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## **BEHAVIORAL PROFILES OF CONSUMERS OF ONLINE TRAVEL AGENCIES**

**Abstract:** *The aim of the article is threefold: analyzing (1) the antecedents of satisfaction of online travel agencies (OTAs)’ customers, and the mediating role of loyalty, and word of mouth; (2) the different customers’ profiles attending to these antecedents; and (3) how antecedents affect satisfaction according to the customer profile. An exploratory factor analysis (EFA) and a structural equation modeling (SEM) were used on a sample of 264 OTAs’ Spanish customers. A non-hierarchical cluster analysis was performed forcing two clusters, and they were identified the most important factors that explain satisfaction for each cluster. EFA results provide five antecedents of satisfaction. However, SEM analysis results show that only “information” (efficiency of the website and quality of information provided) and “utility” for using the platforms are significant antecedents of satisfaction. The relation between satisfaction, loyalty, and word-of-mouth are also significant. The quality of the information provided in the websites is the main antecedent for the cluster of satisfied customers. In contrast, utility is the most important for the cluster of unsatisfied customers.*

**Keywords:** *customer satisfaction, loyalty, online travel agencies, e-quality, SEM, cluster analysis*

### **1. Introduction**

The Internet is not a new phenomenon, but it has completely revolutionized the world that we knew years ago. The primary business use of the Internet is electronic commerce, which has brought many changes in how enterprises operate and do business, as well as the emergence of a large number of new business models (Xiang et al., 2015). In this context, online travel agencies (e.g. Booking, Atrápalo, Lastminute) facilitating e-commerce have emerged as an efficient and powerful intermediary within the travel

industry. Shopping via the Internet gives consumers the opportunity to reduce shopping costs while saving time and physical effort (Chen and Kao, 2010). In addition, it serves customers by searching for information and previewing travel products (Tsang et al., 2010)

The tourism sector has the highest revenue in the online world; one of three euros billed in Spain corresponds to online business travel agencies and air transport (CNMC, 2016). More specifically, according to data provided by the National Commission of Markets and Competition, travel agencies

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and tour operators account for 20.8% of the total turnover, and air transport for 13%. If we add other activities related to tourism such as hotels and car rentals, the percentage of turnover related to the sector exceeds 43%.

In the beginning, it was thought that the Internet was causing a phenomenon called disintermediation (Stangl et al., 2016), thus reducing the role of the traditional intermediaries in the tourism industry because the consumers were able to directly access the provider websites, buy, and maintain direct contact with them (airlines, hotels, car rental companies, etc.). Nevertheless, as pointed out by Xiang et al. (2015), the Internet has led to a continuous disintermediation and reintermediation of the distribution of the tourism product and, consequently, a change in the structure of the tourism industry.

New intermediaries are sales platforms, inspired by the traditional travel agencies, which offer touristic products from various providers such as flights, hotels, car rentals, train tickets, and even vacation packages. Online travel agencies (OTAs) have been entering the market and increasing the amount of online channels. Gradually, they have been taking over much of the direct selling market in the tourism sector, and have become big and powerful players (Chen and Kao, 2010; Stangl et al., 2016). In order to satisfactorily replace the role of traditional agencies, these platforms are striving to offer improved web pages that are friendlier, simpler, safer, and with more personalized products. The Internet has become the primary information source for travel planning, and OTAs dominate the online information and reservation channel in the travel market.

In general, the success in the world of tourism, an extremely competitive sector, depends on customer satisfaction. Online travel agencies are aware of the importance of establishing a close and lasting relationship with its customers and to

constantly improve the consumer experience to remain competitive. That is why online travel agencies operating in Spain need to know what the important factors are to achieve consumer satisfaction, and loyalty. As stated by Pereira et al. (2016), there is still little research regarding the determinants of e-loyalty to online travel agencies. In addition, there is limited evidence suggesting that consumers do not become loyal in the same way in different cultures, or on how consumers' reactions to service providers could be different in diverse geographical contexts (Pereira et al., 2016).

In addition, Hao et al. (2015) stated that the tourist market is not homogenous, and highlight the importance of understanding customer satisfaction of different segments. Customers have different opinions regarding which factors are the most important when they evaluate OTA websites. Therefore, it is essential to understand the preferences for the different segments and which are the most valued factors (Kabir and Hasin, 2012). Likewise, Kim et al. (2011) pointed out the need to apply multi-group factor analysis in order to explore differences between low- and high-loyalty groups of shoppers. This could be useful for marketing managers to help segment online markets in terms of consumer involvement.

Therefore, the aim of the article is threefold: first, to analyze the antecedents of satisfaction, loyalty, and word-of-mouth; second, to analyze the different customer profiles attending to these antecedents; and third, to analyze how the antecedents affect satisfaction according to the customer profile. Understanding this, these companies could improve in many ways and even redefine their strategy to retain their consumers.

The article is structured in the following way. After this introduction, the second section is devoted to the literature review. The third section proposes the methodology, and the results are presented in the fourth section. The conclusions are the last section,

which includes managerial implications alongside the main limitations of the study and some future lines of research.

## 2. Literature review

Online shopping conditions differ from in-store shopping conditions (Hsu, 2008). Service quality has been considered as one of the primary drivers of customer satisfaction in online travel shopping. Online travel agencies differ from other traditional intermediaries in online tourism. Their role in the pre-trip and pre-transaction phase should be considered. Therefore, in the specific case of online travel agencies, it is necessary to identify which factors determine customer satisfaction and in turn, predict customer loyalty and recommendation intention (word-of-mouth).

Grounded in the literature review, this study integrates perceived security, efficiency, perceived utility, familiarity, quality of information, reputation, influence, and perceived advantages as antecedents of consumer satisfaction, loyalty, and word-of-mouth. The model was built integrating the antecedents of customer satisfaction and its consequences (loyalty and word-of-mouth).

### 2.1. Perceived security

Perceived security, also in some studies called privacy, is defined as the degree to which online customers believe that webpages are safe and protect their personal or financial information. Privacy has been identified as a variable of e-service quality (e.g. Bernardo et al., 2012; Chen and Kao, 2010; Collier and Bienstock, 2009; Mouakket and Al-hawari, 2012; Sahadev and Purani, 2008; Yen and Lu, 2008). Previous studies have analyzed the impact of privacy on customer trust and satisfaction, and the consequent effects on loyalty and repurchase intention (e.g. Bonsón Ponte et al., 2015).

Perceived security is an attribute of the functional dimension of service quality in the e-commerce context that might be valued by customers (Berbegal-Mirabent et al., 2016). In the context of online travel agencies, Tsang et al. (2010) highlighted security as a critical dimension of satisfaction. The authors identified the dimensions used by customers in Hong Kong to evaluate the e-service quality, and the relationship of these dimensions to customer satisfaction and the repurchase intention.

The perceived security by Kim et al. (2011) is related to safe and risk-free payments using credit cards, and the guarantee of privacy and safeguarding of their personal information. The results prove a highly significant and positive effect on trust and customer satisfaction. Likewise, Kim et al. (2012) investigate the relationships among perceived security, website properties, navigational functionality, trust, and satisfaction. In addition, the study investigated differences in these constructs between low- and high-loyalty groups.

Bernardo et al. (2012) examined the role of e-service quality in producing perceived value and loyalty among online customers of Spanish travel agencies. The authors used an adaptation of the E-S-QUAL scale for use in online travel agencies that included the dimension of privacy, as the degree to which the site is safe and protects customer information. Mouakket and Al-hawari (2012), in their research about online reservation, add to the definition not only the degree that it protects customer information but also the guarantee not to share or resell such data.

### 2.2. Efficiency, functionality, ease of use

Efficiency is one of the e-SERVQUAL dimensions in previous studies (e.g. Sahadev and Purani, 2008; Bernardo et al., 2012; Mouakket and Al-hawari, 2012). In this measure, efficiency is defined as the ease and speed of accessing and using a website.

As Hsu (2008) pointed out, although researchers may use different constructs (with different names such as functionality or ease of use), in essence, they are quite similar. Other authors named this dimension website functionality (e.g. Tsang et al., 2010) to measure the extent to which the online travel customer believes that online travel agencies work correctly, it is quick and easy to make or cancel reservations, and the search functions are helpful to them.

According to Kim et al. (2011, 2012), navigation functionality is comprised of operational efficiency, clear search-related words, useful help functions, speedy transmission of words and images, and high level online technology. In this study, navigation functionality has a significantly positive effect on satisfaction.

Agag and El-Masry (2016) also identified the perceived ease of use as one of the antecedents of customers' intention to participate in the online travel community, and their intention to purchase travel online and to recommend the online community. Perceived ease of use is defined as the extent to which the online travel customer believes that using a specific system (i.e. participating in an online travel community in that study) will be free from effort. As these authors cited, research has demonstrated the positive and significant relationship between ease of use and attitude towards online shopping.

### **2.3. Perceived utility**

Perceived utility, otherwise called perceived usefulness (Agag and El-Masry, 2016), refers to the extent to which the customer believes that using a particular system improves his/her travel planning. In the current study, utility is an antecedent to customer satisfaction in online travel agencies.

### **2.4. Familiarity**

Bonsón Ponte et al. (2015) analyze the influence of trust and perceived value on the

intention to purchase travel online. The results indicate that familiarity with the website reduces uncertainty and indirectly affects trust. Following these authors, familiarity with the website is understood in the sense of what they know are accustomed to. This variable is defined as the degree to which a person is familiar with the search for tourism products on these websites, types of platforms, and buying processes.

### **2.5. Quality of information**

Tsang et al. (2010) identify information content and quality as one dimension of e-service quality of online travel agencies' websites. This construct is related to the extent to which online travel agencies provide full, in-depth, concise, and updated information, and the degree to which they are good sources of information. Results of this study demonstrate the positive and significant influence of information content and quality in customer satisfaction and purchase intention.

Chen and Kao (2019) also confirm the relationship between accurate and updated information, and the customers' satisfaction of online travel agents in Taiwan. The overall results confirm the relationship model among quality, satisfaction, and behavioral intentions. However, service quality is differentiated into two dimensions—process quality and outcome quality.

As stated by Wen (2012), information satisfaction is a major determinant of behavioral intentions. Dissatisfied customers will shift to other websites. To prevent that, a website must provide customized, accurate, updated, and in-depth product descriptions. According to Bonsón Ponte et al. (2015), the quality of information on the website of an online seller will affect the intention to purchase travel online. Customers will choose one particular online travel agency over the rest depending on the quality of information on the website, which will, therefore, influence customer satisfaction.

## 2.6. Reputation/Image

Consumers tend to buy familiar or well-known products, as well as products from reputed companies. Likewise, a positive image is essential to gain customers' trust and loyalty. The reputation of the online seller could be considered as a sign of quality and influence consumers perception of security protection (Bonsón Ponte et al., 2015). As stated by Pereira et al. (2016), website knowledge and brand familiarity are an antecedent of customer satisfaction and brand loyalty concerning online tourism products. Customers will more likely access a site they already know and with repeated visits, their familiarity with the website increases.

## 2.7. Influence

Previous studies (e.g. those cited in Lin, 2007) consider two influences: interpersonal influence and external influence. Interpersonal influence refers to word-of-mouth influence by family, friends, peers, and acquaintances, while external influence refers to mass media reports and expert opinions.

Traditionally, theories about consumer behavior have suggested that consumers are highly influenced by the opinions of their referents, and the degree of influence varies among products and brands (Kim et al., 2009). The interpersonal influence has been used in many models as an antecedent of consumer behavior. Huh et al. (2008) noted how the interpersonal influence affected the intention to use a hotel information system. Lin (2007) showed that in the purchase of products on the Internet, interpersonal influence affects the intention to purchase. In the airline industry, Kim et al. (2009) proposed an extended technology acceptance model, which integrates subjective norms, electronic trust, perceived ease of use, perceived usefulness, attitude toward use, and customers' intention to reuse airline business-to-customer e-commerce websites.

This model includes subjective norms as an antecedent of behavioral intention. Subjective norms represent the influence of the opinions of the people that are relevant to customer behavior.

During the online planning process, when a consumer is planning his or her trip, he or she often needs a substantial amount of information. Information available to individual travelers has a significant impact on various aspects of the traveler's decision-making. Xiang et al. (2015) demonstrate that social media and other emergent forms of online communications have a significant impact on travel planning. As these authors highlight, comments and materials posted by other travelers have become a great influence on consumers' attitudes, perceptions, and intentions, as well as their choice of products.

Several studies have identified website knowledge, i.e. customer experiences with a particular website, and brand familiarity as antecedent of customer satisfaction and brand loyalty.

## 2.8. Perceived advantages

Perceived advantages are defined by Agag and El-Masry (2016) as the degree to which a system provides customers with benefits such as convenience, lower price, time savings, and relations with persons who share common interests. This construct is one of the determinants of online shopping supported by a wide variety of studies. For example, Hao et al. (2015) collect satisfaction judgments from customers of OTA websites in China. The study focuses on two customer segments—university students and white-collar employees. The results reveal that university students were generally motivated by cheap ticket prices and online promotions.

## 2.9. Satisfaction

Satisfaction is defined as a function of expectation and expectancy disconfirmation,

or the extent that the product meets expectations and desires (Honore et al., 2012; Kim et al., 2014). In the context of e-commerce, companies must focus on assuring the interface's quality and e-service quality before, during, and after the transactions, assuring customers' satisfaction (Pereira et al., 2016). The scope of e-service is broader than the website interaction of the customer. It also includes the perception of the outcome of the service, and the post-sale service (Chen and Kao, 2010).

Online travel agencies need to further enhance their competitiveness through the delivery of high quality service to meet customers' needs and customer satisfaction. Providing high quality services that satisfy the customer is widely recognized as an important factor to succeed (Tsang et al., 2010). Previous research has demonstrated that trust and customer satisfaction are important antecedents of loyalty (e.g. Hsu (2008) studied the causal relationship in the context of an online retailer in Taiwan). As Mouakket and Al-hawari (2012) stated, customer satisfaction is considered to be one of the main drivers of e-loyalty. Consumer satisfaction increases the likelihood that they will purchase again, and therefore, significantly influences repurchase intention (Kim et al., 2014). Moreover, satisfied customers will recommend it to friends and family, and tell them about their positive experience (Hsu, 2008; Malik et al., 2012). Oral or written word-of-mouth recommendation by a satisfied customer is considered to be the most effective form of promotion (Mouakket and Al-hawari, 2012).

Balasubramanian et al. (2003) stated that some traditional service quality dimensions that determine customer satisfaction (e.g. in the SERVQUAL measure) are not relevant in virtual environments, because some factors that involve face-to-face interactions between service personnel and customers are less applicable in online services. High customer satisfaction can contribute to increased customer retention and loyalty (Balasubramanian et al., 2003).

Kim et al. (2014) explore the relationship between transaction cost advantage, preview, trust, satisfaction, and repurchase intention within online tourism group buying (GB) sites. Online GB sites are Internet platforms that offer places with a discount thanks to the number of buyers purchasing the same product (Kim et al., 2014). The results demonstrate that transaction cost advantage, preview (provides information about products), and trust significantly and positively affect satisfaction, which in turn, influence repurchase intention.

## 2.10. Loyalty

Recently, several studies have focused on identifying antecedents of customer loyalty in e-commerce (Sadeh et al., 2011; Mouakket and Al-hawari, 2012). Prior studies have proved the significant and positive impact of customer satisfaction on loyalty or repurchase intention (e.g. Chen and Kao, 2010; Huang, 2008; Kim et al., 2014; Pereira et al., 2016; Tsang et al., 2010; Wen, 2012; Colakovic and Himzo, 2017).

Relating e-loyalty of tour wholesalers in the travel industry in Taiwan, Huang (2008) investigates the determinants of Business to Business (B2B) e-loyalty toward retailers. The results indicate that e-quality and trust are the most important antecedents to e-loyalty. For the customer's perspective, Mouakket and Al-hawari (2012) validate the relationships among e-service quality, satisfaction, and e-loyalty intention in online reservations in the hotel and airline industry. Wen (2012) analyzes the factors that affect consumers' online purchase intentions for travel products in the United States. In this study, different types of travel websites were considered, not only online travel portal websites.

Loyalty can be defined by repeated purchase behavior of a customer presented over time, and e-loyalty as the intention of a consumer to revisit a website or repurchase products through it in the future (Mouakket and Al-hawari, 2012; Hsu, 2008). As Kim et al.

(2014) stated, the repurchase intention is defined as the probability that a customer will continue to purchase products from the online vendor in the future.

Tanford and Malek (2015) stated that loyal customers must demonstrate loyalty along two dimensions: attitudinal (includes emotional commitment and favorability of attitudes) and behavioral (consists of repeat purchases or usage frequency). Loyalty implies saying positive things about the product or the brand, and recommending it to others. This is commonly referred to as word-of-mouth.

For the purposes of the current study, loyalty is defined as the preference to buy tourism products through a certain website rather than other ways, and the repurchase intention with a certain website.

### **2.11. Word-of-mouth or intention to recommend**

Word-of-mouth (WOM) refers to the exchange of positive information between consumers about their experience with the brand. In the online tourism context, a customer may promote the products of an online travel agency when he or she is satisfied with its service, and as a consequence, will remain loyal and promote their products by spreading positive word-of-mouth.

The results of a study by Agag and El-Masry (2016) indicate that consumer attitude toward an online travel community has a direct and positive influence on positive WOM. This intention of consumers to participate favours the development of consumers' behavioral intention to purchase travel online and enhances consumer intentions to recommend the online travel community and purchase its products. These results indicate the importance of the so-called eWOM, i.e. electronic word-of-mouth (Xiang et al., 2015). Although currently, consumers utilize a variety of channels to obtain relevant travel information, the role of

social media is growing in the travel planning process (Xiang et al., 2015). The written information is available over a long period of time, which allows other consumers to consult it when it suits them, giving greater power to the consumer.

Currently, it is believed that WOM can be more effective than advertising in newspapers, magazines, radio, television, and traditional media. In addition, it is the most credible and inexpensive way to advertise a company's products. Recent studies show that e-word-of-mouth has become the most reliable source of information for online consumers. As highlighted by Hu et al. (2017), online travel forums, travel reviews, and social networks have acquired significant importance for sharing travel information among online travel consumers.

Online travel agencies have a good opportunity to develop positive recommendations between consumers. This provides practical implications for marketing practitioners and managers to design strategic plans and tools that allow customers' communication and recommendations. The present study aims to identify the factors that encourage a person speak well of an online travel agency or its products.

## **3. Method**

This section describes first the questionnaire, sample, and observed variables used; then the methodology conducted is explained.

### **3.1. Questionnaire and sample**

This study was designed to understand the factors that make the user trust online travel agencies, and if they are satisfied after using them, speak well of them, and go back to use them. To fulfill this objective, we have used different scales based on previous authors. An adaptation of validated scales was used. All items in the survey were presented as

statements to which respondents indicated their level of agreement/disagreement on a five-point Likert-type scale (from 1 = strongly disagree to 5 = strongly agree). Table 1 provides the eight previous constructs that we found in previous

literature that affects satisfaction, with the items that compose each construct and the sources from where these items were borrowed. The table also includes the items used to collect satisfaction, loyalty, and word-of-mouth.

**Table 1.** Scales used in the research model

Construct	Items	Source
Perceived security	PS1 Protects the information about my purchase behavior	Marimon et al. (2010); Bernardo et al. (2012)
	PS2 Does not share my information with other pages	
	PS3 Protects the information in my credit card	
Efficiency	EF1 Helps you find what you need	Marimon et al. (2010); Bernardo et al. (2012)
	EF2 It is easy to move within these pages	
	EF3 Allows me to complete a transaction quickly	
	EF4 The information is well organized	
	EF5 Loads quickly	
	EF6 They are easy to use	
	EF7 These pages are well structured	
Utility	U1 Using these platforms answers questions when I'm planning a trip	Agag et al. (2015)
	U2 Using these platforms helps me to organize trips more efficiently	
	U3 In general, these platforms are useful for planning shopping trips	
Familiarity	F1 I am familiar with these web pages	Bonson Ponte et al. (2015)
	F2 I am familiar with this type of procurement process	
	F3 I am familiar with searching for tourist products on this website	
Quality of information	QI1 These websites provide accurate information about the tourist products I want to buy	Bonson Ponte et al. (2015)
	QI2 These websites provide enough information to make a transaction	
	QI3 These websites are of great help in the purchase of tourism products	
	QI4 The information provided by these websites is of great help for purchasing tourism products	
	QI5 Product information on this website is clear for making a purchase	
	QI6 These websites offer updated products	
Reputation	R1 These platforms are known	Bonson Ponte et al. (2015)
	R2 These platforms have a good reputation	
	R3 These shopping platforms have a good reputation in their sector	
Influence	I1 Influential people think that I should use these platforms	Kim et al. (2009)
	I2 Important people think that I should use these platforms	
	I3 People with opinions that I appreciate believe that I should use these platforms	
Perceived advantages	PA1 These websites offer more discounts than the websites of the providers (airlines, hotels, etc.)	Agag et al. (2015)
	PA2 These web pages are more useful than web pages of specific suppliers	
	PA3 These websites help you save time	
	PA4 These websites offer a variety of products to buy	
Items for satisfaction, loyalty, and word-of-mouth.		
Satisfaction	In general, I am satisfied with purchases made on this website	Kim et al. (2011, 2012)
Loyalty	I'm loyal and buy tourism products on this website	Kim et al. (2011, 2012)
Word of mouth	I am ready to recommend these websites and their products and services	Agag et al. (2015);

Data come from a survey launched in September 2016 on Spanish customers of online travel agencies that made purchases in the last year. The questionnaire consisted of three sections. The first collects sociodemographic information of the respondent. The second is composed of 35 items with a five-point Likert scale: 32 regarding the nine original dimensions of antecedents of satisfaction; one item to collect global satisfaction; one for loyalty and other for word-of-mouth.

The questionnaire was distributed to 900 people and a total of 264 completed responses were obtained in Spain in 2016 (34.59% response rate). We used the Internet as a distribution channel of the survey, using a tool from Google Drive to develop the survey. The questionnaire was disseminated through social networks and email to various groups of online consumers. In addition, we obtained the collaboration of three universities who spread the survey among

teachers and student groups. These universities are the Universitat Politècnica de Catalunya (UPC), the Universitat Internacional de Catalunya (UIC), and the University of Vic (UVic).

As shown in Table 2, the sample shows a small gender bias, as 154 respondents are women. Nearly 55% of respondents are between 19 and 36 years old, and most of them have a higher level of education (86.36%). Other studies in the context of online travel agencies have used a sample with similar characteristics, where females and young people (aged 20–30) made up the majority of the respondents, holding a bachelor’s degree or higher (e.g. Chen and Kao, 2010). According Xiang et al. (2015), younger generations not only perform better digitally but also, they are more involved in online travel planning. Therefore, companies should strengthen online relationships with these consumers, taking into account their interests and needs.

**Table 2.** Demographic characteristics of the sample

	Number	%
<b>Sex</b>		
Female	154	58.33
Male	110	41.67
Total	264	100.00
<b>Age</b>		
Less than 19	13	4.92
Between 19 and 36 years old	143	54.17
Between 37 and 55 years old	83	31.44
More than 56 years old	25	9.47
Total	264	100.00
<b>Level of education</b>		
Primary school or lower (unskilled, semi-skilled)	0	0.00
Vocational secondary school	36	13.64
Higher education	228	86.36
Total	264	100.00

### 3.2. Methodology

First, the 32 items that came from the eight original satisfaction antecedent dimensions were analyzed altogether through an EFA in order to extract the constructs that are antecedents for satisfaction. In the results

section, it will be shown that this EFA suggested five constructs, instead of the eight original dimensions. Second, each of these five dimensions were analyzed, confirming that the psychometric characteristics were sound (reliability and validity). The discriminant validity of these

five constructs was also performed. The third step was analyzing the research model through structural equation modeling with the complete sample. This model encompasses these five constructs as antecedents of satisfaction, which in turn is antecedent of loyalty and word-of-mouth at the same time. Although the data fit the model, some coefficients of the dimensions of satisfaction were non-significant.

In order to analyze different profiles of purchasers, a cluster analysis, aimed at identifying different profiles of online customers, was performed in order to split the sample into two. A non-hierarchical cluster analysis (k-means) using the five factors established in the previous EFA was performed, forcing two clusters. The cluster analysis is based on the Euclidean distance between vectors of the standardized values of the variables under analysis (Anderberg, 1973; Everitt, 1980). Through this procedure, observations are classified according to similarities in the dimensions considered. This was the fourth step. The fifth was taking these two sub-samples and regress the satisfaction on these five antecedents, aimed at shedding light on the analysis about how different purchaser profiles explain the level of satisfaction.

The first factor collected 36.37% of the total variance. It is composed of three factors of “efficiency” and two from “information quality.” However, after a careful reading of the five items, we reached the conclusion that the best label for the construct is “information.” The second factor extracted contained the three original items of utility, hence, it was labeled “utility,” which explains 6.34% of the variance and is composed of three items. The third, “influence,” explains 5.65% of the variance and is composed of three items. Fourth, “familiarity,” explains 5.14% of the variance and is composed of three items; and, finally, the fifth factor, “perceived security,” explains 3.99% of the variance and is composed of three items.

## 4. Results

### 4.1. Reliability and validity of the satisfaction dimensions

A principal components analysis of the 32 items of satisfaction antecedents’ dimensions was performed. Both the Kaiser-Meier-Olkin statistic (0.926) and the Barlett test ( $\chi^2 = 4,452.8$ ; 496 degrees of freedom; p-value = 0.000) forecasted a good result for this analysis. These results confirmed a linear dependence between the variables, and supported our view that the results were sound (Hair et al., 2010). Seven factors emerged with eigenvalues greater than one (Kaiser criterion), which accounted for 64.84% of the variance in the sample. However, only the first five were considered due to the fact that the eigenvalue of the last two were only 1.1 and 1.2. Table 3 shows the suggested factors, including the percentage of variance extracted. Only loads above 0.250 are shown. The criteria to retain items were: (i) loaded at 0.65 or more on a factor and (ii) did not load at more than 0.50 on two factors. The items that accomplish these criteria are highlighted in Table 3.

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**Table 3.** Matrix of the five components extracted using principal components analysis and the varimax rotation of the 32 items

Items	1	2	3	4	5	6	7
EF4	0.742						
EF7	0.697						
EF6	0.689						
QI5	0.663						
QI2	0.651						
QI3	0.630						
EF2	0.623						
QI1	0.617						
EF5	0.578						
QI6	0.540						
R2	0.529						
EF3	0.503						
R3	0.501						
U2		0.706					
U1		0.677					
U3		0.677					
QI4	0.411	0.659					
EF1	0.435	0.589					
VP4		0.541					
VP3	0.385	0.439					
I2			0.854				
I1			0.854				
I3			0.820				
F3				0.853			
F1				0.849			
F2				0.786			
PS1					0.800		
PS2					0.782		
PS3					0.683		
VP1						0.786	
VP2						0.667	
R1							0.652

**4.2. Reliability and validity analysis of the antecedents of satisfaction**

Next, five factors were extracted in five independent exploratory factor analysis, using the items suggested by Table 3. Based on the figures reported in Table 4, it can be concluded that the five constructs of the

research model are reliable in terms of the classic thresholds of Cronbach’s alpha (>0.7), composite reliability (CR>0.7), and average variance extracted (AVE>0.5) (Hair et al., 1998). These results support the validity of the scales suggested by Bernardo et al. (2012). Discriminant validation is also acceptable (see Table 5).

**Table 4.** Reliability and convergent validity of the scales used

	1		2		3		4		5	
	Information		Utility		Influence		Familiarity		Perceived security	
	EF4	0.838	U1	0.793	I1	0.906	F1	0.916	PS1	0.821
	EF7	0.796	U2	0.876	I2	0.916	F2	0.886	PS2	0.819
	EF6	0.796	U3	0.653	I3	0.882	F3	0.890	PS3	0.733
	QI5	0.778								
	QI2	0.765								
CA	0.852		0.788		0.885		0.879		0.701	
CR	0.896		0.773		0.929		0.925		0.834	
AVE	0.632		0.708		0.813		0.805		0.627	

CA (Cronbach's alpha)

CR (composite reliability)

AVE (average variance extracted)

**Table 5.** Bivariate correlations between main constructs and the square root of average variance extracted

	1	2	3	4	5
1. Information	<i>0.901</i>				
2. Utility	0.626	<i>0.841</i>			
3. Influence	0.400	0.434	<i>0.795</i>		
4. Familiarity	0.482	0.494	0.277	<i>0.897</i>	
5. Perceived security	0.354	0.214	0.211	0.198	<i>0.792</i>

\*The square roots of AVE are in italic font style on the main diagonal and the correlations between latent variables follow below

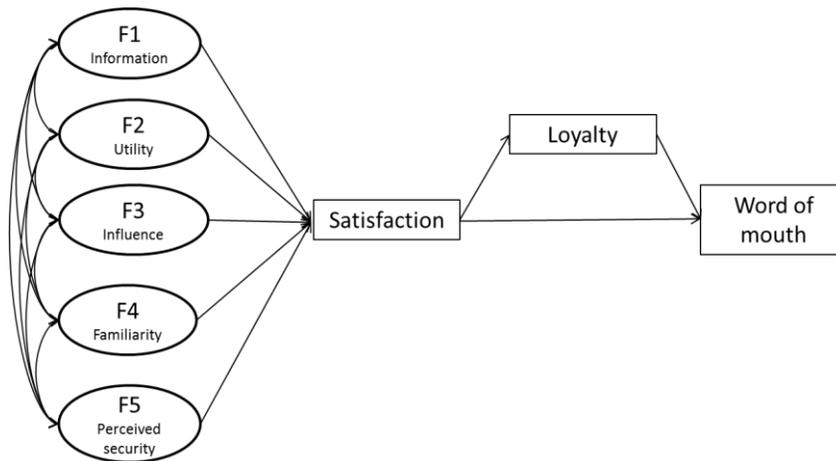
### 4.3. Research model analysis

The model (Figure 1) was estimated using the robust maximum likelihood method from the asymptotic variance-covariance matrix. The procedure suggested by Satorra and Bentler (2001) was followed, which is based on robust maximum likelihood estimation, and according to Curran et al. (1996), this method behaves extremely well in nearly every condition across sample size, distribution, and model specification.

The fit indices obtained in the measurement model estimation showed that the variables did not converge toward the structure established in the model.  $\chi^2$  Satorra-Bentler

was 285.96, with 155 degrees of freedom and a p-value of 0.000.  $\chi^2/df$  was 1.85, which is below the acceptable limit of 5. The root mean-square error of approximation (RMSEA) was 0.057 and the comparative fit index (CFI) was 0.929. Therefore, the global fit of the proposed model was acceptable.

Results shows that only “information” and “utility” are significant antecedents of satisfaction. On the other hand, the three coefficients between satisfaction, loyalty, and word-of-mouth are significant, proving that there are both direct and indirect effects between “satisfaction” and “word-of-mouth.” Table 6 shows the overall results of the research model analysis.



**Figure 1.** Research model

**Table 6.** Analysis of the research model

Coefficient	Standardized solution	t-value
Information → Satisfaction	0.319	2.53 (*)
Utility → Satisfaction	0.351	2.23 (*)
Influence → Satisfaction	0.045	0.86
Familiarity → Satisfaction	0.099	1.32
Perceived security → Satisfaction	0.079	1.16
(a) Satisfaction → Loyalty	0.467	7.08 (*)
(b) Loyalty → Word-of-mouth	0.320	4.49 (*)
(c) Satisfaction → Word-of-mouth	0.491	6.98 (*)
Analysis of decomposition effects.		
Indirect effect (a*b)	0.149 (23.28% of total effect)	
Direct effect (c)	0.491 (76.72% of total effect)	
Total effect	0.640 (100.00% of total effect)	

(\*) significant at 0.05

Satisfaction impacts directly on word-of-mouth, but the indirect effect through loyalty is not at all negligible.

#### 4.4. Cluster analysis

The five factor antecedents of satisfaction that resulted in the EFA in the first step were considered for a non-hierarchical cluster analysis forcing only two clusters. It was settled in order to keep two subsamples large enough to proceed with the regressions required in the next and last step of our analysis. On the other hand, choosing only

two clusters maximizes the difference between them, enabling the interpretation of both purchasers' behavior profiles.

The analysis provided one cluster with 155 cases, in which all the standardized antecedents of satisfaction are positive, and another cluster of 108 cases, with all the standardized antecedents negative. The analysis for the differences of means confirms the difference in the five cases: the t-test was significant at a 0.000 level for the first four factors, while for the last (perceived security) was significant at 0.003 (Table 7).

**Table 7.** Analysis of the differences between means of the five antecedents of satisfaction for each cluster (standardized factors)

	1. Information	2. Utility	3. Influence	4. Familiarity	5. Perceived security
Cluster 1	0.3677	0.3015	0.2497	0.3023	0.1551
Cluster 2	-0.5646	-0.3934	-0.3316	-0.4455	-0.2099
Gaps between the clusters	0.9323	0.6948	0.5813	0.7478	0.3650

The table includes differences between the clusters in terms of each satisfaction antecedent. “Information” is the construct where both clusters are more separated, and “perceived quality” shows the smallest difference.

Table 8 shows the profile of each cluster. The first cluster, which is formed by those

customers that show high punctuations in the five antecedents, is formed mainly by young women with a high education level. However, the cluster of the unsatisfied, which is smaller than the first cluster, is balanced in terms of sex and age, and the education level attained is lower.

**Table 8.** Demographic characteristics of the sub-samples resulting from the cluster analysis

	Cluster 1		Cluster 2	
	Number	%	Number	%
<b>Sex</b>				
Female	97	62.6	57	52.8
Male	58	37.4	51	47.2
Total	155	100	108	100.0
<b>Age</b>				
Less than 19	4	2.6	1	0.9
Between 19 and 36 years old	94	60.6	49	45.4
Between 37 and 55 years old	46	29.7	36	33.3
More than 56 years old	11	7.1	22	20.4
Total	155	100.0	108	100.0
<b>Level of education</b>				
Vocational secondary school	14	9.0	22	20.4
Higher education	141	91.0	86	79.6
Total	155	100.0	108	100.0

#### 4.5. Antecedents of satisfaction

The satisfaction item was regressed on the five dimensions for each subsample. Table 9

shows that the five antecedents are significant for the first cluster, but for the second cluster only the first four antecedents are significant.

**Table 9.** Regressions of satisfaction (standardized coefficients and its significance level in brackets)

	1. Information	2. Utility	3. Influence	4. Familiarity	5. Perceived security
Cluster 1	.598 (9.687)	.391 (7.425)	.273 (4.597)	.469 (7.488)	.225 (3.824)
Cluster 2	.515 (6.593)	.600 (7.846)	.234 (2.989)	.300 (3.594)	.040 (.538)

Both regressions show a coefficient of determination near .50, showing that half of the variance is explained by the five factors ( $r^2$  is 0.498 and 0.479 for first and second cluster, respectively). Satisfaction in the first cluster is explained first by “information,” and second by “familiarity” and third by “utility.” The remaining antecedents have lower coefficients. On the other hand, satisfaction is mainly explained by “utility” and “information” in the second cluster. The antecedent “perceived security” is not significant in this second cluster.

The quality of the information provided in the websites, however, is the main antecedent for the first cluster (young women with high educational level), and the utility and usefulness for using the platforms is the most important factor that explains satisfaction in cluster 2.

In both groups, “information” and “influence” have similar weights. “Familiarity” is reasonably similar but more relevant for cluster 1, whereas “utility” is quite different between the two groups. “Perceived security” is significant only for cluster 1.

## 5. Discussion and theoretical and practical implications

This study has identified and examined several important and under-explored issues in quality management of online Spanish travel agencies. First, this research has analyzed the antecedents of satisfaction. Second, we have identified the different customer profiles attending to these antecedents. Finally, we examined how antecedents affect satisfaction according to the customer profile.

The results show that only “information” and “utility” are significant antecedents of satisfaction. In this sense, the quality of information provided in the website (succinct, complete, and updated) has a significant influence in the e-service quality. On the other hand, the perceived usefulness

of the web to plan for travel also is a significant antecedent of e-satisfaction. In addition, the assessment of the model suggests that the three coefficients between satisfaction, loyalty, and word-of-mouth are significant, proving that there are both direct and indirect effects between “satisfaction” and “word-of-mouth”.

Therefore, the study provided empirical evidence of a strong relationship (direct and indirect) between satisfaction and the intention to recommend (0.640). E-loyalty in the travel industry is the intention to revisit the website or repurchase a travel product in the future. Therefore, loyalty reinforces the intention to recommend the online agencies with an indirect effect. These findings shed light on the relationships of the variables that shape the quality e-service management. Satisfaction is an important factor in motivation for customer loyalty and word-of-mouth.

Based on the analytical results, this study found two clusters that configure the two profiles of consumers of online travel agencies: (1) the cluster of the satisfied is formed mainly by young women with a high education level ( $n = 155$  e-customers); (2) the cluster of the unsatisfied customers is balanced in terms of sex and age and the education level attained is lower ( $n = 108$  e-customers). Therefore, satisfied customers are younger, more highly educated and mainly female. It seems that online customers of travel agencies are gender- and age-oriented.

The findings also showed that for the first cluster, the quality of the information provided in the websites, familiarity, and the utility of the web are the three main antecedents of satisfaction. For cluster 2, the main satisfaction antecedents are the perceived utility and the quality of the information. Both groups show that the content of the online travel agencies' websites is very important. These sites will offer complete, in-depth, updated, and clear information.

In general, results of this study agree with the research findings of Bernardo et al., (2012) and Mouakket and Al-hawari (2012) including the antecedents of consumer satisfaction and e-loyalty. These results enhance the understanding of the antecedents of e-services' quality and the different profiles in customer behavior. Understanding these aspects, these companies could be improved in many ways and even redefine their strategy to retain their consumers. In this sense, some theoretical and practical implications will be suggested. From a theoretical perspective, this study proposed a model of the antecedents of online Spanish travel agencies consumer satisfaction, loyalty, and word-of-mouth. Also, this study identified two different online consumer groups.

From a managerial point of view, the proposed model can offer online travel agency managers to maximize their satisfaction experience, which in turn, will reinforce them to become loyal and recommend the product or service. These sites have to focus more on providing better and accurate information about the travel products. Businesses must develop, plan, and design an attractive and interesting website, taking into account these five antecedents of satisfaction: quality of information, utility, influence, familiarity, and perceived security. In this sense, our study reinforces the need to invest in high quality websites because of the global and challenged context. Companies will work to improve their competitiveness and efficiency towards excellent service.

## 6. Conclusions and future lines of research

This study examined the main antecedents of satisfaction of OTAs' customers, and the mediating role of loyalty and word-of-mouth. Also, different customer profiles

attending to these antecedents were identified. Finally, the research showed how the different antecedents have an impact on satisfaction according to the customer profile.

This study contributes to research in e-service quality management in several ways. It provides an increased knowledge of the antecedents of online travel agencies' consumer satisfaction. Specifically, we identified and profiled two different online consumer groups: the first group composed of young women with a high educational level is highly satisfied; and the second group, with low satisfaction, is composed of older consumers and a lower level of education. Hereafter, our results contribute to the stream of research on e-customers' diversity (e.g. Boyer and Frohlich, 2006; Sousa and Voss, 2012). Also, our study pioneers the study of the behavioral profiles of consumers of online travel agencies in Spain and answers calls for a deeper understanding of patterns of channel behavior.

Some limitations of this research should be acknowledged and directions for future studies should also be proposed. This research investigated the impact of some antecedents of e-satisfaction. Also, the sample used in this study cannot represent the entire online shopping population in Spain.

The developed model can also be replicated in other countries, incorporating new variables such as responsiveness and fulfillment (Ho and Lee, 2007) or subjective norms (Mouakket and Al-hawari, 2012). In addition, future research could be conducted to compare the antecedents of satisfaction by means of longitudinal analysis during different periods. Future research with a larger sample size might improve the generalizations of the findings.

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