

Research Paper

Why do people purchase from online travel agencies (OTAs)? A consumption values perspective

Shalini Talwar^a, Amandeep Dhir^{b,c,d,*}, Puneet Kaur^{d,e}, Matti Mäntymäki^c

^a K J Somaiya Institute of Management, Mumbai, India

^b School of Business and Management, LUT University, Lappeenranta, Finland

^c Turku School of Economics, University of Turku, Finland

^d Optentia Research Focus Area, North-West University, Vanderbijlpark, South Africa

^e Department of Industrial Engineering and Management, Aalto University, Finland

ARTICLE INFO

Keywords:

Consumption values
Hygiene consciousness
Online travel agency
OTA
Tourism

ABSTRACT

Online travel agencies (OTAs) are struggling to remain financially sustainable due to intense competition. To overcome this challenge, OTAs need to better engage their customers by offering them superior value propositions. This calls for an in-depth understanding of the consumption values pertinent to the OTA context. To address this gap, the current study puts forward a framework for predicting purchase intention by adapting the theory of consumption values to the OTA context. The proposed model is tested with data collected from 809 OTA users. The results imply that quality-of-benefits, monetary, social status, preference, and information values predict purchase intention toward OTAs, with the chief driver being the quality-of-benefits value, followed by the preference value. Moderation analysis further reveals that the strength of the relationship between these values and purchase intention differs between users in different age groups and between users with different levels of privacy and security concerns, hygiene consciousness, and visibility perceptions.

1. Introduction

Online travel agencies (OTAs), such as Hotels.com and [Expedia](http://Expedia.com) as well as OYO in India and Ctrip in China, are travel aggregators who interface with prospective travelers via the Internet to sell travel-related products such as flights, cruises, holiday packages, hotel rooms, and so on ([Rezgo, 2019](#)). These online agencies are now shifting their business model from web-based services to smartphone apps since mobile apps are easy to download and operate ([Dwikesumasari and Ervianty, 2017](#)). Furthermore, OTAs are expanding quickly worldwide. It is anticipated that the market share of OTAs will increase globally to USD 755.94 billion in 2019 from USD 564.87 billion in 2016 ([Statista, 2019](#)). Consumer adoption of OTAs is a global phenomenon. For instance, since their inception in the U.S. around 1995, the share of OTAs in the online travel booking market has risen to 39%, which will further expand to 41% by 2020 ([Feinstein, 2019](#)). Similarly, in China, OTAs accounted for nearly 70% of the total online travel booking in the first half of 2019 ([ChinaTravelNews, 2019](#)). The rising popularity of OTAs and intensifying competition have prompted academic research on consumer behavior related to OTAs. For example, prior studies have analyzed different aspects of consumer behavior, such as satisfaction

([Jedin and Ranjini, 2017](#); [Kustiwi, 2018](#)), customer loyalty ([Dwikesumasari and Ervianty, 2017](#)), and innovativeness ([Lee et al., 2017](#)) in the context of OTAs.

Purchase intention is an important aspect of consumer behavior. Prior research has revealed the influence of socio-demographic factors, perceived risk, attitude, and compatibility on intentions to book travel online (e.g., [Amaro and Duarte, 2013, 2015](#)). Another key antecedent of purchase intention is the perceived value that consumers may derive from the use of a product or service ([Carlson et al., 2015](#); [Lu and Hsiao, 2010](#)). With regard to OTAs, users' value perceptions are critical in the choice of potential online modes for booking travel ([Mohd-Any et al., 2014](#)). Furthermore, the literature on OTAs suggests that price advantage, efficiency, system quality, and convenience need to be offered to attract customers ([Ozturk et al., 2016](#); [Jedin and Ranjini, 2017](#)). It is contended that value embodies consumers' needs, desires, and expectations ([Sweeney and Soutar, 2001](#)), which can be met more effectively through a better understanding of the consumption values that consumers derive from their OTA use.

Despite the significance of consumption values for understanding consumer behavior, to the best of our knowledge, very few empirical studies have examined them with respect to OTAs (e.g., [Chang et al.,](#)

* Corresponding author at: School of Business and Management, LUT University, Lappeenranta, Finland.

E-mail addresses: shalini.t@somaiya.edu (S. Talwar), amandeep.dhir@lut.fi (A. Dhir), puneet.kaur@aalto.fi (P. Kaur), matti.mantymaki@utu.fi (M. Mäntymäki).

2019; Mohd-Any et al., 2014). Notably, no prior studies have attempted to adapt the generic values proposed by the theory of consumption values (TCV) (Sheth et al., 1991) to measure purchase intention toward OTAs specifically, even though in some extant studies, scholars have attempted to adapt the TCV to specific contexts. For example, Kim and Eves (2012) adapted functional value to represent health value in the context of food consumption at travel destinations. To fill this gap in knowledge, the present study aims to contextualize TCV to address the characteristics of OTAs and examine the associations between different consumption values and purchase intention toward OTAs. Accordingly, this study seeks to answer to three specific research questions:

RQ1: What consumption values characterize the OTA context?

RQ2: How do the different consumption values contribute to purchase intention toward OTAs?

RQ3: Do moderating variables—such as hygiene consciousness, visibility, privacy and security concerns, and age—influence the strength of association between consumption values and purchase intention?

As the TCV provides only generic categories of values, in an effort to make the theory more context-specific to OTAs, the present study has adopted a mixed methods approach (cf. e.g., Mäntymäki and Riemer, 2016; Venkatesh et al., 2013) to generate and measure OTA-specific values, namely monetary (generic functional value—price), quality-of-benefits (generic functional value—quality), information (generic epistemic value), social status (generic social value), and preference (generic conditional value) values. The study also examines four moderating variables, namely hygiene consciousness, visibility, privacy, and age, which have been identified on the basis of an extensive review of the extant hospitality, tourism, and information systems literature. The resultant consumption values have been examined using cross-sectional data from 809 OTA users.

The results suggest that all of the proposed values have a positive association with purchase intention, but the main driver of intentions is quality-of-benefits value, followed by preference value. Moderation analysis reveals that the strength of the relationship between values and purchase intention is different for users of different age groups who have different levels of privacy and security concerns, hygiene consciousness, and visibility perceptions.

This study makes two key theoretical contributions. First, we apply the TCV contextually (cf. Mäntymäki et al., 2014) to grasp consumers' value perceptions with respect to OTAs. Second, by testing the influence of several context-specific moderating variables, we obtain in-depth insights into the unique nature of OTAs, which are an amalgamation of services that are booked online but experienced offline (the online to offline (O2O) model) (Kang and Namkung, 2019). The study highlights the fact that in the case of such services, better value propositions for consumers come not only from an app's features and affordances but also from the quality of the physical services or facilities that are booked.

Our findings offer different practice-related inferences to help service providers in their effort to convert potential users into actual users and ensure continued usage by existing users. The study findings suggest that service providers should focus on the importance of the utilitarian features of their OTA apps, the development of cost-effective advertising strategies, the quality of physical services at travel

destinations, and leveraging the social value that users attach to the use of OTA apps.

2. Theoretical background

2.1. Online travel agencies (OTAs)

Online travel services, and particularly OTAs, have attracted scholars' attention in the recent past, and various relevant studies have been conducted across the globe. Scholars contend that the online mode has become quite a popular way of booking hotel rooms (e.g., Denizci Guillet et al., 2019). In a study involving descriptive quantitative investigation in Indonesia, Augustin (2018) found that three qualities—system, information, and service—play a significant role in influencing OTA usage. Another study revealed that accessibility, pricing, review accountability, and customer service are the key factors that affect customer use of OTAs (Jedin and Ranjini, 2017). Lee et al. (2017) found that website serviceability impacts customer satisfaction, which, in turn, influences customer loyalty and attachment to the brand. Dwikesumasari and Ervianty (2017) found a positive relationship among the determinants of app image, customer inertia, app knowledge, and customer satisfaction in their study.

Mohd-Any et al. (2014) utilized the TCV to propose six dimensions constituting e-value, which, taken together, represent customers' experience of value in booking travel from websites. In their study on cooperation and competition between OTAs and hotels, Chang et al. (2019) applied the TCV to measure perceived value, which was further hypothesized to influence intentions to rebook rooms through hotel websites.

Though there exists a considerable amount of research on OTAs, none of the existing studies has attempted to propose and test a theoretical framework based on OTA-specific values. A framework built on OTA-specific values can help managers develop and redesign their OTA apps to offer their customers better value propositions. The present study proposes to address this gap in the extant literature by utilizing the TCV as the theoretical background and adapting it to the OTA context.

2.2. Theory of consumption values (TCV)

The TCV (Sheth et al., 1991) puts forward five generic consumption values, namely functional, emotional, social, conditional, and epistemic. Table 1 presents conceptualizations of these five values with references to relevant literature.

We utilized the TCV to provide an overarching theoretical framework for the study for three main reasons. First, the TCV is a well-established theory that has been utilized successfully in various contexts to examine consumption values (Dhir et al., 2018; Kaur et al., 2018; Mäntymäki and Salo, 2015; Mäntymäki et al., 2014). Second, prior literature notes that the TCV has been utilized in the hospitality and tourism sector, e.g., in airlines' frequent-flyer programs (Long and Schiffman, 2000) and destination marketing (Phau et al., 2014). Third, the TCV offers a multi-dimensional view of value, covering both the cognitive and affective facets of consumption. This multi-dimensional perspective is important as it allows for capturing the complexity of tourism services (Williams and Soutar, 2009).

Table 1
Generic consumption values

Values	Proposition
Functional	A product alternative's functional features and physical characteristics (Lee et al., 2015)
Emotional	A product alternative's ability to make an impact on a sentimental and affective level (Lee et al., 2015)
Social	A product alternative's capacity to augment self-image of the user (Khan and Mohsin, 2017)
Epistemic	A product alternative's ability to incite curiosity, offer novelty, and/or satisfy a quest to seek knowledge (Mohd Suki, 2016)
Conditional	A product alternative as an outcome of some situation or circumstances that the consumer faces (Sheth et al., 1991)

3. Measuring consumption values from the OTA perspective

As the objective of the present study is to adapt and extend the generic TCV to the OTA context, a qualitative study was undertaken to identify related themes and develop a pool of items to measure OTA-specific values. For this purpose, an open-ended online survey of 40 OTA users was conducted. Such surveys are popular in both media and marketing literature (Dhir et al., 2017). The participants were provided with written statements that acted as stimuli to activate, or even instigate, their sharing of experiences and opinions regarding OTAs. The questions focused on different aspects of OTA use, e.g., frequency of use, and advantages and issues related to OTAs. The collected data were analyzed using the affinity diagramming technique, which is based on the grounded theory approach (Glaser and Strauss, 1967).

The analysis resulted in the development of several themes around the use of OTAs. After obtaining an initial set of themes, we analyzed measurement scales used in prior studies that employed the TCV (e.g., Choe and Kim, 2019) to develop a pool of items, which was further discussed with a panel of three professors and three experts in the area of OTAs, in accordance with the recommended process (Saunders et al., 2016). Finally, the researchers mapped these items according to the different consumption values, resulting in the generation of five OTA-specific consumption values designed to reflect the underlying items, namely monetary, quality-of-benefits, information, social status, and preference values. Thereafter, a pilot survey was conducted with 20 OTA users to assess whether the items were easily understood, clearly worded, and unambiguous. Inputs from the pilot survey were utilized to prepare the final survey instrument. Interestingly, emotional value did not emerge as a key theme during the qualitative study. As a result, we followed prior literature (e.g., Choe and Kim, 2018; Kaur et al., 2018), and omitted emotional value from the proposed framework.

4. Research model and hypotheses

The research model comprises five explanatory variables, namely monetary, quality-of-benefits, social status, information, and preference values, and one dependent variable, namely purchase intention toward the OTA app (Fig. 1). It also examines the moderating role of hygiene consciousness, visibility, privacy and security concerns, and age in influencing the association between the consumption values and purchase intention toward OTAs.

4.1. Monetary and quality-of-benefits values (functional values)

Prior tourism literature has discussed the importance of functional value in consumer choice and predicting user intentions. Jamrozy and Lawonk (2017) found functional value to be a significant predictor in influencing purchase intention toward ecotourism. This value has also been found to be associated with tourists' local food choices (Kim et al., 2018). Chang et al. (2019) highlighted the positive association between functional value and perceived value, which also has a positive association with intentions to rebook a hotel room through OTAs. Mohd-Any et al. (2014) found that functional value contributes to the formation of e-value in OTAs. Furthermore, prior studies have bifurcated functional value into price and quality values (e.g., Choe and Kim, 2018; Jamrozy and Lawonk, 2017). Extant research on mobile applications has also confirmed that the quality (Hsiao and Chen, 2016) and price (Jamrozy and Lawonk, 2017) components of functional value share a significant association with usage intentions.

Similarly, in this study, we bifurcate functional value into monetary and quality-of-benefits value; the former is measured from the perspective of reasonable pricing, the facility to compare prices, and the opportunity to take advantage of promotional offers, whereas the latter is measured in terms of convenience, consistency in offering benefits, and maintaining a high level of benefits. On the basis of the extant research, we anticipate that these two values are likely to enhance OTA

users' value proposition. Thus, we propose the following hypotheses:

H1. Monetary value has a positive influence on purchase intention toward OTAs.

H2. Quality-of-benefits value has a positive influence on purchase intention toward OTAs.

4.2. Social status value (social value)

Previous research suggests that social value is important in the context of tourism (Williams and Soutar, 2000). Morosan and DeFranco (2016) also found that social factors exert a positive influence on travelers' intentions to use the mobile apps of hotels. Similarly, Phau et al. (2014) found that social value exerts a significant influence on the destination choices of tourists. Gallarza et al. (2013) suggested the existence of a strong perceived social value in relation to volunteer tourism. Furthermore, Lei et al. (2019) found that consumers derived social value from branded hotel mobile apps' service-request functions.

In the current study, social value represents the utility derived in the social context from using OTA apps. As the underlying items indicate that consumers perceive that the use of OTA apps elicits social approval and builds a positive image, we have labeled it *social status value*. Based on the extant literature, we argue it is likely that social status value has a positive effect on purchase intention. Thus, we propose the following hypothesis:

H3. Social status value has a positive influence on purchase intention toward OTAs.

4.3. Information value (epistemic value)

Prior literature has suggested a positive association between epistemic value and consumers' choice behavior, e.g., healthy food choices (Thomé et al., 2018) and the purchase of virtual goods by teenagers (Mäntymäki and Salo, 2015). However, only a few empirical studies have examined the influential role of epistemic value in the context of tourism and hospitality literature. For example, Phau et al. (2014) found epistemic value to be associated with the beneficial image of the tourism destination and the choice of vacation destination. Similarly, Ashton (2015) found that the epistemic value provided by a destination represents where and when consumers seek information to satisfy their curiosity about the destination.

In the current study, epistemic value is labeled as *information value*, and it is measured in terms of the acquisition of information on different offers, promotions, and the terms and conditions related to OTA apps. We argue that since epistemic value has a significant association with consumer behavior in the context of tourism and hospitality in general, it is likely that its OTA-specific form, information value, will also have a positive relationship with purchase intention. Thus, we propose a fourth hypothesis:

H4. Information value has a positive influence on purchase intention toward OTAs.

4.4. Preference value (conditional value)

Extant literature has suggested that conditional value is associated with different consumer behavior-related issues in different contexts, such as education (Rivera et al., 2018). Similarly, prior tourism and hospitality literature has also emphasized the influential role of conditional value and considered it to be a key value for tourists (Hur et al., 2012). Phau et al. (2014) argued that conditional value is derived from a specific situation or context that a consumer faces in connection with tourism. For instance, a destination such as Mauritius could be perceived by tourists as providing conditional value in terms of safety and

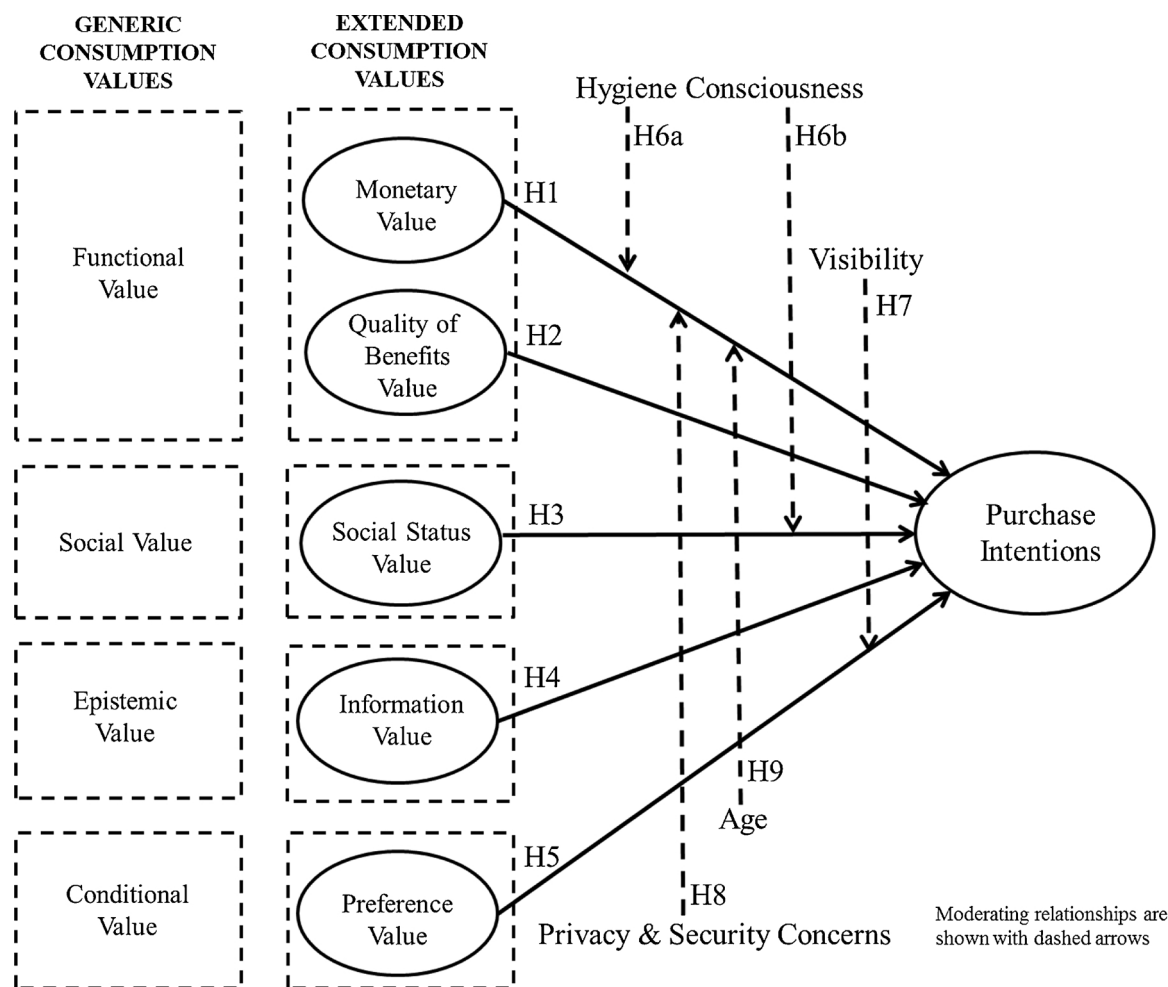


Fig. 1. Proposed research model.

life quality when compared with destinations that are not as peaceful and safe.

In the present study, conditional value, labeled as *preference value*, is measured in terms of conditions, such as free cancellations, promotional incentives, and the listing of more properties by OTAs. Prior research has also found that promotional discounts are important for travelers at both the consideration as well as the booking stage and influence their buying decision (Hu and Yang, 2019). Thus, we hold that preference value derived from the use of OTA apps is likely to enhance users' purchase intention and propose the following hypothesis:

H5. Preference value has a positive influence on purchase intention toward OTAs.

4.5. Moderating influence of hygiene consciousness, visibility, privacy and security concerns, and age

Moderating variables can be utilized to better understand the influence of individual differences in the study of consumer behavior (Meyers-Levy and Loken, 2015). A review of prior hospitality and tourism literature reveals that scholars have examined the role of different moderating variables. For example, Agag and El-Masry (2016) confirmed the moderating influence of habit on the relationship between intentions toward online booking of hotel rooms and the factors that determine it. Ye et al. (2019) suggested that age plays a moderating role when it comes to influencing associations among interactivity, branding elements, and customers' willingness to reuse OTAs. Tan and

Ooi (2018) revealed the moderating influence of age and gender on consumers' decisions to shop for tourism products on their mobile phones. However, there exists scope for evaluating many other relevant variables that can moderate the association between antecedents and intentions in the context of tourism and hospitality.

The present study has undertaken an extensive review of hospitality, tourism, and information systems literature to identify sources of individual differences for digitally driven aggregators, such as OTAs. Prior literature has revealed the importance of demographic factors, hotel attributes, and various aspects of app-based booking in moderating the strength of association between explanatory and dependent variables. Acknowledging the importance of the moderating influences in OTA choice behavior, we have identified four moderating variables, namely hygiene consciousness (related to physical attributes of the service or product booked online), visibility (related to the use of OTA apps for booking), privacy and security concerns (related to booking travel through apps), and age (demographic factor) to evaluate the impact of individual differences on the association of the proposed consumption values with purchase intention. Although no prior examples of these moderating variables were found, the extant literature on hospitality, tourism, and mobile app usage provides sufficient support for them. The selected moderators represent the multi-faceted aspects of OTAs, which are an amalgamation of digital advancement, m-commerce, and the O2O mode of service delivery. This complex nature of OTAs necessitates considering the impact of a variety of variables while examining the association between consumption values and purchase intention. Descriptions of the four moderating variables and the items used to measure them are presented in Table 2.

Table 2
Description of moderating variables.

Moderator	Items	Reference
Hygiene consciousness measures the consumers' habit of being aware of their hygiene. It reflects a concern for cleanliness	<ol style="list-style-type: none"> 1. I reflect about my hygiene a lot 2. I'm very self-conscious about my hygiene 3. I'm alert to changes in my hygiene 4. I'm usually aware of my hygiene 5. I take responsibility for the state of my hygiene 	Amblee (2015); Xie et al. (2014)
Visibility represents the extent to which others are using a given innovation and the extent it is advertised	<ol style="list-style-type: none"> 1. I have seen ads about this specific OTA 2. It is common to find people who book rooms via this OTA 3. I know people who avail themselves of the services of this specific OTA 	Johnson et al. (2018)
Privacy and security concerns refer to both a concern for physical safety while using the hotel room and cyber safety while using travel booking apps	<ol style="list-style-type: none"> 1. Nowadays, budget hotels do not care about the privacy of their guests 2. I'm very concerned about hidden cameras in hotel rooms 3. Sharing identity details with a hotel nowadays concerns me 4. Sharing personal details online while booking hotels concerns me 5. Sharing financial details online while booking hotels concerns me 6. I'm very particular about the privacy and security provisions of the hotel that I intend to book 7. I'm very particular about the privacy and security provisions of a hotel booking app that I intend to use 	Agag and El-Masry (2016); Chellappa and Pavlou (2002); Cheng et al. (2019)

4.5.1. Hygiene consciousness

Previous tourism and hospitality literature suggests that hygiene consciousness is an important variable that is manifested in concerns over the cleanliness of physical facilities. Cleanliness is one of the key attributes that consumers seek in hotel rooms (Sohrabi et al., 2012). In fact, cleanliness is a key consumer consideration when evaluating hotels online and deriving satisfaction from services availed of (Pizam and Tasci, 2019; Xie et al., 2014).

In this study, we conceptualize hygiene consciousness as an individual's preference for maintaining a certain habit: in this case, a certain cleanliness standard. The extant literature has extensively studied the moderating role of habit in the context of purchase intention (Agag and El-Masry, 2016). In comparison, hygiene consciousness has never been examined as a moderating variable in previous studies. We argue that hygiene consciousness is a key source of individual differences when booking travel-related services. Although there are no prior findings to support the argument, we intuitively anticipate that users with higher hygiene consciousness are likely to exhibit a stronger association of purchase intention with monetary and social status values. Thus, we propose the following hypotheses:

H6a. The influence of monetary value on purchase intention toward OTAs is moderated by hygiene consciousness such that the influence is stronger for users with higher hygiene consciousness.

H6b. The influence of social status value on purchase intention toward OTAs is moderated by hygiene consciousness such that the influence is stronger for users with higher hygiene consciousness.

4.5.2. Visibility

Scholars argue that visibility predicts the adoption of technology in many fields related to this research. Visibility shares a significant association with intentions in the case of innovations such as e-commerce and mobile services (Shaikh and Karjaluto, 2015; van Slyke et al., 2010). Furthermore, recent studies have confirmed the significant role of visibility in the context of intentions toward mobile payments (Johnson et al., 2018).

As OTAs are also an app-based form of e-commerce, we anticipate that visibility will influence the intentions of users. The present study measures visibility in terms of the effect of viewing advertisements aired by OTA service providers and observing others using OTA apps.

We reason that higher visibility is likely to reinforce the fact that various user preferences, in terms of promotions, incentives, and listings, are being met. We draw this conclusion based on the assumption that if an app is more popular, it must be offering better incentives, cancellation opportunities, or listings or promoting its product more. This can be taken to imply that visibility will impact the association between preference value and intentions toward OTAs such that users with higher visibility perception will derive higher preference value from OTA use, which, in turn, will strengthen its relationship with purchase intention. Thus, we propose this hypothesis:

H7. The influence of preference value on purchase intention toward OTAs is moderated by visibility such that the influence is stronger for users who perceive OTAs as having a high degree of visibility.

4.5.3. Privacy and security concerns

Prior literature has argued that privacy and security concerns, in terms of physical safety, are among the key anxieties in the tourism and hospitality sector. For instance, Guttentag and Smith (2017) utilized security as one of their service quality attribute in their examination of the performance of Airbnb versus other hotels. Another recent study also suggested that privacy concerns related to unauthorized video recordings are causing anxiety for travelers staying in hotel rooms (Cheng et al., 2019). The importance of physical safety through security systems and safety provisions was also underscored by Chan and Lam (2013) in a study based on Hong Kong hotels.

In addition to fears related to physical safety and privacy, concerns about the use of apps and websites for booking travel also have been examined in the extant literature, wherein scholars have suggested that travelers hesitate to use online platforms despite the convenience that they offer due to various information-privacy concerns, such as sharing personal information and financial details (Chen et al., 2013). Confirming these concerns, many prior studies have revealed a significant association of privacy and security concerns with trust and intentions to book travel online (Agag and El-Masry, 2016; Ponte et al., 2015).

The present study measures privacy and security concerns in terms of safety at the physical facility as well as while booking travel through an app. Although no precedent exists, we anticipate that both these concerns will be triggered at the time of booking travel and, therefore, will erode the monetary value that users may derive from the use of

OTAs. Thus, it is likely that higher privacy and security concerns will reduce the strength of association between monetary value and purchase intention. Thus, we propose the following hypothesis:

H8. The influence of monetary value on purchase intention toward OTAs is moderated by privacy and security concerns such that the influence is weaker among users who experience high levels of privacy and security concerns.

4.5.4. Age

The significant role played by age differences in influencing consumer choices has been discussed in the extant literature as well. Yoon and Occeña (2015) found significant differences in the attitudes and behaviors of consumers in consumer-to-consumer (C2C) e-commerce due to age differences. Fang et al. (2016) studied the effect of age in moderating the association between relational benefits and perceived value that influence the repurchase decision of online consumers. Similar findings have been observed in prior tourism and hospitality literature. DiPietro and Wang (2010) showed that age plays a significant role in the context of online tourism services, in which young people are more likely to use the Internet to improve their lodging and dining experiences. Hwang et al. (2019) found a moderating influence of age on the association between perceived innovativeness and word-of-mouth intentions. In the context of OTAs, Ye et al. (2019) found that age exerts a significant moderating influence on the relationship of branding elements with the willingness of consumers to pay a price premium and their intentions to reuse the app, respectively. Although no studies have examined the moderating influence of age on consumption values in the OTA context, based on the extant literature, we anticipate that the age of users will act as a source of difference in the monetary value that they derive from OTAs, and this difference will either weaken or strengthen the association between monetary value and intentions for different age groups. Furthermore, since millennials (representing younger users in our sample) are more likely to exhibit deal-seeking behavior while shopping (Alton, 2019), it is likely that for them, the monetary value offered by OTAs will have a stronger association with purchase intention. Therefore, we propose the following hypothesis:

H9. The influence of monetary value on purchase intention toward OTAs is moderated by age such that the influence is stronger for younger users.

5. Data and methodology

5.1. Data collection

The data were collected from users of a leading Indian OTA service, OYO Rooms, which offers services in various countries. The cross-sectional data were collected using a questionnaire comprising items generated through the qualitative study discussed in the preceding section. The final survey was conducted at four shopping malls in Delhi and Mumbai on weekdays (evenings) and weekends (all day). The respondents were selected from among working people who had used the OYO app at least once to search for a budget hotel room (a screening question was used to ensure this selection), and they were briefed about the research project and the anticipated implications. A total of 809 responses were found to be valid. The respondents' mean age was 34 years (SD = 8.02), and 28.6% of the respondents were females. The profile of the respondents concerning their educational background was as follows: below secondary level (2.1%), pursuing/completed higher secondary level (5.7%), pursuing/completed graduate level (40.3%), pursuing/completed masters level (42%), and pursuing/completed doctorate (Ph.D. or equivalent) (9.9%).

5.2. Methodology

For the data analysis, a two-step approach was used, as suggested by Anderson and Gerbing (1988). First, confirmatory factor analysis (CFA) was conducted to examine the reliability and validity of the measurement scales used in the present study. Second, the structural path of the proposed conceptual model was assessed using the structural equation modeling (SEM) technique in SPSS 25 and AMOS 25. The effect of moderating variables was analyzed using the process macro.

6. Results

6.1. Common method bias

As the data were collected from a single source, common method bias (CMB) might present a possible problem, so we used a multi-pronged approach to address the issue. First, the respondents' attention was secured by designing one reversed item. Second, we established mono-method variance using Harman's single-factor test. Third, to ensure a more robust evaluation, we utilized the common latent factor technique and the CFA marker variable technique (MacKenzie and Podsakoff, 2012). These approaches confirmed that the potential effect of CMB was not an issue in this study. We also tested for and confirmed the absence of multicollinearity issues (O'Brien, 2007).

6.2. Validity and reliability

CFA was conducted to validate the internal and external consistency of various measures. Internal consistency among the items within each construct was examined by computing composite reliability (CR). All constructs had CR above the required threshold value of 0.70 (Nunnally, 1978). Furthermore, all the factor loadings were above 0.60 (conventional cut-off = 0.40, as suggested by Hair et al., 2010), thereby confirming item reliability (Table 3). The convergent validity and reliability of constructs were also supported by the output of the measurement model (Table 4). The average variance extracted (AVE) was > 0.50, and composite reliability (CR) was > 0.70, well within the acceptable level (Fornell and Larcker, 1981). All square roots of the AVEs were greater than the correlation coefficients among the constructs, thereby supporting discriminant validity (Fornell and Larcker, 1981). Furthermore, the correlations between pairs of study measures were positive, but below 0.80, as recommended (Kline, 2016).

6.3. Structural model

The proposed research model returned satisfactory model fit criteria ($\chi^2/df = 6.09$, $CFI = 0.94$, $NFI = 0.93$, $TLI = 0.93$, $RMSEA = 0.08$) (Anderson and Gerbing, 1988). The results from data analysis indicated that all five hypotheses that tested a direct association of consumption values with intention were supported. Thus, quality-of-benefits ($\beta = 0.29$, $p < .001^{***}$), monetary ($\beta = 0.18$, $p < .001^{***}$), social status ($\beta = 0.11$, $p < .01^{**}$), information ($\beta = 0.17$, $p < .05^*$), and preference ($\beta = 0.27$, $p < .001^{***}$) values were confirmed to affect purchase intention toward OTAs positively and significantly. The results are presented in Fig. 2.

6.4. Moderating role of hygiene consciousness, visibility, privacy and safety concerns, and age

Moderation analysis involved bootstrapping the effects 5000 times, resulting in the production of interaction terms and their 95% confidence intervals, thereby providing the basis for making decision regarding the absence or presence of a moderating effect.

Hygiene consciousness moderated the association between purchase intention and monetary ($PE_{interaction} = 0.12$, 95% CI [0.07, 0.16]) and social status ($PE_{interaction} = 0.11$, 95% CI [0.053, 0.16]) values. Visibility

Table 3
Results of the confirmatory factory analysis.

Study Measures	Measurement items	CFA and SEM
Choe and Kim (2019); Lin and Huang (2012); Sweeney and Soutar (2001) [#]		
Quality-of-benefits value (QBV)	[OTA NAME] offers quality and convenience	.83
	[OTA NAME] consistently offers various benefits	.85
	[OTA NAME] maintains a high level of benefits	.85
Monetary value (MV)	[OTA NAME] charges a reasonable price	.80
	[OTA NAME] offers good value for my money	.83
	[OTA NAME] allows me to compare prices	.75
	Using [OTA NAME] allows me to take advantage of promotional offers	.79
Social Status value (SSV)	The use of [OTA NAME] helps me gain social approval	.89
	The use of [OTA NAME] helps make a positive impression on other people	.91
	The use of [OTA NAME] changed the way that I am perceived by others	.92
	The use of [OTA NAME] helps me stand out among my peers	.89
Preference value (PV)	I would book rooms more often if [OTA NAME] offered free cancellations	.83
	I would book rooms more often if [OTA NAME] offered better promotional incentives	.83
	I would book rooms more often via [OTA NAME] if more properties of my preference join the platforms	.81
Information value (IV)	Before booking via [OTA NAME], I like to obtain substantial information about the terms and conditions	.81
	Before booking via [OTA NAME], I like to acquire a great deal of information about the benefits offered	.84
	[OTA NAME] helps me to know about a variety of properties and their offerings	.81
Purchase intention (PI)	I am willing to book rooms through [OTA NAME]	.86
	I will book rooms through [OTA NAME] in the future	.86
	I would like to reuse the [OTA NAME] app	.88

[#] Scales adapted to the OTA context through qualitative study.

Table 4
Validity and reliability.

	CR	AVE	MSV	ASV	IV	QBV	MV	SSV	PV	PI
IV	.86	.67	.64	.53	.82					
QBV	.88	.71	.63	.51	.68	.84				
MV	.87	.63	.61	.49	.78	.74	.79			
SSV	.95	.81	.42	.34	.58	.65	.62	.90		
PV	.86	.67	.64	.45	.80	.70	.60	.41	.82	
PI	.90	.75	.63	.55	.79	.80	.75	.61	.76	.87

Note: Values on diagonal are the square roots of AVE, and the off-diagonal values are correlations. Composite reliability = CR, Average variance extracted = AVE, Maximum shared variance = MSV, Average shared variance = ASV.

moderated the association between preference value and purchase intention ($PE_{interaction} = .06$, 95% CI [.019, .10]). Furthermore, privacy and security concerns moderated the association between monetary value and purchase intention ($PE_{interaction} = -0.05$, 95% CI [-0.10, 0.01]). Similarly, age moderated the relationship between purchase intention and monetary value ($PE_{interaction} = -.01$, 95% CI [-0.01, -0.00]).

Upon probing moderation effects further, it was found that users with low, medium, and high levels of hygiene consciousness were statistically different from each other in terms of monetary value ($PE_{low} = 0.52$, 95% CI [0.45, 0.59]; $PE_{medium} = 0.64$, 95% CI [0.58, 0.69]; $PE_{high} = 0.73$, 95% CI [0.66, 0.79]) and social status value ($PE_{low} = 0.27$, 95% CI [0.19, 0.35]; $PE_{medium} = 0.38$, 95% CI [0.33, 0.42]; $PE_{high} = 0.46$, 95% CI [0.41, 0.51]). Similarly, the users were statistically different in terms of low, medium, and high perceptions of visibility with regard to preference value ($PE_{low} = 0.44$, 95% CI [0.37, 0.49]; $PE_{medium} = 0.50$, 95% CI [0.42, 0.57]; $PE_{high} = 0.54$, 95% CI [0.47, 0.62]). As for monetary value, the users belonging to different age groups ($PE_{low} = 0.78$, 95% CI [0.71, 0.86]; $PE_{medium} = 0.73$, 95% CI [0.67, 0.79]; $PE_{high} = 0.66$, 95% CI [0.59, 0.74]) and having low,

medium, and high privacy and security concerns ($PE_{low} = 0.65$, 95% CI [0.57, 0.73]; $PE_{medium} = 0.60$, 95% CI [0.54, 0.67]; $PE_{high} = 0.57$, 95% CI [0.49, 0.65]) were different from each other statistically. These moderating influences are graphically illustrated in Fig. 3a–e.

7. Conclusion and implications

7.1. Summary and discussion of findings

The present study was designed to address three research questions that were investigated through a mixed methods approach. In answering RQ1, a qualitative study was used to identify five consumption values pertinent to the OTA context—monetary, quality-of-benefits, social status, information, and preference—and develop an item pool to measure them. Thereafter, nine hypotheses—five related to the direct association between values and intentions and four testing the proposed moderating influences—were presented to examine RQ2 and RQ3. To test the proposed hypotheses, we analyzed data collected from 809 OTA users using structural equation modeling.

Our results provided empirical support for the existence of all main effects (H1, H2, H3, H4, and H5 were supported), thereby confirming that monetary, quality-of-benefits, social status, information, and preference values share a significant positive association with purchase intention toward OTAs.

The finding that both monetary and quality-of-benefits values share a significant positive association with purchase intention toward OTAs implies that the willingness to book travel through OTAs increases if consumers feel that they are deriving functional values (monetary and quality-of-benefits) from OTAs. This finding corresponds with those of prior studies (Mohd-Any et al., 2014; Lei et al., 2019), including the ones related to tourism (e.g., Jamrozky and Lawonk, 2017). Going deeper, the finding also implies that convenience, consistency in offering benefits, maintaining a high level of benefits, reasonable pricing, providing the ability to compare prices, and the opportunity to take

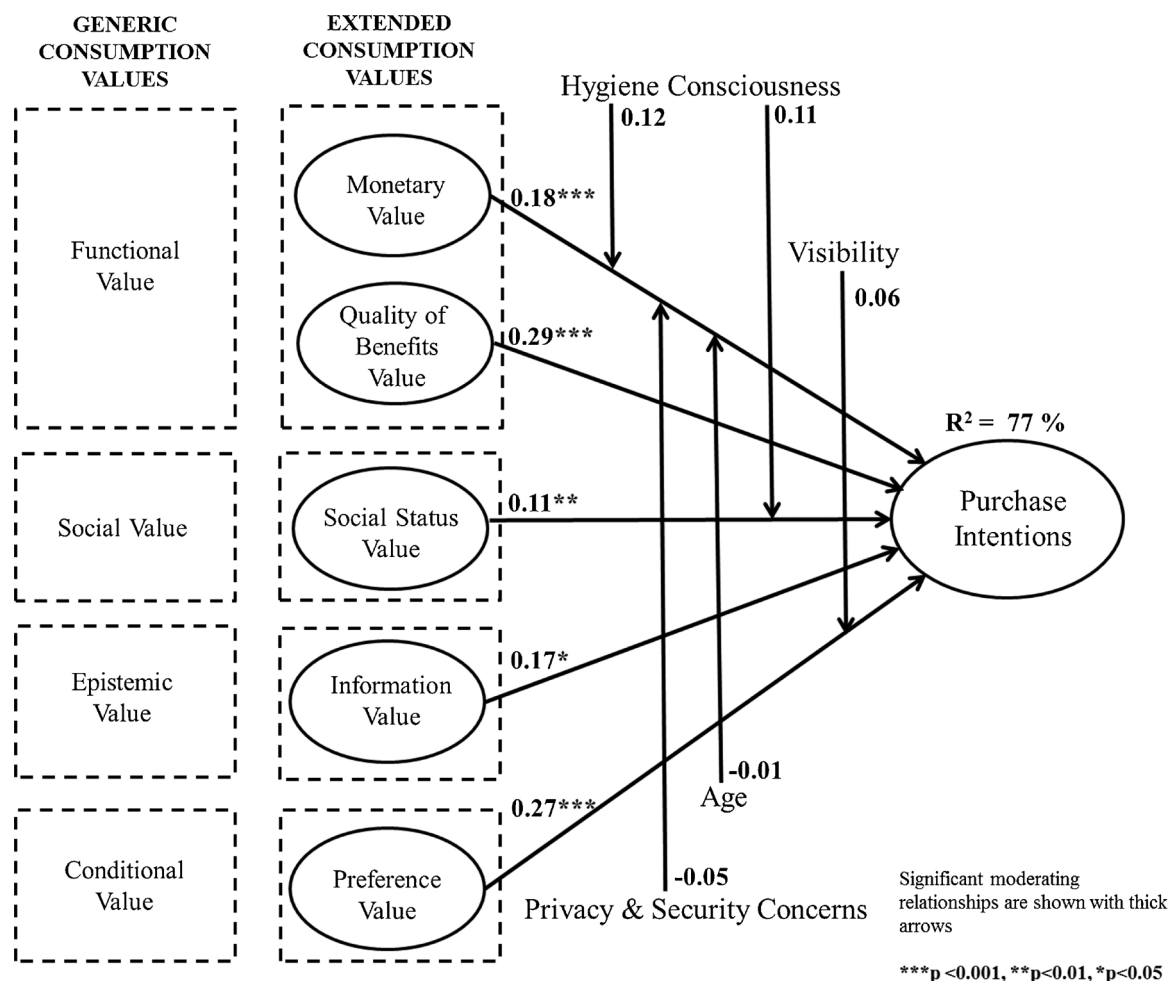


Fig. 2. Results of the hypothesis testing.

advantage of promotional offers are likely to enhance users’ intentions to use OTAs.

Social status, information, and preference values also shared significant positive associations with consumers’ intentions to use OTAs. These results are also in agreement with those of previous studies concerning mobile services and tourism (e.g., Morosan and DeFranco, 2016; Phau et al., 2014). A deeper diagnosis indicates that concern for social status, the ease of acquiring information about different offers and terms and conditions, cancellation policies, promotional incentives, and the listing of more properties are more likely to evoke users’ purchase intention toward OTAs.

The study’s findings confirmed all the proposed moderation hypotheses as well. Hygiene consciousness, privacy and security concerns, and age were found to moderate the strength of the relationship between monetary value and purchase intention such that the relationship was stronger for younger users and for users with higher levels of hygiene consciousness and weaker for users with high levels of privacy and security concerns. Similarly, hygiene consciousness moderated the association between social status value and purchase intention, and visibility moderated the association between preference value and purchase intention such that the association was stronger for users with higher levels of hygiene consciousness and higher visibility preference, respectively. To the best of our knowledge, no extant studies have investigated the moderating influence of these variables, except for age in the context of OTAs and hospitality. Therefore, no research precedent exists in the literature, except for the fact that these variables have been argued, in extant studies, to be important in relation to consumers’ online behavior (Agag and El-Masry, 2016; Fang et al., 2016; Johnson

et al., 2018).

7.2. Theoretical implications

This study makes four main contributions to extant literature. First, it answers the call for more studies on consumer behavior in the context of emerging and smart technologies (Foroudi et al., 2018), particularly the study of consumer behavior toward OTAs, which has witnessed a recent rise in scholarly attention (e.g., Augustin, 2018; Jedin and Ranjini, 2017).

Second, the study contributes to the long-standing theory of consumer-choice behavior by contextualizing the TCV (Sheth et al., 1991) for OTAs. This noteworthy contribution stems from the use of a mixed methods approach to identify a set of OTA-specific consumption values and develop an item pool to measure these values. Furthermore, we have renamed the identified OTA-specific values to differentiate them from the generic consumption values (cf. Sheth et al., 1991) to more deliberately reflect the OTA context.

Third, the study identifies and tests the moderating influence of variables that reflect the digital and online to offline nature of OTAs. The four moderators—hygiene consciousness, visibility, privacy, and age—have not been utilized in the context of hospitality and OTAs before, yet prior literature has recognized them as important constructs (Shaikh and Karjaluo, 2015; Hsu and Lin, 2016). Identifying moderators is important, as they can help researchers understand the role of individual differences with respect to consumer behavior (Meyers-Levy and Loken, 2015).

Finally, the present research augments the limited existing

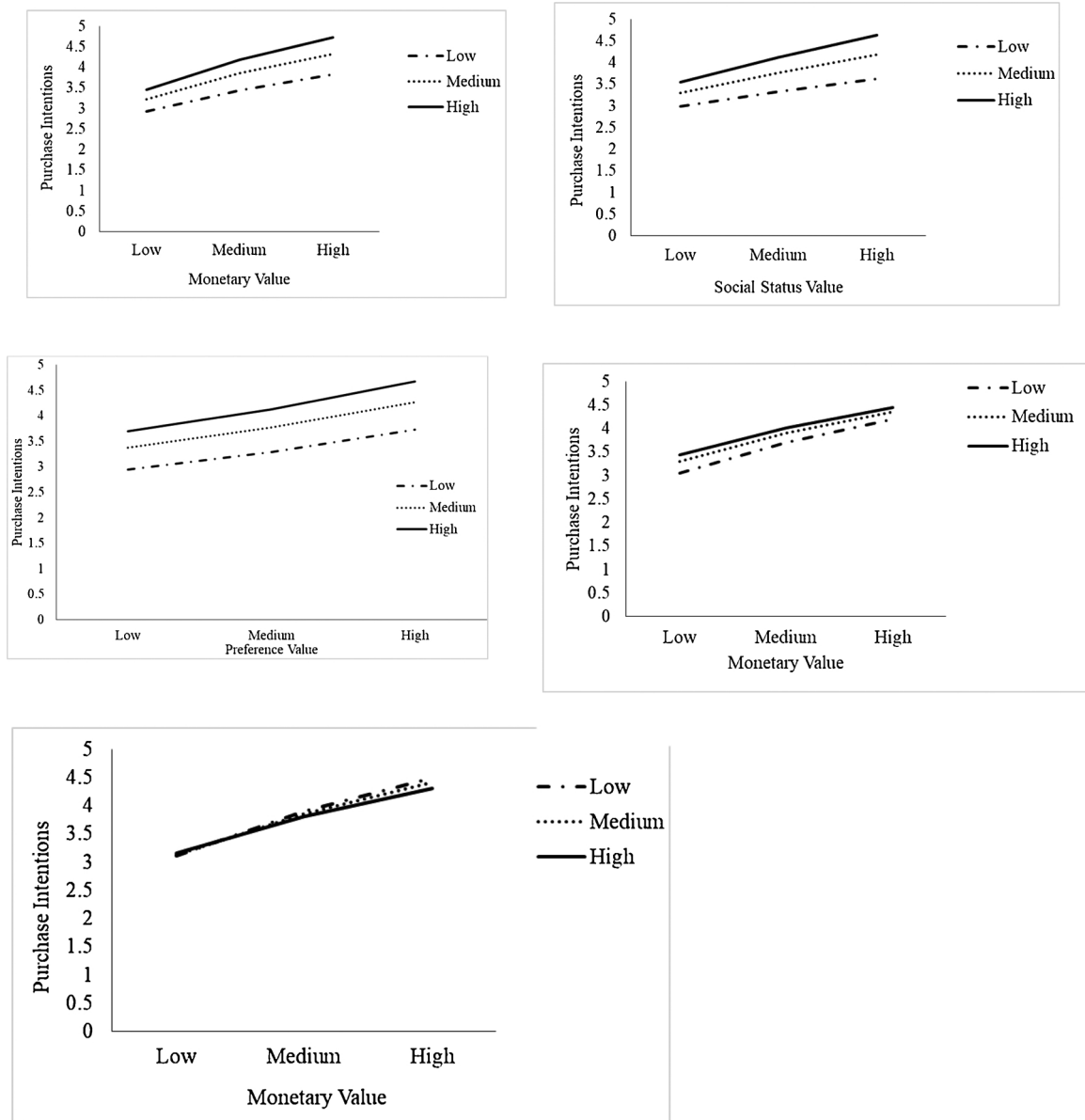


Fig. 3. (a) Moderating effect of hygiene consciousness on association of MV with PI. (b) Moderating effect of hygiene consciousness on association of SSV with PI. (c) Moderating effect of visibility on association of PV with PI. (d) Moderating effect of privacy and security concerns on association of MV with PI. (e) Moderating effect of age on association of MV with PI.

knowledge on the consumption values of Indian travelers planning to book a budget hotel room online. The current literature suggests that Indian travelers using OTAs for booking hotel rooms have not been studied previously in the context of budget hotels. The study covers a broad cross-section of OYO app users between the ages of 22 and 65 years and in two cities in order to provide insights into the consumption values-oriented behavior of Indian OTA customers.

7.3. Practical implications

Our findings provide eight key inferences for practice. First, the findings suggest that all proposed values have a positive association with purchase intention, but the associations are of varying strength. The magnitude of association is highest in the case of the quality of benefits value, followed by preference value. OTA service providers can use this information to identify areas in which initiatives for improvement are likely to produce a higher impact on value. For instance, they should realize that frequent changes in benefits can be

counterproductive as users prefer their benefits to be consistent. On the other hand, service providers should keenly focus on negotiating with more properties and services in order to list them on their apps to satisfy the users' preference for broader choice.

Second, the significant positive association of purchase intention with quality-of-benefits and monetary values, respectively, implies that intentions to purchase travel-related products online can be increased by providing improved utilitarian and functional features. An effective way to enhance functional value can be to provide users with enhanced convenience when booking through apps. Convenience can be provided through a simple interface and fast processing, which can be made possible by upgrading the OTA app using the latest available technology.

Third, as visibility moderates the association between preference value and intentions, OTAs should actively pursue a cost-effective advertising strategy clearly communicating its incentives and listings, which will not only impact the intentions of users positively but also potentially affect the volume, as well as the valence, of online reviews

(De Pelsmacker et al., 2018).

Fourth, as hygiene consciousness moderates the association between consumption values and intentions, OTA service providers should be particular about the hygiene levels of physical facilities at travel destinations and immediately delist any properties/services for which they receive negative feedback. Hygiene is essential because cleanliness is a critical attribute that affects hotel bookings (Sohrabi et al., 2012). Furthermore, OTAs should not only delist but also publicize the fact that they have delisted a hotel/service on account of cleanliness concerns. Such a public statement is likely to entrench the concerned OTA positively in the minds of consumers.

Fifth, since privacy and security concerns weaken the association of monetary value with intentions toward OTAs, the service providers should implement in-app features, encryption of data, and tie-up with payment gateways known for their credibility. To reinforce the fact that their app is safe to use, service providers can flash messages about their app safety practices on the homepage of their app.

Sixth, since physical safety at travel destinations is also a significant concern, OTAs can tie up with local security service providers at travel destinations to ensure the safety of travelers. Security agencies can check the background of cab operators, search hotel rooms for cameras, and provide security to travelers who request it. Service operators can make this service optional so that travelers who opt for it pay additional cost.

Seventh, OTAs should actively solicit testimonials from their steady customers. Positive reviews can make users feel a sense of social approval in their choice of OTAs and enhance their social status value. Online reviews are also a useful source of information for consumers as they can influence consumers' intentions positively (Casaló et al., 2015; Ladhari and Michaud, 2015). In this context, reviews serve as a source of information for consumers to enhance their knowledge about offerings.

Finally, this study identifies critical consumption values related to Indian OTA users. The findings can provide actionable inputs to Indian OTA service providers in the specific context of budget hotels and travel services. This includes offerings for both business travel as well as leisure travel such as package holidays, hotel rooms, private rentals for vacations, homestays, cabs, flights, trains, inter-city buses, and cruises.

7.4. Limitations and future research

The present study has made unique empirical contributions to extant consumer-behavior literature in the fields of tourism, hospitality, and mobile applications. However, it suffers from two important limitations that can be addressed in future investigations. The first is that the study's sample was drawn from among India's population. Therefore, generalizing these findings to other countries may not be possible. Future researchers can conduct replication studies in other regions and compare their findings with those of the present study to expand the applicability of the proposed model and implications. Second, the study is based on cross-sectional data, and it offers static observations from this perspective. Future researchers can conduct longitudinal studies to understand changes in behavioral intentions toward OTAs over time. In addition to this, scholars can enrich extant literature on consumer behavior toward OTAs by applying key theories, such as innovation-resistance theory (Ram and Sheth, 1989), to the study of behavioral aspects of OTA users.

Acknowledgement

This work was supported by the Academy of Finland [292448, 326066, 334595].

References

Agag, G., El-Masry, A.A., 2016. Understanding the determinants of hotel booking

- intentions and moderating role of habit. *Int. J. Hospitality Manage.* 54, 52–67.
- Alton, L., 2019. How Businesses are Reaching Price-sensitive Millennials. Retrieved from: <https://www.mytotalretail.com/article/how-businesses-are-reaching-price-sensitive-millennials/>.
- Amaro, S., Duarte, P., 2013. Online travel purchasing: a literature review. *J. Travel Tourism Mark.* 30 (8), 755–785.
- Amaro, S., Duarte, P., 2015. An integrative model of consumers' intentions to purchase travel online. *Tourism Manage.* 46, 64–79.
- Amblee, N., 2015. The impact of cleanliness on customer perceptions of security in hostels: a WOM-based approach. *Int. J. Hospitality Manage.* 49, 37–39.
- Anderson, J.C., Gerbing, D.W., 1988. Structural equation modelling in practice: a review and recommended two-step approach. *Psychol. Bull.* 103 (3), 411–423.
- Ashton, A.S., 2015. Developing a tourist destination brand value: the stakeholders' perspective. *Tourism Plann. Dev.* 12 (4), 398–411.
- Augustin, K.I., 2018. Information systems success dimension in Indonesia online travel agency industry. *RJOAS* 11 (83), 221–228.
- Carlson, J., O'Cass, A., Ahrholdt, D., 2015. Assessing customers' perceived value of the online channel of multichannel retailers: a two country examination. *J. Retailing Consum. Serv.* 27, 90–102.
- Casaló, L.V., Flavián, C., Guinalu, M., Ekinci, Y., 2015. Do online hotel rating schemes influence booking behaviors? *Int. J. Hospitality Manage.* 49, 28–36.
- Chan, E.S.W., Lam, D., 2013. Hotel safety and security systems: bridging the gap between managers and guests. *Int. J. Hospitality Manage.* 32, 202–216. <https://doi.org/10.1016/j.ijhm.2012.05.010>.
- Chang, Y.-W., Hsu, P.-Y., Lan, Y.-C., 2019. Cooperation and competition between online travel agencies and hotels. *Tourism Manage.* 71, 187–196.
- Chellappa, R.K., Pavlou, P.A., 2002. Perceived information security, financial liability and consumer trust in electronic commerce transactions. *Logistics Inf. Manage.* 15 (5/6), 358–368.
- Chen, J.Q., Zhang, R., Lee, J., 2013. A cross-culture empirical study of M-commerce privacy concerns. *J. Internet Commerce* 12 (4), 348–364.
- Cheng, Y., Ji, X., Lu, T., Xu, W., 2019. On detecting hidden wireless cameras: a traffic pattern-based approach. *IEEE Trans. Mobile Comput.* <https://doi.org/10.1109/tmc.2019.2900919>. 1–1.
- ChinaTravelNews, 2019. China OTAs Turn Over 700 Billion Yuan in H1 2019, Ctrip Accounts for 55.7%. Retrieved from <https://www.chinatravelnews.com/article/131335>.
- Choe, J.Y., Kim, S., 2019. Development and validation of a multidimensional tourist's local food consumption value (TLFCV) scale. *Int. J. Hospitality Manage.* 77, 245–259.
- Choe, J.Y., Kim, S., 2018. Effects of tourists' local food consumption value on attitude, food destination image, and behavioral intention. *Int. J. Hospitality Manage.* 71, 1–10.
- De Pelsmacker, P., van Tilburg, S., Holthof, C., 2018. Digital marketing strategies, online reviews and hotel performance. *Int. J. Hospitality Manage.* 72, 47–55.
- Denizci Guillet, B., Mattila, A., Gao, L., 2019. The effects of choice set size and information filtering mechanisms on online hotel booking. *Int. J. Hospitality Manage.* 102379. <https://doi.org/10.1016/j.ijhm.2019.102379>.
- Dhir, A., Chen, G.M., Chen, S., 2017. Why do we tag photographs on Facebook? Proposing a new gratifications scale. *N. Media Soc.* 19 (4), 502–521.
- Dhir, A., Kaur, P., Rajala, R., 2018. Continued use of mobile instant messaging apps: a new perspective on theories of consumption, Flow, and planned behavior. *Soc. Sci. Comput. Rev.* 089443931880685. <https://doi.org/10.1177/0894439318806853>.
- DiPietro, R.B., Wang, Y., 2010. Key issues for ICT applications: impacts and implications for hospitality operations. *Worldwide Hospitality Tourism Themes* 2 (1), 49–67.
- Dwikesumasari, P.R., Ervianty, R.M., 2017. Customer loyalty analysis of online travel agency app with customer satisfaction as a mediation variable. *Proceedings of the 2017 International Conference on Organizational Innovation (ICOI 2017)*.
- Fang, J., Wen, C., George, B., Prybutok, V.R., 2016. Consumer heterogeneity, perceived value, and repurchase decision-making in online shopping: The role of gender, age, and shopping motives. *J. Electron. Commerce Res.* 17 (2), 116.
- Feinstein, E., 2019. OTA's vs. Direct Hotel Bookings: Which is the Leading Trend for 2018? Retrieved from <https://www.traveldailynews.com/post/otas-vs-direct-hotel-bookings-which-is-the-leading-trend-for-2018>.
- Fornell, C., Larcker, D.F., 1981. Structural equation models with unobservable variables and measurement error: algebra and statistics. *J. Market. Res.* 18 (3), 382–388.
- Foroudi, P., Gupta, S., Sivarajah, U., Broderick, A., 2018. Investigating the effects of smart technology on customer dynamics and customer experience. *Comput. Hum. Behav.* 80, 271–282.
- Gallarza, M.G., Arteaga, F., Gil-Saura, I., 2013. The value of volunteering in special events: a longitudinal study. *Ann. Tourism Res.* 40, 105–131.
- Glaser, B.G., Strauss, A.L., 1967. *The Discovery of Grounded Theory*. Aldine, Chicago.
- Guttentag, D., Smith, S., 2017. Assessing Airbnb as a disruptive innovation relative to hotels: Substitution and comparative performance expectations. *Int. J. Hospitality Manage.* 64, 1–10.
- Hair, J., Black, W., Babin, B., Anderson, R., 2010. *Multivariate Data Analysis: A Global Perspective*, 7th ed. Prentice Hall, Upper Saddle River.
- Hsiao, K.-L., Chen, C.-C., 2016. What drives in-app purchase intention for mobile games? An examination of perceived values and loyalty. *Electron. Commerce Res. Appl.* 16, 18–29.
- Hsu, C.-L., Lin, J.C.-C., 2016. Exploring factors affecting the adoption of internet of things services. *J. Comput. Inf. Syst.* 58 (1), 49–57.
- Hu, X. (Simon), Yang, Y., 2019. Determinants of consumers' choices in hotel online searches: a comparison of consideration and booking stages. *Int. J. Hospitality Manage.* 102370. <https://doi.org/10.1016/j.ijhm.2019.102370>.
- Hur, W.M., Yoo, J.J., Chung, T.L., 2012. The consumption values and consumer innovativeness on convergence products. *Ind. Manage. Data Syst.* 112 (5), 688–706.

- Hwang, J., Lee, J.-S., Kim, H., 2019. Perceived innovativeness of drone food delivery services and its impacts on attitude and behavioral intentions: the moderating role of gender and age. *Int. J. Hospitality Manage.* 81, 94–103. <https://doi.org/10.1016/j.ijhm.2019.03.002>.
- Jamroz, U., Lawonk, K., 2017. The multiple dimensions of consumption values in ecotourism. *Int. J. Culture Tourism Hospitality Res.* 11 (1), 18–34.
- Jedin, M.H., Ranjini, K., 2017. Exploring the key factors of hotel online booking through online travel agency. 4th International Conference on e-commerce (ICoEC) 2017 held in Malaysia.
- Johnson, V.L., Kiser, A., Washington, R., Torres, R., 2018. Limitations to the rapid adoption of M-payment services: understanding the impact of privacy risk on M-Payment services. *Comput. Hum. Behav.* 79, 111–122.
- Kaur, P., Dhir, A., Rajala, R., Dwivedi, Y., 2018. Why people use online social media brand communities: a consumption value theory perspective. *Online Inf. Rev.* 42 (2), 205–221.
- Khan, S.N., Mohsin, M., 2017. The power of emotional value: exploring the effects of values on green product consumer choice behavior. *J. Cleaner Prod.* 150 (C), 65–74.
- Kim, E., Tang, L., Bosselman, R., 2018. Measuring customer perceptions of restaurant innovativeness: developing and validating a scale. *Int. J. Hospitality Manage.* 74, 85–98.
- Kim, Y., Eves, A., 2012. Construction and validation of a scale to measure tourist motivation to consume local food. *Tourism Manage.* 33, 1458–1467.
- Kline, R.B., 2016. *Principles and Practice of Structural Equation Modeling*, 4th ed. Guilford, New York.
- Ladhari, R., Michaud, M., 2015. eWOM effects on hotel booking intentions, attitudes, trust, and website perceptions. *Int. J. Hospitality Manage.* 46, 36–45.
- Lee, C.K., Levy, D.S., Yap, C.S.F., 2015. How does the theory of consumption values contribute to place identity and sustainable consumption? *Int. J. Consumer Stud.* 39 (6), 597–607.
- Lee, K.-W., Han, H., Hwang, J., 2017. Developing a matrix for assessing serviceability of US online travel agency websites. *Soc. Behav. Pers.* 45 (1), 115–126.
- Lei, S.I., Wang, D., Law, R., 2019. Perceived technology affordance and value of hotel mobile apps: a comparison of hoteliers and customers. *J. Hospitality Tourism Manage.* 39, 201–211.
- Lin, P.-C., Huang, Y.-H., 2012. The influence factors on choice behavior regarding green products based on the theory of consumption values. *J. Cleaner Prod.* 22 (1), 11–18.
- Long, M.M., Schiffman, L.G., 2000. Consumption values and relationships: segmenting the market for frequency programs. *J. Consumer Market.* 17 (3), 214–232.
- Lu, H.P., Hsiao, K.L., 2010. The influence of extro/introversion on the intention to pay for social networking sites. *Inf. Manage.* 47 (3), 150–157.
- MacKenzie, S.B., Podsakoff, P.M., 2012. Common method bias in marketing: causes, mechanisms, and procedural remedies. *J. Retailing* 88, 542–555.
- Mäntymäki, M., Riemer, K., 2016. Enterprise social networking: a knowledge management perspective. *Int. J. Inf. Manage.* 36 (6), 1042–1052.
- Mäntymäki, M., Salo, J., 2015. Why do teens spend real money in virtual worlds? A consumption values and developmental psychology perspective on virtual consumption. *Int. J. Inf. Manage.* 35 (1), 124–134.
- Mäntymäki, M., Islam, A.K.M.N., Benbasat, I., 2014. What drives subscribing to premium in freemium services? A consumer value-based view of differences between upgrading to and staying with premium. *Inf. Syst. J.* <https://doi.org/10.1111/isj.12262>.
- Meyers-Levy, J., Loken, B., 2015. Revisiting gender differences: what we know and what lies ahead. *J. Consumer Psychol.* 25 (1), 129–149.
- Mohd Suki, N., 2016. Consumer environmental concern and green product purchase in Malaysia: structural effects of consumption values. *J. Cleaner Prod.* 132, 204–214.
- Mohd-Any, A.A., Winklhofer, H., Ennew, C., 2014. Measuring users' value experience on a travel website (e-value). *J. Travel Res.* 54 (4), 496–510.
- Morosan, C., DeFranco, A., 2016. Co-creating value in hotels using mobile devices: a conceptual model with empirical validation. *Int. J. Hospitality Manage.* 52, 131–142.
- Nunnally, J.C., 1978. *Psychometric Theory*. McGraw-Hill, New York.
- O'Brien, R.M., 2007. A caution regarding rules of thumb for variance inflation factors. *Qual. Quantity* 41, 673–690.
- Ozturk, A.B., Bilgihan, A., Nusair, K., Okumus, F., 2016. What keeps the mobile hotel booking users loyal? Investigating the roles of self-efficacy, compatibility, perceived ease of use, and perceived convenience. *Int. J. Inf. Manage.* 36 (6), 1350–1359.
- Phau, I., Quintal, V., Shanka, T., 2014. Examining a consumption values theory approach of young tourists toward destination choice intentions. *Int. J. Culture Tourism Hospitality Res.* 8 (2), 125–139.
- Pizam, A., Tasci, A.D.A., 2019. Experienscape: expanding the concept of servicescape with a multi-stakeholder and multi-disciplinary approach (invited paper for "luminaries" special issue of International Journal of Hospitality Management). *Int. J. Hospitality Manage.* 76, 25–37.
- Ponte, B.E., Carvajal-Trujillo, E., Escobar-Rodríguez, T., 2015. Influence of trust and perceived value on the intention to purchase travel online: integrating the effects of assurance on trust antecedents. *Tourism Manage.* 47, 286–302.
- Ram, S., Sheth, J.N., 1989. Consumer resistance to innovations: the marketing problem and its solutions. *J. Consumer Market.* 6 (2), 5–14.
- Rezgo, 2019. *Tour & activity industry terms*. Retrieved from: <https://www.rezgo.com/glossary/ota>.
- Rivera, M.A., Murphy, K.S., Khalilzadeh, J., 2018. Globalization of workforce. *J. Hospitality Tourism Technol.* 9 (3), 314–337.
- Saunders, M., Lewis, P., Thornhill, A., 2016. *Research Methods for Business Students*, 5th edition. Pearson Education.
- Shaikh, A.A., Karjaluoto, H., 2015. Mobile banking adoption: a literature review. *Telematics Inform.* 32 (1), 129–142.
- Sheth, J.N., Newman, B.I., Gross, B.L., 1991. Why we buy what we buy: a theory of consumption values. *J. Bus. Res.* 22 (2), 159–170.
- Slyke, C.V., Bélanger, F., Johnson, R.D., Hightower, R., 2010. Gender-based differences in consumer e-commerce adoption. *Commun. Assoc. Inf. Syst.* 26, 17–34.
- Sohrabi, B., Vanani, I.R., Tahmasebipour, K., Fazli, S., 2012. An exploratory analysis of hotel selection factors: a comprehensive survey of Tehran hotels. *Int. J. Hospitality Manage.* 31 (1), 96–106.
- Statista, 2019. *Digital Travel Sales Worldwide from 2014 to 2020 (in Billion U.S. Dollars)*. Retrieved from <https://www.statista.com/statistics/499694/forecast-of-online-travel-sales-worldwide/>.
- Sweeney, J., Soutar, G.N., 2001. Consumer perceived value: the development of a multiple item scale. *J. Retailing* 77 (2), 203–220.
- Tan, G.W.-H., Ooi, K.-B., 2018. Gender and age: do they really moderate mobile tourism shopping behavior? *Telematics Inform.* 35 (6), 1617–1642.
- Thomé, K.M., Pinho, G.M., Hoppe, A., 2018. Consumption values and physical activities: consumers' healthy eating choices. *Br. Food J.* 121 (2), 590–602.
- Venkatesh, V., Brown, S.A., Bala, H., 2013. Bridging the qualitative-quantitative divide: guidelines for conducting mixed methods research in information systems. *MIS Q.* 37 (1), 21–54.
- Williams, P., Soutar, G.N., 2000. Dimensions of customer value and the tourism experience: An exploratory study. In: Paper Presented at Australian and New Zealand Marketing Academy Conference 2000. Queensland, 28. in ANZMAC 2000. Visionary Marketing for the 21st Century: Facing the Challenge. pp. 1415–1421.
- Williams, P., Soutar, G.N., 2009. Value, satisfaction and behavioral intentions in an adventure tourism context. *Ann. Tourism Res.* 36 (3), 413–438.
- Xie, K.L., Zhang, Z., Zhang, Z., 2014. The business value of online consumer reviews and management response to hotel performance. *Int. J. Hospitality Manage.* 43, 1–12.
- Ye, B.H., Barreda, A.A., Okumus, F., Nusair, K., 2019. Website interactivity and brand development of online travel agencies in China: the moderating role of age. *J. Bus. Res.* 99, 382–389.
- Yoon, H.S., Oceaña, L.G., 2015. Influencing factors of trust in consumer-to-consumer electronic commerce with gender and age. *Int. J. Inf. Manage.* 35 (3), 352–363.