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# Exploring Service Quality among Online Sharing Economy Platforms from an Online Media Perspective

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**Abstract:** The sharing economy has become a new socioeconomic activity that allows the co-creation, production, distribution and consumption of goods and services between individuals, driven by Web 2.0 and e-word of mouth. How these online platforms communicate their content is critical. This paper seeks to develop a scale for measuring the perceived quality of websites that offer information about sharing economy services focused on online peer-to-peer accommodation. The resulting model is validated by means of structural equations and is composed of four dimensions (efficiency; reliability, privacy/security; and communication). The influence that perceived quality exerts on satisfaction and loyalty is then explored from an online media perspective. A scale resulting from the combination of these two areas of knowledge (online media and e-service quality) may take advantage of the more beneficial features they have to offer and provide us with as balanced and convergent a model as possible. The results of the study show that all of the initial hypotheses are confirmed except one. Efficiency, reliability and privacy/security positively influence the perceived quality of a collaborative accommodation portal, whereas communication does not.

**Keywords:** sharing economy; collaborative platforms; online peer-to-peer accommodation; online media; perceived quality; loyalty; satisfaction; e-services; interactive communication; user empowerment

## 1. Introduction

The digital era has witnessed the emergence of new phenomena and trends in the field of tourism, which are linked to changes in the purchasing and consumption behavior of individuals influenced by Internet and Web 2.0 use [1]. This situation has resulted in consumers being increasingly more demanding and better informed, and therefore assuming the management of their own trips and travel on a greater scale [2]. The Internet and especially Web 2.0 have led not only to user empowerment when choosing and buying tourist products and services, but also when offering them [3], giving rise to the emergence of online collaborative consumer platforms that bring suppliers and contractors of tourism services into contact with one another, especially with regard to accommodation and transportation. These platforms, and the sharing economy in general, have become emerging fields of research par excellence [4].

Collaborative consumption has become one of the main tourism trends of the present century. The phenomenon began in the United States at the beginning of this millennium, although it only became popular across Europe with the onset of the 2008 economic crisis. Given the search for cheap prices, the central role of the Internet, disintermediation, and a diverse supply of vacation options, collaborative consumption has become one of the most important values among travelers in the last fifteen years and is currently booming [5].

We can define collaborative consumption as traditional exchange, barter, credit, transaction, rent, gift, or compensation, reinvented through information technologies, Internet communities and social networks [6]. In a more recent work, the collaborative economy is defined as: “An economic system whose intermediary companies utilize online platforms to facilitate and lower the cost of the for-profit transactions of giving temporary access—without the transfer of ownership—to idle resources of consumers in the peer-to-peer networks that it has created, because of the trust built among its members, who may be individuals or businesses” [7] (p. 13). On the one hand, consumers are imbued with the criteria of collaborative consumption [8]; namely, consumer rationality, saving money, environmental sustainability, reuse, and direct relationships between people. And on the other hand, peer-to-peer (P2P) platforms or “engagement platforms” facilitate technological support for exchanges between providers and clients and the co-creation of value in a service ecosystem [9], as well as payment processes and commission for managing the platform.

This type of platform can affect the sustainability of the tourist destination, however. It can reduce seasonality in the destination by offering more competitive prices throughout the year and therefore increase the number of visitors at certain times of the year. The results of an investigation carried out by [7] applied to the Balearic Islands showed that these platforms generated a greater concentration of tourists and a greater pressure on the resources of the islands, affecting sustainability in the long term.

Web 2.0 and the development of social networks have accelerated word-of-mouth digitalization and the creation of online feedback mechanisms, fundamental elements for establishing trust among those involved in the P2P commercial exchange [10].

Reference [11] studied the phenomenon of tourist events generated by users (UGE) based on the social network Instagram. The results showed that the differential characteristics of UGEs in tourism were user empowerment, full organization, brand dissemination, attraction capacity, and online community loyalty. The research conducted by [12] found that the most important motivations for users to use a social network are enjoyment, information search and interaction, all elements treated in the present investigation. In line with this, [13] stated that quality of information was a key element in intention of continuous use for food distribution applications. Furthermore, [14] identified quality of information and the interactivity of the platform as necessary factors that motivate users' participation in a brand community based on social networks.

Virtual communities allow the flow of peer information, reduce the risks involved in money transfer, and rely on the technologies of mobile geolocation and GPS. Applied to tourism, these principles give rise to the concept of Collaborative Tourism [15]. However, collaborative consumer tourism platforms such as Uber ([www.uber.com](http://www.uber.com)) and Airbnb ([www.airbnb.es](http://www.airbnb.es)) are more than just social media, and serve to broaden and strengthen the relationship between the physical and digital worlds [4].

Our choice of subject matter for this paper is justified by the growing importance of collaborative tourism platforms and their impact on the tourism industry. Thus, the aim of the present investigation is to determine the factors considered by users of this type of platform when it comes to receiving quality information regarding the service offered.

## 2. Collaborative Accommodation Platforms

According to a Eurobarometer survey, most citizens are aware of the services offered by collaborative platforms and consider that access to services is more conveniently organized on this type of platform. However, users also perceive not knowing who is responsible when a problem arises as a major problem with such platforms [16]. In line with this, a study carried out by [17] emphasized the importance of trust in the collaborative economy and showed that quality and trust metrics will be critical for this model to achieve success.

Reference [18] identified three types of exchange platforms within the framework of the sharing economy and tourism: firstly, the pure house swap; secondly, exchange based on shared characteristics, such as the cases of exchange based on gender and sexual tendency, culture and religion, professional interests or hospitality such as Couchsurfing International ([www.couchsurfing.com](http://www.couchsurfing.com)), which had over

10 million users in 2018; and finally, “hybrid” hospitality (informal and commercial) models, such as Airbnb, or room rental in shared or entire apartments, which use a “social” search and management system, or virtual platforms for local experiences. This paper focuses on the third type of platform used as an information portal.

Reference [10] have claimed that as an alternative mode of accommodation, peer-to-peer home rental has the potential to induce changes in travelers’ behavior: significant differences are found between Airbnb travelers and those who stay in conventional accommodation with regard to duration of stay and expenditure. This is because this type of collaborative accommodation means lower cost for the tourist compared to a hotel [19] and opportunities to meet people and connect with local communities [20]. However, platforms such as Airbnb are criticized as being disruptors of the established order in the hospitality and accommodation industries, which will have unforeseen and potentially negative implications [4].

That said, the huge boom in and acceptance of collaborative tourism and its online platforms can only be explained if these provide a number of advantages for users (suppliers and contractors) that result in their positive satisfaction [4]. This satisfaction can lead to success, tourist retention, expansion, positive word-of-mouth and profitability in the tourism industry [21]. In this regard, the quality of the information offered through the platform is a fundamental element in the user’s satisfaction and intention to repurchase [22].

### 3. Quality of Information and Online Platforms

The present investigation employed the E-S-QUAL (Electronic Service Quality) scale to research the quality of online platforms. This scale measures perceived quality, principally of the e-Service, and was developed by [23], based on previous research by [24]. E-S-QUAL distinguishes between four dimensions: efficiency, compliance, system availability and privacy.

The Internet has led to the emergence of new intermediaries, whose perceived quality cannot be analyzed through previously known methods. [23] themselves stated that the scale must be adapted to the area of study and/or knowledge to be investigated and improved by means of the principles conferred by the model: “An important priority of investigation is to evaluate those scales in the context of pure online services, making the necessary adaptations and evaluating the psychometric properties of said adapted scales” [23] (p. 229).

Studies have been conducted to evaluate the websites of hotels and online travel agencies since the early 1990s, as these can be considered the main competitors on this type of platform. The work done by [25] provides an exhaustive review of research in this field and shows that the main focus of such studies has been quality of information, even if this concept has been represented by different means. In line with this, research applied to DMOs by [26] showed that the most important factor to ensure a successful web presence is first and foremost quality of information. On the other hand, in a work focused on online travel agencies, [27] stated that ease of use is the most important dimension for determining intention to use, followed by information.

The effects quality of service has on customer satisfaction and loyalty have also yielded a broad field of research. Thus, in a study applied to the telecommunications sector, [28] showed that customer satisfaction plays a significant role, unlike the effect of switching cost. This explains why a satisfied customer will remain loyal even when the switching cost is low.

Before deciding which items to include in the scale, an assessment was carried out to determine whether the four dimensions on the original ES-QUAL scale were appropriate for the present study, since the object of study was information offered by a collaborative accommodation platform and not a virtual establishment. It was decided that the dimensions should be adapted as shown in Figure 1. These modifications were based on analytical models created in tourism and accommodation studies, which coincide in pointing out certain essential indicators when defining and evaluating a portal of these characteristics and may be useful in determining the new items for the new scale of values to

focus on [22,29–31]. It is for this reason that the dimension related to interactive communication was taken into account.

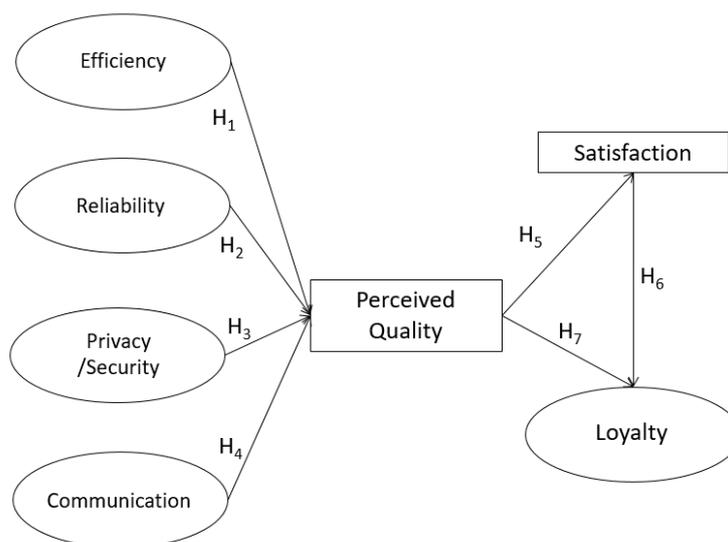


Figure 1. Proposed structural model.

The first of the dimensions is efficiency. This is a key factor in assessing the quality customers perceive, regardless of the service being studied. [24] were the first to determine that consumers use similar criteria when it comes to products offered over the Net. [23] defined this dimension as “the ease and speed with which the website is accessed and used”. The term includes aspects such as how the website is organized, the depth of information provided and how up-to-date it is, among others.

A survey conducted by [32] revealed efficiency to be one of the five dimensions according to which the main elements for measuring quality perception in electronic services are grouped together, along with information, reliability, security and the relationship with the customer or communication. This was also detected by [33] in a later analysis after applying the E-S-QUAL model in eleven different countries. The results published by these authors showed that the dimension of efficiency appeared in each of the twenty studies examined as one of the constant dimensions to be considered and assessed when evaluating perceived quality. Among others, authors such as [34–37] also take the efficiency dimension into account in their models, and establish a positive relationship between efficiency and quality of service in the different online businesses they worked with. We therefore put forward this first hypothesis:

**Hypothesis (H1):** *Efficiency directly and positively influences the quality of the service on collaborative accommodation platforms.*

The dimension of reliability refers to the delivery of products, said delivery being within the agreed deadline and in perfect condition, products being available in certain time slots and distribution schedules being suitable [22]. In summary, reliability comprises the degree of compliance with the provision of the service promised to the customer.

This degree of compliance provides the company with greater loyalty and trust from customers, who compare this phase of the electronic sale with that of physical establishments. Reference [38] highlighted that satisfaction resulting from a good service acts as a sign of reliability for Internet users. There are even authors such as [39] who, on the basis of their work, have argued that said satisfaction is the most important factor in determining impact on product-related loyalty.

Various investigations, such as those carried out by [40–42], have included reliability as a main item on which to base their measurement scales for electronic services. Furthermore, [43] (p.109) determined that “online consumers highlight confidentiality and reliability in the service provided...

as users they are concerned about the security of their data and transactions". In the study conducted by [33], quoted above, the term fulfillment appeared in 16 of the 20 studies analyzed.

More recently, [34] confirmed that reliability is taken into account by users and that, above all, together with efficiency it generates a high level of satisfaction among individuals. The same is true of the study conducted on tourists in Turkey by [35], which analyzed whether the experience they had had with the service in general was part of their decision to contract the company's services. Other works related to the tourism sector, such as those conducted by [44] and [45], have confirmed reliability as a key factor in evaluating hotel service quality. We therefore propose a second hypothesis:

**Hypothesis (H2):** *Reliability directly and positively influences the quality of the service on collaborative accommodation platforms.*

As a single dimension, privacy and security does not solely refer to the fact of protecting customers' data when they register with a website and provide their personal information in order to receive information or offers or to carry out transactions [46]. The aim of this dimension is to evaluate whether users trust the products and services provided by the collaborative accommodation portal, with the result of this leading them to return and increase not only their number of visits, but also the number of services contracted.

A study analyzing the websites of financial entities, tourist services and music and book stores carried out by [47] concluded that greater protection of privacy and security increases levels of consumer confidence, confirming Internet users' fears when it comes to providing personal and financial data. Subsequent to this, [33] showed that privacy was an important dimension in 17 of 20 studies on perceived quality using the E-S-QUAL method. It is important to address this issue, since in research such as that conducted by [48], serious shortcomings were detected in privacy and personal data protection policies in the online accommodation sector. Indeed, [49] expressly specified that hotel managers should ensure their websites generate the greatest positive emotional flow towards their guests if they want to make them regular customers, and that includes the privacy and security of customer data, among other factors. [50] reached the same conclusion when determining that the notion of privacy is one of the factors that determines quality in e-commerce services. We therefore put forward hypothesis three.

**Hypothesis (H3):** *Privacy/Security directly and positively influences the quality of the service on collaborative accommodation platforms.*

Despite it not being a dimension used in the SERVQUAL or E-S-QUAL models posited by [23,51], interactive communication is one of the three main pillars of the WEBQUAL scale, along with usability and quality of information [52]. As these authors commented, "A website that does not take care over its design and interaction with the Internet user projects a poor image on the Internet and loses competitiveness" [52] (p. 114).

Communication has been a dimension that has been considered in different models and scales to evaluate the e-service quality. [53] considers communication as an active dimension to assess virtual service quality together with reliability, efficiency, support, security, and incentives. The NetOffer model developed by [54] proposed that the concept of the core service in a service package should include elements of customer participation and communication. In a study carried out by [55] it was affirmed that good communication had an influence on online service quality, which in turn was a key factor for customer repurchase intention.

In the field of information portals, [56] concluded that a relationship exists between the perception of online interactivity, seen from a communicative point of view, and the quality with which information is processed electronically. In addition to the above, the study by [22] included an E-SQ-media model that studied perceived quality in the cybermedia and concluded that the dimension of interaction, treated as an element of participatory communication, directly influenced the quality of the information portal.

Finally, [49] associated reviews by users themselves, as a way of participating and communicating with the website, with an improvement in the quality of the electronic service. We therefore propose our fourth hypothesis:

**Hypothesis (H4):** *Communication directly and positively influences the quality of the service on collaborative accommodation platforms.*

While satisfaction is thought to be the result of a transitory judgment, perceived quality is believed to be the overall result maintained over time and based on that or other types of value judgments regarding the service [51]. Reference [57] were among the first to contradict the model posited by [51], stating that quality precedes satisfaction. In line with this, a study applied to spa tourism conducted by [58] argued that the quality of the service, or the perception thereof, is determined by the customer's positive experiences over time, concluding that quality of service is an important precursor to satisfaction. [59] and [60] reached this same conclusion. These authors concluded that the impact perceived quality has on users is not only one of joy but also satisfaction of use, generating future prospects of purchase. We therefore propose our fifth hypothesis:

**Hypothesis (H5):** *The quality perceived in a collaborative accommodation platform significantly influences the user's satisfaction.*

Both satisfaction and loyalty are indicators of the virtual platform functioning well and fundamental marketing elements that translate into greater benefits [61,62]. Reference [63] also agreed on this point, finding loyalty itself to be a consequence of satisfaction. According to these authors [63] (p. 37), loyalty consists of "customers' expectations or willingness to buy a particular product or service from a provider". In fact, these authors determine that satisfaction has a positive and significant effect on loyalty.

Numerous and varied studies can be found in the literature relating the two concepts as a result of customer-perceived quality, including those conducted by [47,58,59,64], among others. More recent research also concludes that customer satisfaction has a significant impact on customer loyalty [65]. And this hypothesis is also contemplated by other authors in reference to the online world, such as [66] who, in their study on satisfaction, loyalty and commitment in online environments, found that "Level of satisfaction positively influences customer loyalty in the online environment" [67] (p. 175).

For their part, in a study into the effects of website quality on user satisfaction, [60] stated that this satisfaction was closely linked to present and future intention to purchase, thus generating a certain loyalty towards the website. In line with this, [50] also concluded that user satisfaction in electronic commerce has a positive and direct effect on loyalty. We therefore propose a sixth hypothesis.

**Hypothesis (H6):** *Satisfaction has a positive and direct effect on loyalty among users of collaborative accommodation platforms.*

Reference [64] referred to loyalty as a commitment customers themselves make to the company, which is reflected in the purchase of its products and services, as well as recommendations to friends, relatives and acquaintances. In this same line, [68] stated that loyalty can be measured and evaluated on the basis of intention to repurchase, recommendations to other customers and a certain flexibility with regard to price, thus resisting any actions by the competition.

This relationship has been confirmed in studies applied in different fields. For example, the research conducted by [69] in the field of health supported the fact that perceived quality in intrinsic attributes of the product has a positive effect on customer loyalty. Furthermore, in the field of virtual supermarkets [43] also confirmed the hypothesis that a high level of perceived quality translates into high levels of loyalty towards the website. In line with this, [70] also concluded that there is a direct relationship between perceived quality and customer loyalty in tourist destinations. Although

the study by [33] only partially supported the relationship between perceived service and loyalty, [71] again confirmed the positive relationship between perceived quality and customer loyalty. We can therefore posit our seventh hypothesis:

**Hypothesis (H7):** *The quality of the service provided by a collaborative accommodation platform positively and directly influences the loyalty of its users.*

#### 4. Methodology

Based on an extensive review of the literature on both collaborative accommodation platforms and perceived quality, we identified the main dimensions and items that can be included in the scale; they are listed in Table 1. The items for measuring satisfaction and loyalty are also included.

**Table 1.** Measurement scale for perceived quality in a collaborative accommodation platform, satisfaction and loyalty.

EFFICIENCY	
EF1	The website is easy to use
EF2	The information on the website is well organized and easy to find
EF3	I can access the website from my usual device
EF4	The website design makes browsing easier
EF5	I can access the information I want from the home page
EF6	I can access related content from the information I am checking
EF7	I can register and/or subscribe to the website and the different services quickly and easily
EF8	The pages of the different sections open quickly
EF9	The contents are well linked and redirect correctly
RELIABILITY	
R1	The website contains all the information I need to know about the features of the products, services and content offered
R2	Information and content are updated on a regular basis
R3	The confirmation process after the transaction is completed is suitable and comprehensible
R4	The purchasing process is easily accessible and manageable
R5	The process for participating and/or creating content is easily accessible and manageable
PRIVACY/SECURITY	
PS1	I think the website has adequate security measures
PS2	I feel secure doing economic transactions through the platform's website
COMMUNICATION	
C1	The communication process with other users and/or owners through the website is adequate
C2	The way of receiving information through my usual device is adequate
C3	I can give my opinion on the different services on the website itself
PERCEIVED QUALITY OF CYBERMEDIUM	
PQ	Evaluate the overall quality of the platform's website you use most frequently
USER SATISFACTION	
S	Rate your level of satisfaction with platform's website experience you use most frequently
USER LOYALTY	
L1	How likely are you to recommend the platform's website you use most frequently to friends and family?
L2	How likely are you to revisit the platform's website in the next 6 months?

We then developed an on-line questionnaire (on Google Forms) comprising all the items identified in the literature review. Items were measured using a five-point Likert scale from 1 "strongly disagree"

to 5 “strongly agree”. The questionnaire (Appendix A) also included a block of sociodemographic questions. The survey was designed following the suggestions of [72].

The population under study consisted of individuals who had used a collaborative accommodation platform during the past year. The questionnaire was self-administered and participation in a gift draw was offered to encourage responses (gifts included an electronic device and a surprise trip). The survey was disseminated via Facebook groups related to tourism and travel, travel blogs and Spanish university travel forums. The link for the survey was sent to the group and forum administrators so that they could pass it on to their users. Data collection took place between the months of January and March 2019.

A total of 474 surveys were collected. Of these, 359 were considered valid for the present study. A pilot test had been carried out previously, which consisted in administering the survey to 75 users of collaborative accommodation platforms. This test was used to verify that the questions were understood correctly; relevant modifications were made to several questions and the text was improved as a result.

The respondent profile was as follows: women (68%), young (62% were aged between 20 and 34), used social networks (100%), had university studies (56%), travelled for leisure purposes (90%), were accompanied by their partner, family or friends (95%), stayed between two and four nights at the destination (57.4%), had average purchasing power and used platform occasionally (85%).

Before performing the corresponding analyses, the database was cleansed using two criteria: those cases where over 50% of all items were rated with the average response (3 out of 5) were eliminated, as were those that showed the same response pattern from a certain point in the survey onwards. A final total of 309 valid surveys was obtained.

Regarding the method of analysis, the proposed conceptual model was tested using structural equation models, which allows for the simultaneous testing of causal relationships between dependent and independent variables. All indicators are reflective. The statistical software MPlus7.4 [73] and the robust maximum likelihood (RML) technique were employed, since missing values and non-normality were taken into account in some variables. First, the dimensionality, reliability and validity of the scale were tested using a confirmatory factor analysis (CFA), and then causal relationships were determined to test Hypotheses 1–7.

## 5. Results

### 5.1. Results of the Measuring Model

Table 2 shows the results of the first step of the study, where a CFA was carried out for the items comprising the scale. As we can see, the four expected dimensions, efficiency, reliability, privacy and communication are defined, as well as loyalty (measured by two items). Convergent validity is demonstrated, firstly, by the factor loadings, which are greater than 0.5 [74], and secondly by the average variance extracted (AVE) for each of the factors, which are also greater than 0.5 [75]. The reliability of the scale is confirmed by the Cronbach’s  $\alpha$  indices of each of the factors, which are greater than 0.7.

Table 3 shows the discriminant validity of the four dimensions, evaluated by means of the AVE. The square root of the AVE between each pair of factors is given in the diagonal (values in bold). This must be higher than the estimated correlation between those factors (below the diagonal).

**Table 2.** CFA: Analysis of the dimensionality, reliability, and validity of efficiency, reliability, privacy/security, communication and loyalty (fully standardized solution).

	Factor Loading	t
<b>Efficiency</b> (AVE = 0.73; Cronbach's $\alpha$ = 0.96)		
EF1	0.87	44.11**
EF2	0.87	43.22**
EF3	0.82	31.91**
EF4	0.88	50.25**
EF5	0.84	31.85**
EF6	0.81	24.30**
EF7	0.82	36.24**
EF8	0.87	47.23**
EF9	0.90	58.52**
<b>Reliability</b> (AVE = 0.75; Cronbach's $\alpha$ = 0.94)		
R1	0.81	31.47**
R2	0.84	35.57**
R3	0.91	47.06**
R4	0.92	74.64**
R5	0.85	32.64**
<b>Privacy/Security</b> (AVE = 0.76; Cronbach's $\alpha$ = 0.85)		
PS1	0.84	22.67**
PS2	0.90	35.20**
<b>Communication</b> (AVE = 0.75; Cronbach's $\alpha$ = 0.89)		
C1	0.85	23.42**
C2	0.89	38.21**
C3	0.85	30.52**
<b>Loyalty</b> (AVE = 0.61; Cronbach's $\alpha$ = 0.76)		
L1	0.88	29.15**
L2	0.67	12.27**

Notes: model fit: chi-square = 359.15; df = 179;  $p$  = 0.000; root mean square error of approximation (RMSEA) = 0.06; comparative fit index (CFI) = 0.96; Tucker Lewis Index (TLI) = 0.95; Standardized root mean square residual (SRMR) = 0.03; \*\*  $p$  < 0.001.

**Table 3.** Correlations and discriminant validity.

	1	2	3	4
<b>1 Efficiency</b>	<b>0.85</b>			
<b>2 Reliability</b>	0.80**	<b>0.87</b>		
<b>3 Privacy/Security</b>	0.68**	0.79**	<b>0.87</b>	
<b>4 Communication</b>	0.68**	0.82**	0.85**	<b>0.87</b>

\*\*  $p$  < 0.001.

## 5.2. Results of the Structural Model

The causal relationships from the proposed model were analyzed to test Hypotheses 1–7 (Table 4).

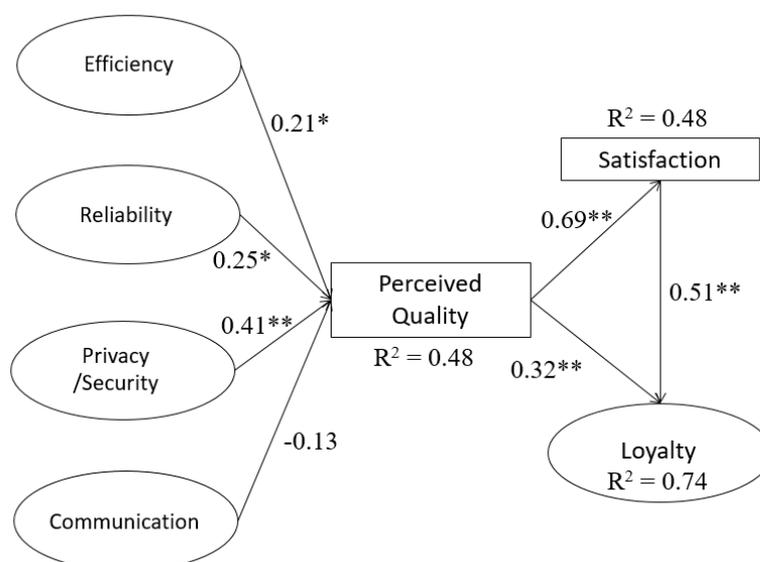
**Table 4.** SEM results (fully standardized solution).

Hypotheses	Path	Path Coefficient	t	Result
H1	Efficiency -> Perceived quality	0.21	2.285*	Accepted
H2	Reliability -> Perceived quality	0.25	2.03*	Accepted
H3	Privacy/Security -> Perceived quality	0.41	2.92**	Accepted
H4	Communication -> Perceived quality	-0.13	-0.83	Not accepted
H5	Perceived quality -> Satisfaction	0.69	15.74**	Accepted
H6	Satisfaction -> Loyalty	0.51	7.24**	Accepted
H7	Perceived quality -> Loyalty	0.32	4.52**	Accepted

Notes: model fit: chi-square = 463.38; df = 241,  $p = 0.000$ ; RMSEA = 0.06; CFI = 0.96, TLI = 0.95; SRMR = 0.05; \*\*  $p < 0.01$  \*  $p < 0.05$ .

Based on chi-square, CFI, TLI and RMSEA values the fit of the model was acceptable. Additionally, the variance in perceived quality ( $R^2 = 0.48$ ) was explained by efficiency, reliability, privacy/security and communication. This indicates that the model used in this study has the capacity to satisfactorily predict and explain the perceived quality of collaborative accommodation platform websites. The variance in satisfaction is explained by perceived quality ( $R^2 = 0.48$ ), and the variance in loyalty is explained by satisfaction and perceived quality ( $R^2 = 0.74$ ).

The results of the structural equation model indicate, as Table 2 and Figure 2 show, that efficiency, reliability and privacy/security positively influence perceived quality ( $\beta = 0.21$ ,  $p < 0.05$ ;  $\beta = 0.25$ ,  $p < 0.05$ ; and  $\beta = 0.41$ ,  $p > 0.01$ ), but not communication ( $\beta = -0.13$ ,  $p > 0.05$ ). These results support Hypotheses 1–3, but not Hypothesis 4. Furthermore, perceived quality positively and significantly affects satisfaction ( $\beta = 0.69$ ,  $p < 0.01$ ), satisfaction also positively and significantly affects loyalty ( $\beta = 0.51$ ,  $p < 0.01$ ), and perceived quality positively and significantly affects loyalty ( $\beta = 0.32$ ,  $p < 0.01$ ). Thus, Hypotheses 5–7 are also accepted.

**Figure 2.** Results of the structural model.

## 6. Conclusions

This study analyzes motivations affecting the use of collaborative accommodation platforms as an information portal. We propose a structural equation model in which the different dimensions of perceived quality are related to satisfaction and loyalty. To this end, we have based our work on previous studies such as that conducted by [23], which relate the dimensions included in the

E-S-QUAL model to the constructs of satisfaction and loyalty, and we have added the dimension of communication, designed from an interactive point of view. This approach has been used previously for online media and in this case has been adapted to collaborative accommodation portals.

Several quality indicators can be found that are common to different spheres (banking, tourism, education, retail, etc.) and likely to comprise the dimensions used to analyze perceived quality through the E-S-QUAL method. Quality indicators typical of information portals also exist that are likely to be used in a scale for measuring perceived quality.

The results of the study show that all of the initial hypotheses are confirmed except one. Efficiency, reliability and privacy/security positively influence the perceived quality of a collaborative accommodation portal, but communication does not. This finding differs from those of other studies applied to information portals. The key difference lies in the fact that the information offered by this type of portal leads to the subsequent contracting of a service. In contrast, in studies applied to online media, this information does not always lead to the acquisition of a product or service. It is possible that interactive communication is not so highly valued by users because those who offer the service and those who consume it are “peers”, and users’ evaluations may therefore be influenced by the mutual trust they share. Another possibility could be that the users mostly booked entire units with smart locks that required little coordination. Furthermore, an alternative perspective to explain the negative and non-significant effect might be because communication could be considered a hygiene factor rather than a motivational one [76,77], and thus, it would only negatively affect satisfaction if it is not adequate, but would have little impact when it is adequate. The results also indicate that perceived quality positively influences satisfaction and intention to return and repurchase.

The results demonstrate that efficiency, reliability and security are related to perceived quality. A collaborative accommodation portal that offers information, functions correctly, and contains updated and accessible information generates user confidence and therefore a greater predisposition when interacting with the website. A positive experience with an information portal results in a higher level of satisfaction and loyalty on the part of the Internet user. On this point, the users surveyed suggested that their satisfaction and loyalty to a portal will increase in proportion with their overall evaluation of it.

In summary, the scale provided for measuring perceived quality in a collaborative accommodation portal is both valid and reliable. The model contemplates and reveals not only the relationship between the aforementioned dimensions and perceived quality, but also the relationship between users’ perception of quality and their satisfaction and loyalty. Our research therefore provides administrators of this type of platform with a set of relevant elements when designing the portal so that they may adopt the necessary measures to attract more users and thereby improve competitiveness in the accommodation market. This type of platform should invest resources in developing aspects related above all to efficiency, reliability and security. That is, the website must be easy to use and not generate waiting time. Furthermore, it must also ensure that the information received is accurate, and that the product or service offered is consistent with what was contracted by the client. And last but not least, managers of this type of platform must ensure it complies with data privacy and security standards.

Evaluating satisfaction with information offered by sharing economy platforms is important because the sharing economy provides a new economic opportunity for different agents in the tourism industry. In other words, if suppliers did not have access to this type of platform it would be very difficult for them to offer their products or services on the market. Furthermore, for consumers who use collaborative accommodation platforms it is a more sustainable form of consumption since they are taking advantage of resources that would be otherwise underutilized. Finally, developing this type of platform could open up a pathway to an equitable, decentralized and sustainable economy.

As a main limitation of this study, we can state that the present investigation ignores the purely informative aspects of portals and the hedonic character of users’ decisions. In addition, the study has focused on collaborative accommodation portals, leaving aside other types of tourism information portals, whether dedicated to news, destinations or other types of services. Also, the survey refers

to users from a specific country, Spain, and it would therefore be interesting to extend the study to Internet users from other geographical areas so as to analyze the influence of cultural variables. Future lines of research should aim to conduct an in-depth analysis of the direct and indirect effects of the constructs analyzed through rival models. A second line of research would be to investigate how variables relating to consumers' characteristics or the establishments offered affect perception of the quality of information available, and therefore also satisfaction and loyalty. A third line of work would be to apply the scale to other types of collaborative economy platforms to analyze whether differences exist with regard to interactive communication and its influence on perceived quality. Finally, further analysis could be carried out considering other variables besides cultural ones, such as respondents' gender or other socio-demographic variables, as well as environmental variables or those related to the new paradigm of collaborative economics (e.g. user motivations, collaborations and relationships, the rise of new platforms, regulations).

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## Appendix A. The Questionnaire

Although the questionnaire was designed using Google Forms, the format of the questionnaire presented here does not reflect the format that participants encountered.

1.1. *When was the last time you used a collaborative accommodation platform (e.g., to search for information, inquire about prices, and make reservations for accommodations)?*

- Less than 1 month ago
- From 1 to 3 months ago
- From 3 to 6 months ago
- Between 6 months and a year ago
- More than 1 year ago (End survey)
- Never (End survey)

1.2. *Which collaborative accommodation platform do you use most often? Select only one option.*

- Airbnb
- HomeAway
- HouseTrip
- Wimdu
- Flats
- Niumba
- Vacation Home Rentals
- Hundredrooms
- Homestay
- Rentalia
- BeMate
- Other

1.3. *Considering the platform selected above, what type of user were you in the past year? Select only one option.*

- I look for accommodation on the platform.
- I offer at least one accommodation on the platform.
- I look for and offer accommodation on the platform.

1.4. *How often do you use the selected platform? Select only one option.*

- Daily
- Weekly
- Monthly
- Only when I want to travel
- Only when someone books an accommodation of mine
- I don't know.

1.5. For what type of travel did you last use the selected platform? Select only one option.

- Leisure travel
- Business travel
- Both leisure and business travel
- I don't know.

1.6. If you last used the selected platform for leisure travel, who did you travel with? Select all options that apply.

- I traveled in a couple.
- I traveled with my family.
- I traveled with friends.
- I traveled alone.
- Other
- I don't know.

1.7. What social media networks do you usually use? Select all options that apply.

- Facebook
- YouTube
- Twitter
- Instagram
- LinkedIn
- Pinterest
- Google+
- Tumblr
- Other
- None of the mentioned networks
- I don't know

1.8. Do you interact on social networks on the selected platform (e.g., by posting comments, complaints, doubts, questions, or reviews)?

- Yes
- No

1.9. What device do you usually use the selected platform on? Select all options that apply.

- Desktop computer
- Smartphone
- Laptop computer
- Tablet
- Smart TV
- Other
- I don't know

1.10. When was the last time you booked a stay on the selected platform?

- Yesterday
- In the last week
- In the last month
- In the last 3 months
- In the last 6 months
- Last year
- More than a year ago
- I don't know

1.11. How many nights did you stay in the last accommodation that you booked on the selected platform? \_\_\_\_\_

1.12. How much did you pay for the last accommodation that you booked on the selected platform?

- Less than €100
- Between €101 and €300
- Between €301 and €600
- Between €601 and €1,000
- Between €1001 and €1500
- Between €1501 and €2000
- More than €2000
- I don't know

**2. Indicate the extent to which you consider that the platform's website that you use most frequently has the characteristics described in each statement (1 = strongly disagree, 5 = strongly agree).**

1. The website is easy to use.	1-2-3-4-5
2. The information on the website is organized well and easy to find.	1-2-3-4-5
3. I can access the website from the device that I usually use.	1-2-3-4-5
4. The website's design makes browsing easy.	1-2-3-4-5
5. I can access the information that I want from the website's homepage.	1-2-3-4-5
6. I can access related content from the information I am checking	1-2-3-4-5
7. The website's multimedia (e.g., images, videos, and audio materials) provide me with information about the services provided on the platform.	1-2-3-4-5
8. I can register or subscribe to the website and the different services quickly and easily.	1-2-3-4-5
9. The webpages for the different sections of the platform open quickly.	1-2-3-4-5
10. The contents on the website are linked well, and links redirect correctly.	1-2-3-4-5
11. I have needed to install additional applications to browse the website or to access various services and content.	1-2-3-4-5
12. I have needed to use advanced computer knowledge to navigate the website.	1-2-3-4-5
13. The website has an easy-to-use search function and access system.	1-2-3-4-5
14. I was able to contact the people responsible for the different services offered on the platform or the website's contents.	1-2-3-4-5
15. Customer service for the platform operates 24 hours a day.	1-2-3-4-5
16. The website contains all of the information I need to know about the company.	1-2-3-4-5
17. The website contains all of the information I need to know about the features of the products, services, and content offered.	1-2-3-4-5
18. The website's information and content are updated on a regular basis.	1-2-3-4-5
19. The confirmation process after a transaction is completed is suitable and comprehensible.	1-2-3-4-5
20. The purchasing process is easily accessible and manageable.	1-2-3-4-5
21. The process of participating or creating content is easily accessible and manageable.	1-2-3-4-5
22. The service delivered is as promised on the website.	1-2-3-4-5
23. The website generally instills confidence.	1-2-3-4-5
24. When I have had a complaint, customer service representatives have dealt with it quickly and efficiently.	1-2-3-4-5
25. The website assures me of the confidentiality of my data in all transactions.	1-2-3-4-5
26. The platform ensures that I do not receive external commercial mail when I register.	1-2-3-4-5
27. The website has adequate security measures.	1-2-3-4-5
28. I feel secure conducting transactions on the website.	1-2-3-4-5
29. The communication process with other users and owners via the website is adequate.	1-2-3-4-5
30. The way that I receive information from the website on the device that I usually use is adequate.	1-2-3-4-5
31. I can give my opinion about the different services offered by the platform on the website.	1-2-3-4-5
32. I can subscribe to receive information about content that interests me via email.	1-2-3-4-5
33. The platform cares about my opinion by conducting surveys and evaluations of the contents and services offered.	1-2-3-4-5

**3.1. Evaluate the overall quality of the platform's website that you use most frequently.**

1    2    3    4    5

**3.2. Rate your level of satisfaction with your experience on the platform's website that you use most frequently.**

1    2    3    4    5

3.3. How likely are you to recommend the platform's website that you use most frequently to friends and family?

1    2    3    4    5

3.4. How likely are you to revisit the platform's website in the next 6 months?

1    2    3    4    5

4.1. Indicate your gender.

- Man
- Woman

4.2. Indicate your age in years.

14–19    20–24    25–34    35–44    45–54  
55–64    65 or more

4.3. Indicate the highest level of education that you have completed.

- None
- Primary and secondary school
- Baccalaureate or professional training
- Graduate or postgraduate
- I don't know

4.4. Indicate your current employment status.

- |              |                |
|--------------|----------------|
| • Employed   | • Pensioner    |
| • Unemployed | • Other        |
| • Student    | • I don't know |
| • Homemaker  |                |

4.5. Indicate your household's approximate monthly net income.

- |                  |                   |
|------------------|-------------------|
| • Less than €600 | • €3001–€3600     |
| • €601–€1200     | • €3601–€4200     |
| • €1201–€1800    | • More than €4201 |
| • €1801–€2400    | • I don't know    |
| • €2401–€3000    |                   |

4.6. Enter your zip code: \_\_\_\_\_

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