Research article

Factors influencing the cruisers in recommending onshore excursions in Gran Canaria

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ABSTRACT

This paper investigates which elements are the ones that most influence the cruise passenger to recommend the onshore excursions, offering relevant information that could help all stakeholders (cruise firms, local operators, politicians, etc.) to better design/adapt shore excursions to the expectations of the cruise passengers, increasing the positive impact of this activity in the destination. The latter is essential for the existence of a good harmony between the cruise ships visiting a destination and the population living there. To this aim, an ordered logit model was estimated using a sample of 1,059 questionnaires obtained during the period 2018–2020. The results have shown that cruise passengers are more likely to recommend the onshore excursions if their expectations regarding the excursion have been covered, they have perceived a good quality/price ratio and have had a satisfactory tour guide service. Moreover, the fact that the cruisers aged between 45 and 55 are less likely to recommend excursions could suggest that the design of existing excursions could be improved by being tailored by demographic characteristics (i.e., aged-oriented) or even by offering different alternatives for each group during the shore excursion when possible. The results could be useful to all stakeholders when designing excursions to increase the positive impact of this activity on the destination.

1. Introduction

Until the arrival of the COVID-19 pandemic, cruise tourism had become a popular choice for vacation travel. This was due to low price strategies and new emerging itineraries [1] where, in addition to enjoying the gastronomy and facilities on a boat [2], cruisers could visit different destinations and carry out activities onshore during each port of call.

It is recognized that beyond the problems that cruise tourism may cause, such as the overcrowding of cities [3] and environmental pollution derived from ships while at port [4,5], the industry also generates positive impacts upon the destinations included in their itineraries. Indeed, such positive impacts have been frequently studied not only by the own industry [6,7], but also by the extant academic literature which usually distinguishes between monetary and non-monetary value [8].

When it comes to monetary value, there are a significant number of studies assessing the economic impact on destinations through the evaluation of cruise ship tourists' expenditure onshore (see [9,10] for a review of papers focus on the total expenditure and on different expenditure items, respectively). On the other hand, the non-monetary value is associated with the opportunity of

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'showcasing' the destination's tourist attractions to cruise passengers who may recommend the destination when they arrive back home, (Word of Mouth communication, WOM hereafter) and may return as cruise passengers, or even as land-based tourists [11,12].

The spread of the virus paralyzed the cruise industry causing losses for the companies due to widespread interruptions and cancellations that affected millions of passengers and people employed directly or indirectly through the cruise industry [13,14]; the destinations also comprise one of the elements that has also been affected not only by the losses of the port business itself, but also by the loss of the crew and passenger expenses in port cities that contribute to local community [9,15].

Currently, cruise activity has been restarted, but under strict protocols that try to eliminate or at least alleviate the risk of people getting sick and with good forecasts for the industry [7]. According to [16] there is reason for hope and optimism "based on four expectations: a vaccine, the relaxation of travel restrictions, the implementation of additional health measures for passengers to access the ships and, mainly, the presence of loyal customers". The last point being key because the customer loyalty to a brand is related to a high levels of satisfaction with the purchased product (which in the cruise case includes not only the experience in the ship but also the onshore excursion during the port calls) and, therefore, affect the individual decision of whether to repurchase the product/service and even make a recommendation to others [17,18], associations that in the long term benefit both the cruise companies and the destinations. Therefore, research that focuses on the behaviour of cruise passengers onshore is indeed relevant due to the influence of the onshore experiences upon their satisfaction levels [19] intention of return [20] and/or to recommend the destination (WOM) [21–23].

The present study focuses on the cruiser's intention to recommend one of the main activities within the sector, the onshore excursions, "an aspect currently absent from cruising experience measures", as recently pointed out by [24], who recommended that "cruise lines should highlight unique port destinations through awe-inspiring itineraries". Indeed, and from an economic point of view, onshore excursions are one of the main elements contributing to improving not only the profit of the cruise companies (since it allows them to recover part of the lost profit caused by the discounts offered on cabins [3]), but also to ameliorating the economic impact on the local community [25]. This last point highlights the importance of understanding which factors determine whether cruise passengers recommend the excursion they have made, fundamental knowledge when designing/adapting it to the expectations of the cruise passengers.

To sum up, the research objective and, therefore, the contributions of this article to the extant literature are two. First, a literature review of studies associated with WOM related to the cruise industry is carried out and, more specifically, upon those that take WOM as a variable to be explained through econometric estimations. This literature review allowed us to delve into the factors by better identifying which could influence the cruisers to recommend the cruise, the destinations, or the onshore excursions. Second, to the best of the authors' knowledge, this is the first paper using econometric techniques to focus on the intention to recommend the shore excursions themselves, that is, to analyse the factors influencing the cruisers in recommending the onshore excursion, and it offers relevant information that could help all stakeholders (cruise firms, local operators, politicians, etc.) to increase the positive impact of this activity.

The rest of this paper is organized as follows. Section 2 undertakes a review of the literature trying to explain WOM in the cruise industry using estimations/econometric techniques. In Section 3, the methodology is described. Section 4 presents the questionnaire. Section 5 shows the data used to estimate the model, presents and discuss the results. Finally, Section 6 concludes, presents limitations and future research.

2. Brief literature review which attempts to explain WOM in the cruise industry

Nowadays, cruise passengers have more sources of information available than ever before, both before the cruise (cruise brochures, travel guides, WOM) and during the cruise itself with onboard meetings to talk about the destination, destination television channel, tourist information desk and WOM [26]. In this context, WOM communication plays a fundamental role, being perhaps the most influential source of information [27] to offer informal communication to other people about products, brands and/or services [28], which makes this non-monetary impact increasingly valuable. Besides, added to the more traditional forms of WOM we must include, thanks to technological advances, the e-WOM (electronic Word of Mouth) such as social networks, opinion portals and independent blogs [29]. In this regard, the cruise tourism industry recognizes the importance of WOM as a key marketing tool [30], since the cruise tourists' evaluations (not only regarding services on board the cruise, but also about the ship itself and the shore activities, including excursions) are increasingly taken into account [31–33].

Extant research related to the cruise passengers' intention to recommend (WOM) a cruise and/or a destination is relatively recent. Table 1 summarizes some papers using estimations/econometric techniques to explain WOM in the cruise industry.[1]

Table 1 shows that, although most of the studies focus on the intention to recommend the visited destination [8,21–23], others focus on the intention to recommend the cruise itself [34] or focus on customer satisfaction with cruise-line services [36]. Although, there are some papers which include shore excursions as an explanatory variable to explain the intention to recommend the visited destination [22] or (dis)satisfaction with cruise-line services [36], to the best of the authors' knowledge the present paper is the first to focus on the intention to recommend the shore excursions themselves; this is despite Johnson [37] and Lopes and Dredge [38] recognising shore excursions as being an important component of the cruise experience, and which are frequently identified as a key source of value, not only monetary but also non-monetary.

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[1] It should be noted that the WOM variable is not always taken as endogenous but as an exogenous variable in the literature; for example, other studies such as [50,51] incorporate WOM (through exogenous constructions) into their intentional behaviour studies as one of the variables explaining the destination's image.

Table 1

Paper using estimations to explain WOM in the cruise industry.

Study	Data	Methodology	Endogenous variable	Independent variables	Results
[34]	- Ship: Rhapsody of the Seas cruise liner (RCCL) - Ports: Singapore; Cambodia; Vietnam; Thailand; Hong Kong. - Year: n.a. - Period: a two-week cruise in January - Population: cruise passengers - Sample: 169 questionaries	- Multiple regression analyses - Likert scale 7 points (−3 to 3) to the likelihood of recommending - Questionnaire type: n.a. - Administered: Onshore - Sampling method: n.a. - SAQ:	WOM: this cruise	- Education - Entertainment - Aesthetics - Escapism - Satisfaction	A partial mediation of satisfaction in the relationship between experiences and intention to recommend was established.
[38]	- Ship: n.a. - Ports: Split and Trogir (Croatia) - Year: 2009 - Period: July–October - Population: cruise passengers - Sample: 602 questionaries	- Binary logistic regression - Likert scale 7 points - Questionnaire type: Structured - Administered: On board - Sampling method: n.a. - SAQ: Yes	WOM: the visited destination	- Overall experience with the country attributes - Gastronomic offer - Tourism destination product	- High level of positive WOM - Satisfaction positive influence on WOM intentions
[8]	- Ship: Navigator of the Sea (RCCL Italy) - Port: Messina (Italy) - Year: 2012 - Period: July–September - Population: cruise passengers - Sample: 208 questionaries	- Estimation of "echo" effect generated by positive WOM - Likert scale 6 points (−3 to +3) - Questionnaire type: Structured - Administered: Onshore - Sampling method: n.a. - SAQ: No	WOM: the visited destination		Cruisers who bought an organized excursion package tend to be more active in recommending the visited destination
[21]	- Ship: Costa Crociere (CCC) - Ports: Cádiz, Valencia, Barcelona (Spain); Lisbon (Portugal); Casablanca (Morocco) - Year: 2013 - Population: cruise passengers of Costa Fortuna aged 18 or over - Sample: 748 questionaries	- Ordered logistic regression - Likert scale 4 points - Questionnaire type: Structured - Administered: On board - Sampling method: Accidental - SAQ: No	WOM: the visited destination	- Satisfaction - Satisfaction multiplied by excursion - Excursion - Employment - Age - Older cruisers - Marital status - Country of origin - Education - Income - Group composition - First cruise - Time spent out of the ship - Destination (port dummies)	The level of cruiser's destination satisfaction positively influences the intention to recommend the visited destination
[22]	- Ship: n.a. (RCCL) - Ports: Genoa, Messina, Bari (Italy) - Year: 2012 - Period: July–September - Population: cruise passengers aged 18 or over - Sample: 669 questionaries	- Ordinary least-squared - Likert scale 7 points (−3 to 3) to the likelihood of recommending - Likert scale 5 points to rate the satisfaction with the overall onshore destination - Questionnaire type: Structured	WOM: the visited destination	- Overall satisfaction of the destination - Destination (port dummies) - Homeport vs. port of call - Gender - Age - Nationality - Marital status - Employment - Repeater	Results confirm the positive association between overall destination satisfaction and WOM attitude.

Table 1 (*continued*)

Study	Data	Methodology	Endogenous variable	Independent variables	Results
		- Administered: Onshore - Sampling method: Accidental - SAQ: No		- No guided excursions taken	
[23]	- Ship: Celebrity Century (CCL); Golden Princess, Sapphire Princess (PC) - Port: Oahu, Hawaii (USA) - Year: 2013 - Period: Spring - Population: cruise passengers - Sample: 237 questionaries	- Binary logistic regression - Likert scale 5 points - Questionnaire type: Structured - Administered: Onshore - Sampling method: Accidental - SAQ: n.a.	WOM: the visited destination	- Satisfaction - Trips - Distance (miles) - Age - Ship - Gender - Marital status - Education	Overall satisfaction has an influence on the declared intent to revisit and recommend
Present study	- Ship: AIDAnova; Columbus; Explorer of the Seas; Marella Dream; Marella Explorer; Mein Schiff 1; Mein Schiff 2; Mein Schiff 3; Mein Schiff 4; Mein Schiff Herz; Norwegian Spirit; Vasco Da Gama - Port: Gran Canaria (Spain) - Years: 2019 and 2020 - Period: January–March 2019 and October-2019-March 2020 - Population: cruise passengers - Sample: 1059 questionaries	- Ordered logistic regression - Likert scale 7 points - Questionnaire type: Structured - Administered: Onshore - Sampling method: Accidental - SAQ: Yes	WOM: the tour (shore excursion)	- Information received before the tour - Transport services reach - The tour guide service - Quality/Price ratio - Covered expectation - Previous port of call - Rating Berlitz - Season - Gender - Age - Education level - Occupation - Nationality - Monthly family income	Cruise passengers are more likely to recommend it if: - Their expectations regarding the excursion have been covered, - They have perceived a good quality/price ratio - They have had a satisfactory tour guide service (importance of the human factor).

Note: RCCL = Royal Caribbean Cruise Line; CCL= Carnival Cruise lines; NCL = Norwegian Cruise Line, CCL = Celebrity, Cruises, PC = Princess Cruise; SAQ = Self-administered questionnaire; n.a. = Not available.

It should be noted that, all papers in Table 1 gathered the data through questionaries. Moreover, regarding where the questionnaire survey was conducted, five articles collected data onshore [[8,22,23,34], the Present Study], whereas the other two did so on board [21,35]. Besides, three out seven focus on a single port [[8,23], Present study], two out seven focus on several ports belonging to the same country [22,35] and two out seven analyse several ports belonging to different countries [21,34]. It should be noted that all the works reviewed (see Table 1) involve ports located in countries that belong to the northern hemisphere (Croatia, Italy, Spain, Portugal, Morocco, the United States, Singapore, Cambodia, Vietnam, Thailand, Hong Kong). Regarding the population interviewed, all the papers focus exclusively on cruise passengers; three of them were performed by trained interviewers [8,21,22] and four were self-administered [[23,34,35], the Present Study].

In terms of the model used, all the papers included in Table 1 apply econometric models with the sole exception of Penco & Di Vaio [8] which, despite not using proper econometric models, try to estimate the "echo" effect generated by the WOM. The regression models used were: multiple regression analyses [34], ordinary least squares models [22], binary logistic model [23,35] and ordered logistic regressions [21, Present study].

Finally, and regarding the explanatory variables included in the estimations, two studies used the factors extracted from an Exploratory Factor Analysis [35] or Confirmatory Factor Analysis [34] applied to a set of items obtained in the questionaries, whereas the other four used some of the items included in the questionaries as variables [21, 22, 23, the Present Study] along with socio-demographic variables (i.e., age, gender, education, nationality, employment, income, and so on). Moreover, other variables such as satisfaction or whether an excursion/trip was made [21–23] and even the interaction effect between the two variables [21] have also been considered. Moreover, studies obtaining their sample from more than one port of call introduce dummies variables to distinguish between each of these ports [21] or between the type of port: home port or port of call [22]. Other variables also included in same studies are a dummy that indicates whether it is a first-time cruiser or a repeater [21,22]; the group composition (i.e., partner, family, friends or alone) and the time spent onshore [21] or the distance between the destination, the visitor's residence and the ship where the visitors embarked [23]. Finally, among the variables of the present study, not featured in the other studies is the information received before the tour, the evaluation of the transport services and tour guide service, the quality/price ratio, the previous port of call, the

score of the Berlitz's rating, whether the tour covered the cruiser's expectation and a dummy to distinguish the season in which the survey was carried out.

3. Material and method

3.1. Theoretical model

Discrete choice models are used to analyse individual choices among alternatives. These models are based on the economic theory of random utility assuming that the decision-maker chooses the alternative with the highest utility [39].

The models of multiple response introduced by McFadden [39], on the basis that the categorical variable of interest follows a multinomial distribution, use the maximum likelihood method to estimate the probability associated to each election given the characteristics of individuals or the attributes of the choices, as summarized in the regressors and included in the model. In some cases, categorical data are naturally ordered. One example is the 7-point Likert scale used in discrete opinion surveys, such as the one used in this paper, to assess cruisers' satisfaction regarding the excursion they had taken in Gran Canaria; that is, the model explains the endogenous variable (latent) through the categorical variables (the cruisers' elections) and cruisers' individual characteristics such as gender, age, etc. [40].

The most popular standard model for such data is the ordered logit model [41]. The theoretical fundamental of this specification is based on additive random utility model or the latent regression model. Following Cameron and Trivedi [42], the ordered outcomes are modelled to arise sequentially as a latent variable, y* that in our case is an unobserved measure of agreement/disagreement. For cruiser i,

$$y_i^* = x_i'\beta + \varepsilon_i \tag{1}$$

For an m-alternative logistic ordered model,

$$y_i = j \quad if \; \alpha_{j-1} < y_i^* \leq \alpha_j, with \quad j = 1, \ldots\ldots m.$$

where:

$$\alpha_0 = -\infty \quad and \; \alpha_m = \infty$$

Then:

$$\Pr(y_i = j) = \Pr\left(\alpha_{j-1} < y_i^* \leq \alpha_j\right)$$

$$= \Pr\left(\alpha_{j-1} - x_i'\beta \; < \varepsilon_i \leq \alpha_j - x_i'\beta\right) \tag{2}$$

$$= F\left(\alpha_j - x_i'\beta\right) - F\left(\alpha_{j-1} - x_i'\beta\right)$$

where F is the cumulative distribution function (c.d.f.) of the error term, ε_i, and it is logistically distributed. The regression parameters, βs, and the m - 1 threshold parameters $\alpha_1, \ldots \alpha_m$, are obtained by maximizing the log likelihood with $\Pr(y_i = j)$ as defined above.

The sign of the βs parameters can be interpreted as determining whether the latent variable, y*, increases with the regressor. Therefore, if β_j is positive, then an increase in X_{ij} necessarily decreases the probability of being in the lowest category ($y_i = 1$) and increases the probability of being in the highest category ($y_i = m$).

3.2. Econometric model

In the econometric model of an ordered logit model, the continuous latent variable Y* has various cut points, so the value on the observed variable Y depends on whether or not crossed a particular cut point. In the case of our estimated model we have two cut points (note that there is no intercept term). Then the estimated M-1 cut point terms (k_1 and k_2 in our case) are used to estimate the probability that Y will take for a particular value, that is:

$$y_i = 1 \; if \; y_i^* \leq \kappa_1 \tag{3}$$

$$y_i = 2 \; if \; \kappa_1 < y_i^* \leq \kappa_2 \tag{4}$$

$$y_i = 3 \; if \; y_i^* > \kappa_2 \tag{5}$$

where the formulas to obtain the probability in case of M = 3 are:

$$\Pr(y = 1) = \frac{1}{1 + e^{(Z_i - \kappa_1)}} \tag{7}$$

$$\Pr(y = 2) = \frac{1}{1 + e^{(Z_i - \kappa_2)}} - \frac{1}{1 + e^{(Z_i - \kappa_1)}} \tag{8}$$

$$\Pr(y = 3) = 1 - \frac{1}{1 + e^{(Z_i - \kappa_2)}} \tag{9}$$

Hence, using the estimated value of Z:

$$Z_i = \sum_{k=1}^{K} \beta_k X_k \tag{10}$$

and if we assume that the disturbance term follows a logistic distribution, we can estimate the probability that the latent variable Y* is within the cut points by applying the ordered logit model.[2]

4. Data

The Canary Islands are a Spanish archipelago located in the Atlantic Ocean. They are part of the tropical region of Macaronesia and have a temperate climate throughout the year. The island of Gran Canaria is the third largest island of the Canaries. The capital of Gran Canaria Island is Las Palmas de Gran Canaria which is the largest city in the archipelago.

The tourism sector represents the main economic activity in the archipelago. Cruise passengers' numbers and cruise services deployed in the Canaries have increased over time since the final years of the past century (see Fig. 1), when this type of tourism began to operate on a regular basis, with the sole exception of the last year due to COVID-19. In 2019, the main Canary Islands involved in cruise traffic were Tenerife (Tenerife Port), Gran Canaria (Las Palmas Port) and Lanzarote (Arrecife Port), which together signifies 77.5 % of the total cruise traffic (29.1 %, 28.4 % and 20.1 %, respectively); the other five less important ports are Rosario, Los Cristianos, La Gomera, La Palma and La Estaca (located in Fuerteventura, Tenerife, La Palma, La Gomera and El Hierro, respectively). Indeed, Las Palmas held one of the largest shares in continuous growth until March 2020 when cruise ships were banned from Spanish ports due to the COVID-19 pandemic.[3]

The study focuses on cruise passengers who disembarked in Gran Canaria (Las Palmas Port) and taken any of the excursions offered by the cruise company. To gather the dataset, we have the collaboration of Las Palmas Port Authority[4] and from Intercruises Shoreside & Port Services.[5] The latter offers shore excursions to cruise companies in Las Palmas Port and it allowed the questionnaires to be distributed, at the end of the tour and inside the buses, by the cruisers' guides to those cruisers who agreed to collaborate with the study. Following this procedure and through self-administered questionaries, a final sample of 1059 surveys was attained during the high cruise seasons (from october to march); 496 were obtained 2018–2019 season and 563 in the 2019–2020 season.[6]

The items included in the questionnaire were designed after drawing on the WOM tourism and cruise literature (see Section 2) and could be classified in five sections. The fourth one included the questions specifically design to investigate what the cruiser's experience regarding the excursion was. Throughout those questions they had to evaluate their satisfaction regarding the tour. This way, they had to assess different aspects such as the transport service's quality and the tour's price/quality relationship, to name but two. Finally, they had to answer whether they would recommend the tour. The last section included the usual sociodemographic questions which let us know the passengers' profile.

5. Results and discussion

5.1. Survey analysis

For the sake of brevity this section only presents and discusses the data included in the different ordered logit models estimated, in order to analyse what factors influence the cruisers in recommending the onshore excursion. Interested readers could find all the cruisers' answers not included here in the Appendix.

Table 2 shows the sociodemographic characteristics of the cruise passengers in the sample during the two seasons. There are no major differences in gender, age, occupation, and monthly family income among the seasons. Similar to the gender stratification of cruisers' population where cruise passengers are predominantly female [43], the respondents are also predominantly female. Moreover, the age distribution shows that more than 80 % were older than 45, the 56 and older age cohorts being the most represented class (more than 60 %) and the ($\leq$25) cohort the least represented with less than 5 %. That is to say, although cruise industry is increasingly

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[2] The estimates were made with Stata software, version 14.

[3] Several cruise firms approached the Canary Islands Government to activate the autumn-winter season of their cruises between the Canarian ports only. The Canary Islands Government authorized cruise ships, which comply with the new health rules set out by the regional authorities, to restart between the ports of the islands from November 5th, 2020. Since then TUI Cruises have been operating permanently while Aida and Happag Lloyd's do so intermittently.

[4] The Canaries comprised two provinces, Las Palmas and Santa Cruz de Tenerife, each one having several islands. Ports in each province is managed by its own Port Authority. According to Ref. [9] the reader interested on a detailed analysis of the port management model in Spain, could see Rodriguez-Álvarez and Tovar [52] and Tovar and Wall [53–55].

[5] This is an experienced global business offering turnaround, shore excursions, port operations and hotel-programme services to the ocean and river cruise industry.

[6] The cruise industry covid shutdown in mid-March 2020 meant the interruption of the data collection.
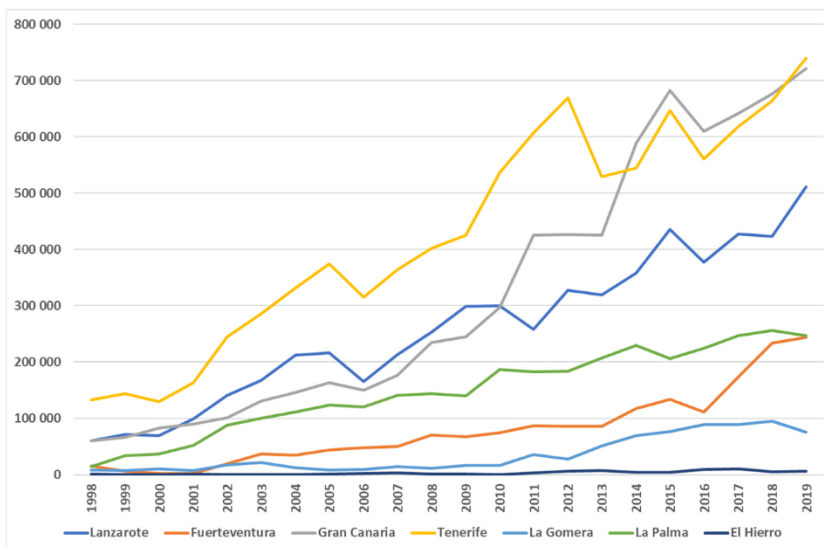
Fig. 1. Evolution of cruise passengers by island in the Canary archipelago.
Source: Statistical Institute of the Canary Islands (ISTAC).

Table 2
Cruisers' sociodemographic profile.

Variable	Season 2018–2019	Season 2019–2020
	%	%
Gender		
Male	43.55	40.50
Female	56.45	59.50
Age		
≤25	3.83	2.31
26–44	14.52	9.77
45–55	17.94	21.14
≥56	63.71	66.79
Education level		
No studies	4.84	1.78
High school or below	10.69	12.26
Vocational/Professional Training	37.10	35.17
College/Degree	47.38	34.99
Postgraduate and beyond	–	15.81
Occupation		
Freelance	5.44	7.64
Executive management member	6.05	4.44
Middle manager	10.08	6.57
Employee	28.23	31.97
Retired	42.54	45.83
Student	1.01	1.24
Housewife	2.42	2.13
Unemployed	0.20	0.18
Nationality		
German	39.31	48.13
British	20.56	34.46
North American*	26.81	4.09
Other	13.31	13.32
Monthly family income		
NA	36.09	41.21
<500 €	0.81	0.36
501-1000 €	1.21	2.31
1001-2000 €	8.47	9.41
2001-3000 €	13.91	14.74
>3000 €	39.52	31.97

Note: North American comprises Americans and Canadians.

attracting young generations (see [6,22]) this is still not really happening in the Canary Islands.

Finally, it should be noted that a variable for income is available in the database despite the usual potential problems that could be associated with this variable.[7] Table 2 shows that there are high rates of non-response: 36.09 % and 41.21 % depending on the season. Moreover, 39.52 % and 31.97 % of respondents for 2018–2019 and 2019–2020 seasons, respectively, stated a monthly family income higher than €3000.

The levels of education of the respondents were grouped into five categories ranging from no studies or postgraduate and beyond. The educational profile is medium-high: more than 70 % of participants hold a vocational/professional training and more than 47 % are graduates or postgraduates and beyond, no matter the season. Regarding the level of studies, it has been observed that the main difference between seasons is the existence that 15.81 % of the individuals who arrived in the 2019–2020 season have postgraduate studies.

The great majority of the respondents resided in Europe, and the main groups within the European citizenry cruising in the Canary Islands in the sample were the British and Germans, which was as expected due to the usual nationality profile of those cruising in the Canary Islands [44]. This is not a surprise due to the fact that "UK has been the second largest single country source market for cruise passengers (after the USA) for more than 20 years" [45]. The survey population of those from outside Europe were, mainly, from the USA and Canada. There are major differences between seasons when it comes to the latter nationalities. Thus, in the 2018–2019 season, 26.81 % of those surveyed were people from the North American region (Americans and Canadians), while in the following season this group only represented 4.09 %. This notable reduction was probably due to the unusual presence of the US cruise company Norwegian Cruise Line during the 2018–2019 season, as in the following season its itineraries did not include the Canary Islands.

Regarding occupation, the vast majority of cruise travellers were retired (more than 40 %), followed by employees (28.23 % and 31.97 %, depending on the season) and then with quite a significant distance, middle manager (7.8 %).

Table 3 shows the items related to the satisfaction levels regarding the tour. The cruiser has to indicate his/her degree of agreement or disagreement with each one of the items, using a 7-point Likert scale (where 0 means strongly disagree and 7 means strongly agree). The first five items are related to different aspects of the excursion carried out and the last one synthesizes his/her overall assessment of the tour by asking whether he/she would recommend the excursion he/she has taken.

The mean and mode values in Table 3 reveal that cruisers have a high degree of agreement with the items, which allows us to conclude that the perception of cruise passengers about the excursion was positive, highlighting the quality of the transport service and the tour guide as the factors that have contributed the most to the fact that the cruise passengers have also mostly agreed that the excursion met their expectations and would recommend it. The internal consistency on these Likert items was considered excellent [46] with a value of 0.904 in the Cronbach Alpha index.

5.2. Regression analysis

After the initial estimates obtained and carrying out an analysis as robust as possible, the range of variables was reduced (as has already been done in other studies such as Li and Kwortnik [47] and Di Vaio et al. [48] to name but two) from a 7-point to a 3-point Likert scale, obtaining a Cronbach's Alpha index of 0.885, to check which of the two scales produces better results.

The transformation of the initial scale was due to the observed bias towards the highest scores which could be behind the low significance of the variables and the models initially estimated. The statistics used for the comparison of the models estimated with the 3-points and 7-points Likert scale were the pseudo R^2, the log likelihood and the Akaike (AIC) and Bayesian (BIC) information criteria, the latter also known as the Schwarz information criterion. Thus, for the pseudo R^2 values, values of 0.6133 and 0.5345 were obtained for the model estimated with the 3-points and 7-points Likert scale, respectively. In turn, the values of the log likelihood obtained were −439.2584 and −681.4184 for the model estimated with the 3-points and 7-point Likert scale, respectively. Finally, the values obtained for the AIC and the BIC were 906.5167 and 976.0278 when the 3-point scale was used whereas, they were 1396.8370 and 1481.2430 in the case of the 7-point scale. Therefore, all the statistics confirm that the best model is the one obtained after the reduction in the range of variables.

The results of the best model estimation, which takes as a reference category an individual aged 56 years or over, who visited Gran Canaria during the 2018–2019 season and whose previous port of call was Arrecife (Lanzarote), is presented in Table 4. This ordered logit model was obtained after reducing the range of variables, and is the result of applying the stepwise method; that is to say, we eliminated one by one of the non-significant variables (from highest to lowest degree) and re-estimated the model until we obtained the best one.

The results shown that those cruise passengers are more likely to recommend them, if their expectations regarding the excursion have been covered, they have perceived a good quality/price ratio and have had a satisfactory tour guide service. This last factor highlights the importance of the human factor in this type of activity being the guides one of the tourist agents, perhaps the most important, of transmission, valorization and interpretation of heritage, since they are the ones who have direct contact with the visitors. Hence the importance of the guide being qualified and well prepared for each excursion. This result can also be found in [31], where their study highlights the "importance of the performance of the tour guide".

Regarding the sociodemographic variables, results show that cruisers aged between 45 and 55 are less likely to recommend them than people aged over 56. This result could be consequence of the age difference inside the groups (i.e. the tours' pace could be slower

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[7] We decided to include a question about income in the survey despite of potential problems derived not only from the high rates of non-response, but also due to a high percentage of unreliable answers.

Table 3

Cruisers' answers about the tour undertaken in Gran Canaria. 2018–2019 & 2019–2020 seasons.

About the tour you have done today	Mean	Mode	Std. Dev.
I received sufficient and truthful information before taking the tour	5.96	7	1.21
	5.71	7	1.33
The transport service (driver and bus) reaches high standard of quality	6.43	7	1.00
	6.20	7	1.12
The tour guide service is satisfactory (kindness, knowledge of language, …)	6.49	7	1.01
	6.24	7	1.16
The quality/price ratio is excellent	5.75	7	1.23
	5.55	6	1.32
The tour has covered my expectations	6.08	7	1.15
	5.86	7	1.23
I would recommend this tour	6.11	7	1.25
	5.85	7	1.31

Note: Shaded rows represent cruisers' responses for the season 2018–2019.

Table 4

Ordered logit model.

I would recommend the tour	Coefficient	Std. Err.
The tour guide service is satisfactory (kindness, knowledge of language, …)	0.341**	0.144
The quality/price ratio is excellent	0.910***	0.163
The tour has covered my expectations	3.789***	0.188
Age		
$\leq$25	−0.0527	0.547
26–44	−0.476	0.293
45–55	−0.484**	0.243
Season		
2019–2020	−0.480**	0.222
Previous port of call		
Cádiz	0.245	0.364
Casablanca	1.002***	0.346
Puerto del Rosario	0.328	0.336
San Sebastián de La Gomera	0.925	0.848
Santa Cruz de Tenerife	−0.141	0.258
Constant cut1	7.136***	0.437
Constant cut2	11.39***	0.562
Observations	1059	

***$p < 0.01$, **$p < 0.05$, *$p < 0.1$.

to prevent it from being too intense for the older ones, causing dissatisfaction to younger ones).

Moreover, those cruise passengers who made any of the excursions during the 2019–2020 season are less likely to recommend them compared to those who came during the 2018–2019 season. The presence of North Americans during the 2018–2019 season was considerable and the vast majority stated that they would recommend the shore excursions. Therefore, it would be convenient for local stakeholders to encourage cruise companies that work with this type of cruise passengers to schedule itineraries to the Canary Islands. What could be the tools to encourage cruise corporations is out of the scope of this paper but deserves future research effort.

In addition, although it has not been possible to establish a relationship between each one of the previous ports of call and the probability of recommending the onshore excursions in Gran Canaria, the model tells us that those individuals who arrived from Casablanca (Morocco) are more likely to recommend the excursion in Gran Canaria compared to those arriving from Arrecife (Lanzarote). This result could be due to higher similarities between the two Canary Islands which might make the onshore excursions less attractive. Indeed, the items devoted to discovering the cruisers' opinions regarding the offer of tours in Gran Canaria (see Appendix) suggest that promoting the originality of tours offered in each island should be a priority. In this sense, applying a content analysis

Table 5

Prediction power for ordered logit model.

I would recommend the tour (real)	I would recommend the tour (predicted)			Total
	Disagree	Neither disagree nor agree	Agree	
Disagree	243	23	5	271
Neither disagree nor agree	31	274	19	324
Agree	4	49	411	464
Total	278	346	435	1059

through text as [33] did in their study could allow us to discover differences and similarities in the content of each shore excursion offered by cruise companies in each destination.

In general, the findings of the present study show that the cruise passengers surveyed show high values for the items related not only with the offer of tours, but also with the satisfaction levels regarding the excursion they enjoyed. However, it should be borne in mind that during the 2019–2020 season these values were slightly lower, so it is convenient to monitor this negative evolution. Moreover, the fact that the cruisers aged between 45 and 55 are less likely to recommend excursions could suggest that the design of existing excursions could be improved by being tailored by demographic characteristics (i.e., aged-oriented) or even by offering different alternatives for each group during the shore excursion when possible. So it may be useful for tour designers, to delve even deeper on the factors that make cruise passengers choose and recommend a certain type of shore excursion, in order to design new and better offers to increase the tours demand, benefiting both local communities and cruise companies.

Finally, the predictive capacity of the model is presented in Table 5. Based on the results showed in the table, a predictive capacity of 87.63 % was obtained. This is a fairly high percentage and indicates that the model has a good predictive capacity.

6. Conclusions and future research

The present study fills a gap in the literature by estimating an ordered logit model to investigate which elements are those that most influence the cruise passenger to recommend one of the main activities within the cruise sector, the onshore excursions. The case study focuses on Gran Canaria (Spain), where the evolution of the arrival of cruise passengers indicates an increasing trend. With this aim, a sample of 1,059 questionnaires was obtained through surveys during the 2018–2019 and 2019–2020 seasons.

The results have shown that the factors which positively influence the cruise passenger in recommending the excursions are the quality of the tour guide, excellent value for money and that the excursion has met their expectations; this indicates the importance of the human factor (tour guide) and the design of the excursion when shaping the future offer of the excursions. Likewise, the negative sign of the age group between 45 and 55 years indicates that they would recommend them to a lesser degree than the reference group, which may be a call for attention to design specific excursions, or to add alternative activities to current excursions that take into account the different age groups. Similarly, it seems that cruise passengers from the last season studied would recommend them less strongly than those from the previous season, so it is advisable to monitor this evolution and, if it persists, to analyse its causes.

Finally, this work presents some limitations that could be considered in future research. First, the data were collected in a single port, therefore it would be convenient to carry out studies which include in the sample all the ports on the itinerary, this would be to analyse whether the fact of having made an excursion in the previous port of call has any effects on the decision of doing so in the next. In addition, our sample only included cruisers that decided to purchase one of the excursions offered by the cruise company. In fact, to collect the data set, as explained in Section 4, the questionnaires were distributed by the tour guides at the end of the tour and on the buses to those cruisers who agreed to participate in the study. For this reason, there is a lack of information about those who decided not to go on a tour. Therefore, it might be convenient for future research to also include those cruisers who choose to explore the island on their own or to buy onshore excursions from local firms. This is in order to gain a better understanding of the determinants that make a cruise passenger recommend the excursion taken at the destination. In addition, although we included several questions about cruisers' attitudes towards the tours (see Appendix), the questionnaire could have included a question about whether the decision to take the tour was motivated by WOM. Last but not least, it should be noted that the data presented here were taken prior to the arrival of COVID-19, so the results could vary due to, for example, the strict protocols in place to mitigate the risk of COVID-19; these could change the onshore behaviour of cruise passengers.

Data availability

Data will be made available upon request.

CRediT authorship contribution statement

Montesdeoca S: Writing – review & editing, Writing – original draft, Visualization, Validation, Software, Resources, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Tovar B:** Writing – review & editing, Writing – original draft, Visualization, Validation, Supervision, Resources, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Conceptualization.

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.

Appendix

Table A1
Cruisers' answer to items which characterize the trip.

	Season 2018–2019	Season 2019–2020
	%	%
Q.1 Have you ever been to Gran Canaria before?		
No (jump to Q.5)	74.40	61.99
Yes	25.60	38.01
Q.2 Was your previous visit to Gran Canaria on a cruise?		
No (jump to Q.4)	0.00	49.07
Yes	100.00	50.93
Q.3 Are you repeating your visit to Gran Canaria with the same cruise company?		
No	21.26	33.03
Yes	78.74	66.97

Table A1 shows that, of the cruise passengers surveyed, the majority stated that they had not been to Gran Canaria before, and the percentage being somewhat higher in the 2018–2019 season. Therefore, although the Canary Islands are a traditional tourism destination in Europe, most of the respondents chose cruising in the Canary Islands as their way to visit the archipelago for first time. It should be noted that, a significant number of repeaters had visited the island on a cruise (it ought to be highlighted that in the 2018–2019 season it was 100 % of those surveyed). Moreover, those who repeated the cruise were asked if they had done so with the same company, and the vast majority of respondents answered yes, which shows that there is an important level of loyalty towards the cruise company; this fact is probably associated to some extent with one characteristic of the cruise industry, which is the existence of specialized brands by nationality.

Regarding excursions (see Table A2), a large majority of those who had already been to Gran Canaria stated that they had not taken any excursion in their previous visit to the island (62.99 % and 67.76 % for 2018–2019 and 2019–2020 seasons, respectively). Moreover, when they were asked with regard to whether they had taken an excursion in the previous port of call, the answers with respect to both options were balanced, with the affirmative answer only taking a slight advantage in the first season and being somewhat higher in the second (11.38 %). Therefore, it has not been possible to establish a relationship with the excursions offered in the destinations visited prior to arrival in Gran Canaria. Furthermore, when it comes to obtaining information about the offer of tours in Gran Canaria from sources other than the ship, most respondents revealed that they had not obtained any, although the percentage of those who did so increased, and was one out of three in the 2019–2020 season. Therefore, it seems that the marketing effort of the Government in the Canary Islands and local firms by offering information on different websites regarding the activities, tours and proposals that can be enjoyed onshore is becoming successful. Besides, although more than 70 % of respondents did not consider making any tours on their own, Table A2 shows that in the second season there was a higher number who considered this possibility. These results are in line with the growing trend among cruise passengers to undertake shore excursions independently [49]. Finally, and regarding the shore expenses incurred during the tour, more than half of those surveyed in both seasons claimed claim to have made at least one expenditure. The average total expense was €38.11 and €44.71 in the first and second seasons, respectively.

Table A2
Cruisers' attitudes to tours and sources of information.

	Season 2018–2019	Season 2019–2020
	%	%
Q.4 During your previous visit in Gran Canaria, did you take any tour?		
No	62.99	67.76
Yes	37.01	32.76
Q.5 Have you made any tour during the previous port of call?		
No	49.60	44.31
Yes	50.40	55.69
Q.6 Did you get information about the offer of tours in Gran Canaria from different sources other than the ship?		
No	79.03	64.12
Yes	20.97	35.88
Q.7 Did you consider making the tour on your own?		
No	78.02	71.58

Table A2 (*continued*)

	Season 2018–2019	Season 2019–2020
	%	%
Yes	21.98	28.42
Q.8 Have you made any expenses during this stopover (onshore)?		
No	46.17	44.23
Yes	53.83	55.77
Average expenditure	38.11€	44.71€

The general opinion regarding the offer of tour in Gran Canaria, as shown in Table A3, is positive. People clearly think that there is both enough and easily accesible information when it comes to the tour offer in Gran Canaria with less than 5 % of respondents disagreeing with this item. Moreover, when the existence of a good combination of elements in the tour is considered, the existence of a good mix of culture, nature, gastronomy, etc., it should be noted that 87 % of respondents think that there is, showing average scores of 5.81 and 5.46 for the 2018–2019 and 2019–2020 seasons, respectively. The positive view of the tours on offer is also confirmed when people give opinions about the existence of a wide range available and their standards of quality; 84 % of respondents showed a positive opinion and less than 5 % disagree with this item.

However, when people were asked about the similarity between the tours offered on the different islands visited during the itinerary, the results showed a clear opinion; 58 % and 64 % of the respondents, depending on the season, believe that they are similar. Thus, this result suggests that promoting the originality of tours offered in each island should be a priority, in order to enhance and enrich the offer by avoiding, as much as possible, similarities and duplications that could discourage cruise passengers.

Table A3
Cruisers' answers about the tour offer in Gran Canaria. 2018–2019 & 2019–2020 seasons.

About the offer of tours in Gran Canaria	Mean	Mode	Std. Dev.
There are wide range of options which reach high standars of quality	5.59	6	1.13
	5.33	6	1.19
They are similar to those existing in the other islands of the itinerary	4.71	6	1.58
	4.93	5	1.31
There is enough and easily accesible information	5.68	6	1.16
	5.38	6	1.31
There is a good mixture of elements	5.81	6	1.13
	5.46	6	1.22

Note: Shaded rows represent cruisers' responses for the season 2018–2019.

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