2010); the Azores (de Menezes et al., 2008); Norway (Jacobsen et al., 2018; Prebensen et al., 2015; Thrane & Farstad, 2012); Madagascar (Peypoch et al., 2012); Brazil (Santos et al., 2015); Guimaras Province, Philippines (Ganzon & Fillone, 2015); Dalian in northeastern China (Wang et al., 2012); Languedoc-Roussillon (Peypoch & Solonandrasana, 2007); and Virginia Beach (Silberman, 1985), among others.

However, the length of stay may reveal different behaviours depending on the destination (Alén et al., 2014). An example is found in the contradictory findings in relation to the total expenditure of tourists on a holiday. Mules (1998) in his study on Australia and Spotts and Mahoney (1991) in their study on a rural region of Michigan concluded that tourists who stay longer spend more than those who make shorter visits. In contrast, in their study of the island of Guam, Mok and Iverson (2000) argue that visitors on shorter stays spend more than those who stay longer. Therefore, research results cannot always be extrapolated to all destinations. Wrong decisions may be made based on studies carried out in different destinations. In particular, wrong decisions may be made in the case of cultural city tourism.

It can be said that there are different types of variables fundamental to the study of length of stay (Alén et al., 2014). These are the socio-demographic profile of the tourist (Alegre et al., 2011; Barros & Machado, 2010); the characteristics of the life cycle (Grigolon et al., 2014); the motivations for the trip (de Oliveira Santos et al., 2015; Yang et al., 2011); and the characteristics of the trip (Ferrer-Rosell et al., 2014; Salmasi et al., 2012).

2.3.1. Socio-demographic profile

Within the demographic variables, if we look at the nationalities of the tourists, the researchers (Gokovali et al., 2007; Thrane & Farstad, 2012) found different variations in the length of stay. These patterns are related to the differentiation between domestic and foreign tourists. The trip durations of both types of tourists are not the same since the domestic tourist can make short trips while the foreign tourist usually makes longer trips to reduce the cost of the trip. Therefore, the first hypothesis is formulated as:

H1. The stays of foreign tourists are usually longer than those of national tourists.

If the focus is placed on the age of the tourists, the literature points to a positive relationship between the length of stay and the age of the tourists (Alén et al., 2014; Barros et al., 2010; Barros & Machado, 2010; Esiyok et al., 2018; Thrane & Farstad, 2012; Wang et al., 2012).

The explanation of the relationship between the age of tourists and LOS is related not only to their higher income level but also to having more time and availability to travel. Thus, we will establish the second hypothesis as:

H2. The length of stay is positively related to age.

Another variable that the literature recognizes as a determinant of the length of stay is the marital status of the tourist. For Salmasi et al. (2012),widows tend to have longer stays, and according to Mak et al. (1977), single visitors stay more days than married ones. That is why the following hypothesis is proposed:

H3. The duration of the stay is determined by the marital status of the tourist.

Finally, in relation to gender, some authors found that the longest trips are usually those made by men (Barros & Machado, 2010; Mortazavi & Cialani, 2016; Thrane, 2015), and the following hypothesis is proposed:

H4. For men's trips, the length of stay is longer.

2.3.2. Life-cycle characteristics

Regarding the life cycle, one of the variables to be taken into account is the composition of the households, since travelling with children often makes the length of stay longer (Grigolon et al., 2014; Scholtz et al., 2015; Soler et al., 2018). This leads to formulating the following hypothesis:

H5. The length of stay increases when there are children in the family.

In addition, tourist occupancy has often been related to the time available for travelling (Fleischer & Pizam, 2002) and the association between being a student and travelling is well known (Thrane, 2008). There is already evidence from other destinations wherein employment status determines the length of stay during the holidays (e.g. Alén et al., 2014). That is why the following hypothesis is formulated:

H6. The employment status affects the length of stay.

Focusing on the income variable, the literature review suggests a relationship between income and length of stay (Ferrer-Rosell et al., 2014; Fleischer & Pizam, 2002; Grigolon et al., 2014; Mak et al., 1977; Mak & Nishimura, 1979; Salmasi et al., 2012; Soler et al., 2018; Soler et al., 2020; Zheng & Zhang, 2013). From this information, the following hypothesis is formulated:

H7. There is a positive relationship between the length of stay and the tourist's income.

2.3.3. Motivation

A significant variable in relation to the length of stay is the motivation for the trip. Some authors have found positive relationships between a wide range of motivations (de Menezes & Moniz, 2011; Thrane & Farstad, 2012; Yang et al., 2011). There are different types of cultural tourist profiles, which tend to be motivated by more than just deep cultural experiences (Özel & Kozak, 2012). In this sense, business travellers are those who spend the most but also have shorter stays (Salmasi et al., 2012). Following this argument, some authors (Aguilar & Díaz, 2019; Mak et al., 1977) conclude that leisure tourists have longer stays than other tourists. For Hellström (2006), those who travel to visit acquaintances or relatives have longer stays. And according to (Marin-Pantalescu et al., 2022) cultural tourists have a longer length of stay in the destination they visit and spend a larger budget. Therefore, the following hypothesis is established:

H8. The intention of the trip affects the duration of the stay.

But the purpose of the trip is not the only variable of motivation. We could also highlight the satisfaction of the trip (Kozak & Rimmington, 2000; Neal et al., 2007) or the intention to return (Thrane, 2012). The cultural or city tourist has a variety of interests (gastronomy, concerts, festivals, museums, etc.) (Chen & Rahman, 2018) This leads us to establish the following hypotheses:

H9. Intention to return to the destination affects the length of stay.

Cultural tourism has a relevance in the city as it stands out for its need of a diversity of services and products: technological, social, architectural, natural, etc. (UNWTO, 2021).

Table 1
Description of sample.

Variables		Mean or %
Motivation	Other motivation	6.78
	Holiday[a]	73.91
	Business	6.27
	Visiting family or friends	13.05
Type of Accommodation	Other accommodations	3.00
	Five-star hotel[a]	0.86
	Four-star hotel	15.28
	Three-star hotel	22.58
	Two-star hotel	1.89
	One-star hotel	0.43
	Hostel	3.26
	Five-star aparthotel	0.69
	Four-star aparthotel	1.29
	Three-star aparthotel	0.60
	Two-star aparthotel	0.09
	One-star aparthotel	0.69
	Tourism apartment	1.29
	Rented house	27.90
	Second residence	3.95
	Timeshare house	2.75
	Family/friend's house	11.76
	Country house/lodge	0.09
	Shelter	1.63
	No hotel/hostel	55.79
Type of Reservation	Accommodation only[a]	10.64
	Breakfast included	20.86
	Half board	10.73
	Full board	1.89
	All-inclusive	0.09
	No answer	0.26
Mode of Transport	Rental car[a]	2.06
	Own car	22.06
	Coach	7.55
	Motorbike	0.09
	Airplane	53.22
	Train	11.33
	Ship	2.32
	Other transportation	1.12
	No answer	0.09
Satisfaction	Very positive[a]	57.08
	Positive	40.17
	The expected	2.32
	Negative	0.34
Reservation	Yes[a]	83.52
	No	15.19
	No answer	3.95
Destination internet use	Yes[a]	77.85
	No	18.20
	No answer	2.66
Anticipation time	Yesterday or today[a]	0.60
	Less than a week	2.83
	Between 7 and 15 days	10.39
	Between 15 days and 1 month	22.75
	From 1 to 2 months	34.42
	From 2 to 6 months	21.72
	From 6 months to 1 year	3.26
	>1 year	1.37
	No answer	1.55
Travelling Group	Alone[a]	10.73
	Couple	38.54
	Family	16.22
	Friends	28.67
	Co-workers	4.29
Intention to return	Yes[a]	65.49
	No	3.18
	Maybe	29.01
	No answer / Don't know	2.32
Recommendation	Yes[a]	89.53
	No	0.26
	Maybe	8.33
	No answer / Don't know	1.89
Visit another destination	Yes[a]	29.87
	No	44.72
	No answer / Don't know	25.41

(*continued on next page*)

Table 1 (*continued*)

Variables		Mean or %
Nationality	Spain[a]	36.91
	Foreign	63.09
	No answer / Don't know	0.09
Employment Status	Employee[a]	68.41
	Unemployed	0.86
	Student	18.11
	Retired	11.33
	Housework	1.20
	No answer / Don't know	3.61
Marital Status	Single[a]	35.79
	Married	57.08
	Widow/Widower	0.94
	Divorced	2.58
	No answer / Don't know	4.89
Dependent Children	Yes[a]	35.62
	No	59.48
Social Networks	Yes, I use them daily[a]	45.15
	Yes, occasionally	22.83
	I don't use them	21.29
	No answer / Don't know	10.73
	No answer	10.30
Age	18–29[a]	27.55
	30–39	18.20
	40–49	16.14
	50–59	14.16
	60–64	5.24
	≥ 65	8.41
Gender	Male[a]	54.85
	Female	45.15
Mean Monthly Income	≤ €500[a]	0.26
	€501–1000	0.94
	€1001–1500	2.15
	€1501–2000	4.38
	€2001–2500	6.01
	€2501–3000	7.21
	€3001–3500	4.64
	€3501–4500	3.00
	€4500–6000	1.46
	≥ €6000	2.23
	N/A	67.73
LOS		5.85
Satisfaction	Destination	8.19
	Accommodation	8.41
	Food and beverage	8.47
	Museums	8.50
	Events	8.38
	Leisure	8.43
	Public transport	8.34
	Beach services	8.31
	Environmental landscapes	8.44
	Urban environment	8.40
	Citizen security	8.40
	Attention / Treatment	8.50
	Quality / Price Ratio	8.45
	Accessibility	8.38
	Road signalling	8.35
	Tourist information	8.36
	Shopping	8.44
	Cleaning	8.10
	Traffic	7.94
	Parking	7.94
	Acoustic pollution	7.93

[a] Reference alternative.

H10. Satisfaction with services provided at destinations affects length of stay.

2.3.4. *Trip characteristics*

Other variables that are related to the characteristics of the trips are the types of accommodation used. In the case of accommodation already contracted in advance (hotels or apartments), tourists stay less time but have higher daily expenditures (Alegre & Pou, 2006). Therefore, we propose the following hypotheses:

H11. The type of accommodation determines the tourist's stay.

H12. The type of reservation determines the duration of the stay.

Mode of transport also seems to be relevant in determining the length of stay. Thus, De Menezes et al. (de Menezes et al., 2008) found that tourists using scheduled flights tended to stay less time than those flying on chartered flights, while Yang et al. (2011) concluded that the flexibility of mode of transport influences the length of stay in a negative way. However, Salmasi et al. (2012) show a positive relationship with LOS when travelling by train, plane and ship. In any case, there is a certain consensus that at least when the trip is solo or in a group, it determines the LOS (Salmasi et al., 2012). This leads to proposing the following hypotheses:

H13. The mode of transport determines the duration of the stay.

H14. Whether tourists travel alone or in groups determines the length of stay.

3. Methodology

3.1. Study area

Malaga is a city located in the south of Spain, in the tourist region of the Costa del Sol (Almeida-García et al., 2021). The growth of cruise tourism has triggered an orientation of its economic and it urban development activity towards tourism (Andrade et al., 2021), leading to a notable increase in the number of museums, hotels and rented flats (Andrade et al., 2020) and making it a well-known destination for both domestic and foreign tourists (Chica-Olmo et al., 2020).

3.2. Database

The variables studied were collected through a survey questionnaire that was structured in four groups of variables. The first group included sociodemographic variables such as nationality, age and gender. The second group of variables included life-cycle characteristics such as household composition, tourist's marital status, family income level and employment status. The third group of variables referred to travel motivations. The last set of variables included some characteristics of the trip such as the type of reservation, type of accommodation and board, the main travel cost, mode of transport and whether they travelled in a group.

The questionnaire was carried out on adult visitors in the city of Malaga who were not residents of Malaga or its metropolitan area, using stratified random sampling with a confidence level of 95 % and a sampling error of 5 %, through field surveys in different locations in the city. A total of 1152 questionnaires were collected between 1 November 2017 and 31 October 2018.

Table 1 compiles the details of the composition of the sample:

3.3. Econometric analysis

The analysis of the length of stay has methodological difficulties. By doing a study of the literature, different types of methodologies can be found and there is a debate about which is the most appropriate (Ferrer-Rosell et al., 2014; Soler et al., 2020; Thrane, 2012).

Survival or duration models are used by some authors to study the length of stay (Yiet al, n.d.; Barros et al., 2008; Barros & Machado, 2010; Gokovali et al., 2007; Martínez-Garcia & Raya, 2008; Peypoch et al., 2012; Wang et al., 2012). These models have been widely used in medicine or to analyse the survival of companies (Gemar et al., 2016; Gemar et al., 2019). However, the survival models applied to the length of stay receive criticism from some authors, such as Thrane (Thrane, 2012) who categorizes these methods as too complex and only applicable in parametric longitudinal models. This use of survival models in the analysis of the length of stay may be due to the analogy of the duration of a patient in a hospital. However, this author argues that when a tourist decides on a trip, the length of stay is a decision made beforehand, so it makes little sense to think of the length of stay as a positive random variable that indicates survival times.

Other authors (Lee et al., 2014; Scholtz et al., 2015; Thrane, 2012; Thrane & Farstad, 2012; Wang et al., 2018) prefer ordinary least squares (OLS) models, and argue that despite their simplicity, they offer results similar to count models (Thrane, 2016) the most successful alternative for many authors (Alén et al., 2014; Brida et al., 2013; Prebensen et al., 2015; Salmasi et al., 2012) is the use of count models (i.e., Poisson or negative binomial models), given the characteristics of length of stay. Count models are applied in this study.

The count models can be analysed using a negative binomial distribution which, following Alén et al. (2014), is defined with the following formula (1):

$$P(y_t) = \frac{\Gamma(\alpha^{-1}+y_t)}{\Gamma(\alpha^{-1})\Gamma(y_t+1)} \left(\frac{\alpha^{-1}}{\alpha^{-1}+e^{\sum_{k=1}^{k}\beta_k\chi_{tk}}}\right)^{\alpha^{-1}} \left(\frac{e^{\sum_{k=1}^{k}\beta_k\chi_{tk}}}{\alpha^{-1}+e^{\sum_{k=1}^{k}\beta_k\chi_{tk}}}\right)^{y_t}_{\forall y_t=\{0,1,2,\ldots\}} \quad (1)$$

The expression $P(y_t)$ represents the probability that an individual t will choose a number of days y_t for his stay. The characteristics of the subject are represented by Γ, χ_{tk}, and β_k represents the characteristic k. On the other hand, α expresses the dispersion of the observations.

Given that the Poisson model is a particular form of the negative binomial model when $\alpha = 0$, the Poisson model is more restrictive than the negative binomial models (Thrane, 2015), since in these models, variance and mean have the same value (Gurmu & Trivedi, 1996).

Negative binomial models are commonly used in empirical analyses since they tolerate overdispersion (Englin & Shonkwiler, 1995; Gurmu & Trivedi, 1992; Winkelmann & Zimmermann, 1995).

In the specific case of length-of-stay studies, function (1) must be adjusted to a zero-truncated negative binomial regression (Alén et al., 2014; Cameron & Trivedi, 1998; Greene, 2012) and expressed according to the following formula (2):

$$P(y_t|y_t>0) = \frac{\Gamma(\alpha^{-1}+y_t)}{\Gamma(\alpha^{-1})\Gamma(y_t+1)} \left(\frac{\alpha^{-1}}{\alpha^{-1}+e^{\sum_{k=1}^{k}\beta_k\chi_{tk}}}\right)^{\alpha^{-1}} \left(e^{\frac{\sum_{k=1}^{k}\beta_k\chi_{tk}}{\alpha^{-1}+e^{\sum_{k=1}^{k}\beta_k\chi_{tk}}}}\right)^{y_t} \left(\frac{1}{1-\left(1+\alpha\bullet e^{\sum_{k=1}^{k}\beta_k\chi_{tk}}\right)^{\alpha^{-1}}}\right)_{\forall y_t=\{1,2,\ldots\}} \quad (2)$$

Following Alén et al. (2014), the count models overcome the inefficiency problems of the logit model when considering so many alternatives (0, 1, 2, 3, 4, … days) (Cameron & Trivedi, 1998) and the bias

problems of the regression analysis by the discrete character of the dependent variable (Hellerstein & Mendelsohn, 1993).

4. Results

Table 1 shows the composition of the sample. The average length of stay is 5.85 days. The sample is made up mainly of men (54.85 %) with varied age ranges, the most common range being 18 to 29 years. The main motivation was holiday (73.91 %). These travellers mainly stayed in 3- and 4-star hotels or rented houses. The main type of reservation they made was bed and breakfast, the mode of transport was mainly airplane (53.22 %) or their own car (22.06 %). Based on the responses in the survey, the most valued facets of destination tourism companies are accommodation, food and beverage, attention, and the quality / price ratio. Regarding the environment, the most valued are the museums, events, environmental landscapes and urban environment. The least valued are traffic, parking and acoustic pollution, although the scores did not show great dissatisfaction with any of them.

Table 2 shows the results of the zero-truncated Poisson regression and the zero-truncated negative binomial regression. Values for the Akaike (1973, 1974) Information Criterion (AIC) based on logarithmic probability and the Bayesian Information Criterion (BIC) (Raftery, 1995) based on the deviation were calculated. It should be noted that a lower value in both cases indicates a better fit. The results from the AIC and BIC justified the application of the zero-truncated negative binomial regression instead of the zero-truncated Poisson regression (Akaike, 1973; Cameron & Trivedi, 1998; Raftery, 1995; Stasinopoulos et al., 2008).

5. Discussion

The findings of the present study are consistent with the results obtained from the Tourist Observatory of the city of Malaga (Ayuntamiento de Málaga, 2018). Table 3 shows the summary of acceptance or rejection of the hypotheses formulated. In this table, four sets are shown. The first set is the one corresponding to the accepted hypotheses. The second set is that of the rejected hypotheses because the sign of significance found was the opposite. It was found that the variables considered here had a significant impact on the length of stay, but in the opposite direction to that expected. The third set of variables is the one corresponding to the accepted hypotheses but only for some variables of those represented in that category. The fourth set of variables is the one corresponding to the rejected hypotheses.

Regarding the hypotheses considering the socio-demographic profiles of the respondents, in the analysed model, there is no causal relationship with respect to the length of stay if the client is a foreigner (H1), and this result is contrary to the findings by other authors (Gokovali et al., 2007; Thrane & Farstad, 2012). In addition, no relationship was found with the tourist's age (H2), contrary to what the literature shows (Alén et al., 2014; Barros et al., 2010; Barros & Machado, 2010; Esiyok et al., 2018; Thrane & Farstad, 2012; Wang et al., 2012). It should be added that it is not related to marital status (H3), as suggested by some authors (Mak et al., 1977; Salmasi et al., 2012). That is why these three hypotheses are rejected. There is only a causal relationship with the tourist's gender, coinciding with the findings of some authors (Barros & Machado, 2010; Mortazavi & Cialani, 2016; Thrane, 2015) but in a different sense than expected, since in the present study, it is women who stay longer than men. For this reason, we reject the hypothesis and defend the finding that is contrary to the literature (H4).

Regarding the hypotheses on life-cycle characteristics, H5 is rejected since in the present study, no causal relationship was found between the existence of dependent children in the family and LOS. These findings contradict some studies (Grigolon et al., 2014). Regarding employment status (H6), consistent with some authors (Alén et al., 2014), some categories were accepted in the present study. For instance, students and retired people do increase their lengths of stay. A curiosity is that regarding the traveller's income, a negative relationship was found in the present study for the income ranges €1001–€ 1500 and €2000–€2500, but the study found no relationship in the other ranges, contradicting the findings of some authors (Ferrer-Rosell et al., 2014; Fleischer & Pizam, 2002; Grigolon et al., 2014; Mak et al., 1977; Mak & Nishimura, 1979; Salmasi et al., 2012; Soler et al., 2018; Soler et al., 2020; Zheng & Zhang, 2013). The reason that only these income ranges were relevant for this destination in the short duration of stay is due to the fact that in the first income range were young travellers who could not organize longer trips due to limited income; the other income range involved families with very young children for whom travelling to this city destination and staying too long could be uncomfortable. This is why H7 is only accepted for some categories.

In the model analysed for the destination under study, trip purpose – except for other motivation – appear to have significant impacts on LOS. That is why H8 is accepted, but there is one noteworthy nuance. None of the typical travel motivations, i.e. leisure, business or visiting friends, are significant. This result is different when compared with those reported in the literature. A significative relationship between travel motivation and LOS was found by several authors (de Menezes & Moniz, 2011; de Oliveira Santos et al., 2015; Thrane & Farstad, 2012; Yang et al., 2011; among others). For example, Soler et al. (2018) found a positive relationship when people travelled for an educational purpose. Alén et al. (2014) obtained a positive impact of visiting friends on LOS. The findings of the present work do not find that the motivation of leisure tourists affects LOS, in contrast with other works where they did find a positive relationship with LOS (Aguilar & Díaz, 2019; Mak et al., 1977).

However, in line with the literature (Kozak & Rimmington, 2000; Neal et al., 2007; Thrane, 2012), the hypotheses regarding loyalty to destiny (H9) and satisfaction (H10) are accepted. The association between the intention to return and the length of stay is in line with the results obtained for example by Gang-Hoan et al. (2008), who concluded that repeat festival visitors showed longer lengths of stay, as well as a better attitude towards understanding the local culture and visiting the region. This authors also found that those who repeated, showed a more favourable attitude in terms of satisfaction. It is important to note that the implications of the results that lead to the validation of (H10) in the current research those deserves special attention.

Tourist who visit for longer stays explore more locations, generating more diverse economic, social and environmental impacts (Barros & Machado, 2010) and the contribution of cultural tourism is determined by the level of visitor satisfaction, which in turn has been formed on the appreciation of their experiences (de Rojas & Camarero, 2008). The relationship between negative satisfaction could be due to the predominant tourist profile. For example, we could be dealing with a predominant Class 3 of cultural tourist type, according to Van der Ark and Richards's (2006) classification, which has a high participation in cultural activities but a low level of satisfaction. This tourist might use secondary tourism resources to complete his or her holiday, but not value these experiences in the same way. Such a statement could be aligned with Su and Teng (2018), who stated that satisfying tourists can be one of the biggest challenges facing museums. However, it could also be seen from the supply side. It is possible that the destination is better positioned to satisfy short-stay customers. Destination managers should therefore work on the creation and promotion of the varied tourism offer demanded by these tourists. It is possible that, they may consider managing the expectations of these cultural tourists in order to improve their satisfaction (Kline et al., 2016). If their quality expectations are met and tourists perceived the price to be fair, cultural tourist spending and their satisfaction will be increased (Vena-Oya et al., 2021).

Based on the results described above, it seems difficult to develop segmentation strategies and increase the length of stay based on the socio-demographic profiles of tourists or their life cycle characteristics. It is necessary more than ever to understand the tourist, especially those who enjoy longer stays (Marin-Pantalescu et al., 2022). However, for

Table 2
Results for LOS determinant factors.

Variables	Zero-Truncated Poisson Regression				Zero-Truncated Negative Binomial Regression			
	Coefficient	Std. Error	z	Pr(>|z|)	Coefficient	Std. Error	z	Pr(>|t|)
Motivation								
Other motivation	0.5389523	0.1674726	3.22	0.001***	0.4766865	0.1403992	3.40	0.001***
Business	0.2947424	0.2986873	0.99	0.324	0.0939951	0.2284485	0.41	0.681
Visiting family or friends	−0.0693051	0.1033828	−0.67	0.503	−0.0404697	0.0969255	−0.42	0.676
Type of accommodation								
Other accommodations	0.1549497	0.3003924	0.52	0.606	0.0681813	0.239336	0.28	0.776
Four-star hotel	−0.0096158	0.1464651	−0.07	0.948	0.020601	0.1268006	0.16	0.871
Three-star hotel	−0.0412106	0.1349552	−0.31	0.760	−0.0192077	0.1221772	−0.16	0.875
Two-star hotel	−0.5174647	0.2130665	−2.43	0.015**	−0.5001454	0.1814184	−2.76	0.006***
One-star hotel	0.0296404	0.2855282	0.10	0.917	0.0352715	0.2584265	0.14	0.891
Hostel	−0.1544968	0.2028734	−0.76	0.446	−0.0586391	0.1746284	−0.34	0.737
Five-star aparthotel	−0.2964757	0.259119	−1.14	0.253	−0.3337275	0.1992479	−1.67	0.094*
Four-star aparthotel	0.1646989	0.2282162	0.72	0.470	0.1413331	0.2106428	0.67	0.502
Three-star aparthotel	0.075528	0.2877068	0.26	0.793	0.0823973	0.2349398	0.35	0.726
Two-star aparthotel	0.0966724	0.3961234	0.24	0.807	0.0094565	0.3249141	0.03	0.977
One-star aparthotel	−0.016836	0.3261591	−0.05	0.959	−0.0947895	0.2968829	−0.32	0.750
Tourism apartment	0.2774755	0.3305077	0.84	0.401	0.221078	0.294845	0.75	0.453
Rented house	0.4028558	0.2228481	1.81	0.071*	0.2674436	0.1933374	1.38	0.167
Second residence	0.8195707	0.2618251	3.13	0.002***	0.7492698	0.2182169	3.43	0.001***
Timeshare house	0.3594141	0.2622116	1.37	0.170	0.1892	0.2190482	0.86	0.388
Family/friend's house	0.5812874	0.2318039	2.51	0.012**	0.5401765	0.1980493	2.73	0.006***
Country house/lodge	−0.8702605	0.3594712	−2.42	0.015**	−0.9695937	0.3308222	−2.93	0.003***
Shelter	0.0982722	0.2551897	0.39	0.700	0.077613	0.227106	0.34	0.733
Type of reservation								
No hotel/hostel	−0.0559582	0.1563931	−0.36	0.720	0.0230021	0.1391288	0.17	0.869
Breakfast included	0.0876915	0.0738063	1.19	0.235	0.082772	0.0681036	1.22	0.224
Half board	0.0522938	0.086808	0.60	0.547	0.0187381	0.07764	0.24	0.809
Full board	−0.048941	0.1343532	−0.36	0.716	−0.090575	0.115235	−0.79	0.432
All-inclusive	1.174843	0.5166613	2.27	0.023**	0.7585657	0.4268275	1.78	0.076*
Mode of transport								
No answer	−0.678802	0.5383791	−1.26	0.207	−0.6109564	0.5001602	−1.22	0.222
Own car	0.1073192	0.2006128	0.53	0.593	0.023778	0.1760931	0.14	0.893
Coach	−0.0483478	0.2159429	−0.22	0.823	−0.1435059	0.1906514	−0.75	0.452
Motorbike	−1.696626	0.2689505	−6.31	0.000***	−1.657006	0.2217584	−7.47	0.000***
Airplane	0.1309527	0.1778004	0.74	0.461	0.1306871	0.1638081	0.80	0.425
Train	−0.1064464	0.1918098	−0.55	0.579	−0.1033341	0.1744168	−0.59	0.554
Ship	−0.705314	0.3140084	−2.25	0.025**	−0.7452447	0.2541639	−2.93	0.003***
Other transportation	0.1191521	0.3388535	0.35	0.725	0.1007543	0.3131598	0.32	0.748
Satisfaction								
No answer	−0.2563788	0.2061719	−1.24	0.214	−0.4316439	0.180756	−2.39	0.017**
Positive	0.0039215	0.0885106	0.04	0.965	−0.0148456	0.052452	−0.28	0.777
The expected	0.3288915	0.2048542	1.61	0.108	0.2833729	0.1697881	1.67	0.095*
Negative	1.484731	0.2231739	6.65	0.000***	1.585566	0.2507429	6.32	0.000***
Reservation								
No	0.1778125	0.1070041	1.66	0.097**	0.1442584	0.0794812	1.81	0.070*
No answer	−0.3499388	0.1508449	−2.32	0.020**	−0.3616075	0.124676	−2.90	0.004***
Destination internet use								
No answer	−0.1135204	0.1150893	−0.99	0.324	−0.0508153	0.0900344	−0.56	0.572
No	−0.1216337	0.0789937	−1.54	0.124	−0.0655385	0.058082	−1.13	0.259
Anticipation time								
No answer / Don't know	1.134592	0.3614825	3.14	0.002***	1.087904	0.3044127	3.57	0.000***
Less than a week	1.020056	0.3805493	2.68	0.007***	1.004979	0.3244894	3.10	0.002***
Between 7 and 15 days	0.9396117	0.3589716	2.62	0.009***	0.866739	0.2978953	2.91	0.004***
Between 15 days and 1 month	1.214437	0.364334	3.33	0.001***	1.190338	0.2974548	4.00	0.000***
From 1 to 2 months	1.26743	0.3615424	3.51	0.000***	1.215687	0.2956573	4.11	0.000***
From 2 to 6 months	1.620067	0.3495148	4.64	0.000***	1.536932	0.2954754	5.20	0.000***
From 6 months to 1 year	1.813026	0.3952249	4.59	0.000***	1.666837	0.3293002	5.06	0.000***
>1 year	1.866368	0.4571866	4.08	0.000***	1.797884	0.3707448	4.85	0.000***
Travelling group								
No answer	−0.5173576	0.2034202	−2.54	0.011**	−0.4016043	0.1786869	−2.25	0.025**
Couple	−0.3688798	0.1270377	−2.90	0.004***	−0.333655	0.1113507	−3.00	0.003***
Family	−0.3555672	0.1207585	−2.94	0.003***	−0.3635415	0.1077654	−3.37	0.001***
Friends	−0.7150975	0.1383786	−5.17	0.000***	−0.606419	0.1088639	−5.57	0.000***
Co-workers	−0.4899866	0.2513976	−1.95	0.051*	−0.4306103	0.1953794	−2.20	0.028**
Intention to return								
No	−0.2933442	0.1217741	−2.41	0.016**	−0.3162136	0.10556	−3.00	0.003***
Maybe	−0.0832121	0.0643009	−1.29	0.196	−0.0461153	0.0495561	−0.93	0.352
No answer / Don't know	−0.1206381	0.2228108	−0.54	0.588	−0.0757795	0.1499507	−0.51	0.613
Recommendation								
No	−0.020717	0.4452226	−0.05	0.963	0.0168626	0.411824	0.04	0.967
Maybe	−0.1225733	0.0825368	−1.49	0.138	−0.0907618	0.0738769	−1.23	0.219
No answer / Don't know	−0.3503532	0.1941362	−1.80	0.071*	−0.3444371	0.1576501	−2.18	0.029**
Visit another destination								

(*continued on next page*)

Table 2 (*continued*)

Variables	Zero-Truncated Poisson Regression				Zero-Truncated Negative Binomial Regression			
	Coefficient	Std. Error	z	Pr(>|z|)	Coefficient	Std. Error	z	Pr(>|t|)
No	−0.3135496	0.1016252	−3.09	0.002***	−0.2742719	0.0671555	−4.08	0.000***
No answer / Don't know	−0.1457176	0.0758575	−1.92	0.055*	−0.0834767	0.0592698	−1.41	0.159
Nationality								
Foreign	0.0411255	0.0688472	0.60	0.550	0.0207151	0.0553245	0.37	0.708
Employment status								
No answer / Don't know	0.3226359	0.1899638	1.70	0.089*	0.1910007	0.1293201	1.48	0.140
Unemployed	0.0206146	0.1873315	0.11	0.912	0.038511	0.1651416	0.23	0.816
Student	0.2969332	0.1030319	2.88	0.004***	0.2723405	0.0858756	3.17	0.002***
Retired	0.3888102	0.2018172	1.93	0.054*	0.365123	0.1790543	2.04	0.041**
Housework	−0.2473517	0.1617749	−1.53	0.126	−0.19722	0.125331	−1.57	0.116
Marital status								
No answer / Don't know	0.2585355	0.1806037	1.43	0.152	0.1098433	0.1455262	0.75	0.450
Married	−0.0669979	0.0711406	−0.94	0.346	−0.0402394	0.0599005	−0.67	0.502
Widow/Widower	−0.3665976	0.2267327	−1.62	0.106	−0.2397293	0.2033294	−1.18	0.238
Divorced	0.0517726	0.2331238	0.22	0.824	0.085312	0.1770046	0.48	0.630
Dependent children								
No answer / Don't know	−0.3320611	0.1778475	−1.87	0.062*	−0.2966123	0.1362124	−2.18	0.029**
No	−0.0259885	0.0858401	−0.30	0.762	−0.0552404	0.0656089	−0.84	0.400
Social networks								
Yes, occasionally	−0.1082449	0.0922663	−1.17	0.241	−0.0909424	0.0636594	−1.43	0.153
I don't use them	−0.0833867	0.0876864	−0.95	0.342	−0.1013615	0.0683889	−1.48	0.138
No answer / Don't know	−0.0447309	0.0924632	−0.48	0.629	−0.0394607	0.0759422	−0.52	0.603
Age								
No answer	0.0009882	0.1062598	0.01	0.993	0.0769948	0.0891073	0.86	0.388
30–39	−0.1279547	0.1143484	−1.12	0.263	−0.1288465	0.0863521	−1.49	0.136
40–49	−0.1627672	0.1448342	−1.12	0.261	−0.1345425	0.0987979	−1.36	0.173
50–59	0.0596009	0.1286333	0.46	0.643	0.0222676	0.0933085	0.24	0.811
60–64	−0.0065425	0.1554645	−0.04	0.966	0.0570733	0.1262572	0.45	0.651
≥ 65	−0.0981519	0.2108025	−0.47	0.641	−0.0629067	0.1799651	−0.35	0.727
Gender								
Female	0.1994674	0.0620925	3.21	0.001***	0.1468597	0.0412573	3.56	0.000***
Mean monthly income								
€501–1000	−0.3262079	0.2732006	−1.19	0.232	−0.3919885	0.2447166	−1.60	0.109
€1001–1500	−0.3002816	0.3083099	−0.97	0.330	−0.3848157	0.2303601	−1.67	0.095*
€1501–2000	−0.0585572	0.3199883	−0.18	0.855	−0.2421129	0.22037	−1.10	0.272
€2001–2500	−0.1919203	0.253827	−0.76	0.450	−0.3636135	0.1923701	−1.89	0.059*
€2501–3000	−0.0307472	0.3045143	−0.10	0.920	−0.2262054	0.2065045	−1.10	0.273
€3001–3500	0.1458258	0.267596	0.54	0.586	−0.0686019	0.2042876	−0.34	0.737
€3501–4500	0.0156627	0.309664	0.05	0.960	−0.2407074	0.2145283	−1.12	0.262
€4500–6000	−0.0210864	0.4395677	−0.05	0.962	0.0695725	0.4012253	0.17	0.862
≥ €6000	0.0779616	0.3008153	0.26	0.796	−0.135098	0.2208127	−0.61	0.541
N/A	−0.197817	0.2492037	−0.79	0.427	−0.4118277	0.1800678	−2.29	0.022**
(Intercept)	0.6919018	0.5584471	1.24	0.215	0.9238919	0.4371776	2.11	0.035**
/lnalpha	–	–			−1.756628	0.1515654		
alpha	–	–			0.172626	0.0261641		
Number of Observations in the Fit	1152				1152			
Degrees of Freedom for the Fit	90				91			
Akaike Information Criterion	6267.028				5482.157			
Schwartz-Bayesian Criterion	6721.461				5941.639			

Notes: Pr(>|z|) = two-tailed *p*-value; ***, **, * = statistically significant at the 1 %, 5 % and 10 % level, respectively.

this reason improvements in tourism offerings are particularly important to increase length of stay. o this end, it is important to highlight the opportunities for urban renewal in order to improve the tourist attractiveness (Bayliss, 2004; Krivý, 2013) and competitive possibilities of the destination (Mandeli, 2019). Likewise as stated above, 'pedestrianization' could reinforce shopping tourism as one of those secondary tourist resources with which to complete the vacation (Yoshimura et al., 2022), serving to improve the destination's offer and ultimately increase the length of stay and the destination's promotional opportunities.

Regarding the trip characteristics as conditioning factors of the length of stay, and specifically regarding the type of accommodation (H11), this study is in line with previous studies. Specifically, some authors found that cheaper accommodations such as tourist apartments, camping sites, country houses, rented houses, second houses or family or friends' houses, can affect LOS in a positive way (Martínez-Garcia & Raya, 2008). However, it may be noted that with regard to the type of reservation, only all-inclusive reservations have a positive relationship with LOS in the present study, so H12 is partially validated. However, Alegre and Pou (2006) found a positive relationship between accommodation-only and LOS compared with full-board reservations. In relation to the mode of transport and its relationship with LOS, the findings of this study confirm a negative relationship when travel is by motorbike or ship, which is why H13 is accepted only for some categories. This supports the fact that, in this coastal destination, cruise tourists tend to make shorter visits. However, these findings do not coincide with some authors (de Menezes et al., 2008), or with the results of Salmasi et al. (2012) who obtain a positive relationship, contrary to the results of the present study. Travelling by plane was not significant in the present study, and therefore some authors contradict our findings (de Menezes et al., 2008). Consensus has been found for individual or group travel and its relationship with the length of stay (Salmasi et al., 2012). This relationship is also confirmed in the present study. That is why H14 is accepted.

6. Conclusion

The present study analysed the determinants of LOS in a tourist destination. Results are very important for a number of reasons.

Table 3
Summary of hypotheses validation.

Hypothesis	Validation
Socio-demographic profile	
H_1: The stays of foreign tourists are usually longer than those of national tourists.	Rejected
H_2: The length of stay is positively related to age.	Rejected
H_3: The duration of the stay is determined by the marital status of the tourist.	Rejected
H_4: For men's trips, the length of stay is longer.	Opposite sign
Life-cycle characteristics	
H_5: The length of stay increases when there are children in the family.	Rejected
H_6: The employment status affects the length of stay.	Some categories
H_7: There is a positive relationship between the length of stay and the tourist's income.	Some categories
Motivation	
H_8: The intention of the trip affects the duration of the stay.	Accepted
H_9: Loyalty to the destination affects the length of stay.	Accepted
H_{10}: Satisfaction with services provided at destinations affects length of stay.	Accepted
Trip characteristics	
H_{11}: The type of accommodation determines the tourist's stay.	Some categories
H_{12}: The type of reservation determines the duration of the stay.	Some categories
H_{13}: The mode of transport determines the duration of the stay.	Some categories
H_{14}: Whether tourists travel alone or in groups determines the length of stay.	Accepted

Accepted = Hypothesis accepted
Opposite sign = Hypothesis rejected with opposite sign
Some categories = Hypothesis accepted only for some categories
Rejected = Hypothesis rejected

Theoretical implications, practical implications, limitations and future lines of research are explained below.

6.1. Theoretical implications

This research presents two important theoretical contributions. On the one hand, in this study, different methodological options were sought and a zero-truncated negative binomial regression was chosen. The existing methodological debate on the best way to model the length of stay is not avoided. On the contrary, it provides a strong rationale for highlighting that count models are the ones best adapted to LOS investigations. We also worked with a zero-truncated Poisson model, which it is justified to compare its fit with the zero-truncated negative binomial model. In summary, both models provide similar results for the validation of the hypotheses.

Planners need to develop urban plans to allow integrated infrastructural and socioeconomic development in the city (Rana & Bhatti, 2018). For example, to address overtourism, a radical approach to development models is needed, driven through research oriented towards efficient urban policies (Pasquinelli & Trunfio, 2020). This article attempts to contribute by emphasizing length of stay and its urban implications.

On the other hand, this model puts the focus of the problem of mass cultural tourism on short-term stays as well as on the planning and design of cultural destinations suitable for these cultural tourist profiles. To avoid crowded cities, long-stay destinations should be designed. To achieve this, the efforts should focus on understanding the cultural preferences of those tourist with a higher propensity for long stays. But also improve the knowledge about the destination traits of that favour this type of travel.

It is necessary to work on the services provided at the destination so that city tourists are not clustered on specific days and there are no significant seasonal variations. In the same way, it is strategic to achieve a longer length of stay, encouraging city visitors to return to the destination for a variety of reasons, including those that go beyond leisure. This could be for educational, exchange or event reasons.

This article helps to begin to uncover these patterns on international destination, with a clear orientation towards culture and urban lifestyle. A destination that could represent the idiosyncrasies of many other destinations, which must manage stakeholder pressure to shift the strategy towards one or another style of tourism.

However, it is important to be cautious. The present work highlights the heterogeneity of the destinations and suggests the need to replicate the study in many other different destinations. By working with the information of many destinations, it is certain that the behaviour patterns of particular variables will be discovered.

6.2. Practical implications

Policy makers will make better decisions if they know not only the descriptive studies that they usually have of their destinations but also the effective causal relationships captured by these models. For example, policy makers will have to pay special attention to loyalty and satisfaction of services at the destination, promoting these attributes by working on cleaning spaces and implementing destination quality standards that serve to increase the quality of tourist establishments. This research also provides indicators to improve destination promotion by identifying both the target and the conditions that favour different lengths of stay. In the same way, planners can take these results into account to set the tourism strategy and thus devote resources to the development of a varied offer that mixes major and minor tourism resources.

In addition, this research advances in the direction of new scientific literature in the study of LOS, with interesting results that contradict many studies in areas where it seemed that there was a certain consensus. If destination managers were to apply the findings of other research, they could reach sub-optimal decisions. Along these lines, the present study does not confirm the relationship between LOS and age, nationality or marital status for this destination. Nor is the fact of having children in the family decisive for LOS at this destination. An interesting result is that it is women who determine the length of stay the most. The relationship that income or employment status has with LOS is confirmed. Above all the relationship between motivation and length of stay: promoting the segment of visitors who are not only travelling for leisure, encouraging them to return to the destination on successive occasions and getting to know the tourist in order to provide a satisfactory service, will be factors that will have an impact on the length of stay being longer. A tourist who is loyal to the destination will feel the city as his or her own.

The importance of knowing the determinants of the length of stay has been explained and thus it can be said that if the length of stay is long, this will be better for the tourist destination. But from an urban point of view, this information will be very important given that the best knowledge of the length of stay will affect urban planning and design a city according to the expected flow of visitors, since the behaviour in the city is different if it is of a short or long stay tourist. The city should be planned urbanistically with this additional knowledge and design its growth according to this important data, especially in overcrowded tourist destinations.

Decision-makers should move towards a holistic approach to tourism policies, including management areas such as territorial planning and management. Strategies based on public administration leadership in tourism governance will therefore be necessary. Alongside this, it is vital to ensure social and economic balance in areas with the highest tourism pressure, while prioritising the maintenance of the resident population.

6.3. Limitations and future research work

This study has limitations inherent to this type of study. The most important limitation of this type of study is that its findings cannot be

extrapolated to other destinations, that is, the results are particular to the specific destination where it was applied. That is why it would be good to replicate the study in the future for the same destination and thus be able to compare with the present findings. The study could also be replicated in other destinations and thus try to discover patterns between some variables and LOS.

As future lines of research, the possibility of working with longitudinal data and using duration or survival models, more appropriate with this type of data, is proposed. In addition, this research simplifies the motivations of the tourists due to the difficulty in capturing the variety and depth of the concept as well as in trying to compare the results with other work. So, it would also be interesting to look at the length of stay for the different cultural tourism profiles. Focusing on the specific cultural motivations of the tourist key aspects of the length of stay that have so far remained hidden could be uncovered.

CRediT authorship contribution statement

German Gemar: Conceptualization, Methodology, Software, Data curation, Writing – original draft, Visualization, Investigation, Supervision, Validation, Writing – review & editing. **Eva María Sánchez-Teba:** Conceptualization, Methodology, Software, Data curation, Writing – original draft, Visualization, Investigation, Supervision, Validation, Writing – review & editing. **Ismael P. Soler:** Conceptualization, Methodology, Software, Data curation, Writing – original draft, Visualization, Investigation, Supervision, Validation, Writing – review & editing.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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