

Article

Empirical Study on Behavioral Intentions of Short-Term Rental Tenants—The Moderating Role of Past Experience

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Received: 24 May 2019; Accepted: 12 June 2019; Published: 20 June 2019



Abstract: Existing sharing economy (SE) studies tend to focus on the nature of SEs, their business models, and impact. However, there are limited in-depth studies on what motivates consumers' participation in sustainable SE context, particularly in short-term rentals involving safety risks arising from face-to-face engagement with strangers while consuming the services. Applying the perceived value theory and extended theory of planned behavior, this study examines the relationships among consumers' perceived value (gain versus loss), *past experience*, and *behavioral intentions* in sustainable consumption of short-term rentals offered on smart online matching platforms. Based on a survey of 421 Chinese consumers, our study has demonstrated that *social appeal* and *economic appeal* (gains) are positively related to *behavioral intentions*. Second, we establish that the relationship between *perceived risk* (loss) and *behavioral intentions* is inverted U-shaped, enriching the existing literature which has assumed a linear relationship. Finally, our study shows that *past experience* positively moderates the influence of *social appeal* on *behavioral intentions*. This suggests that, compared with consumers having little or no *past experience*, the positive relationship between *social appeal* and *behavioral intentions* is stronger for consumers having much *past experience*. On the other hand, *past experience* has no effect on the relationship between *economic appeal* and *behavioral intentions*.

Keywords: sharing economy; short-term rental; economic appeal; social appeal; perceived risk; past experience

1. Introduction

The growing popularity of sharing economy (SE) and its impact on multiple aspects of today's society at various levels has captured increasing public attention in recent years. SE refers to an economic system in which individuals directly share underutilized assets or services for free or for a fee [1]. Its development has ushered in a new phenomenon of providers of peer-to-peer (P2P) services mediated by online platforms. Many providers of SE platforms started off with the purpose of providing consumers with access to excess capacity owned by non-professional individuals (consumer-to-consumer services), with some focusing on P2P short-term rental services (e.g., U.S.-based Airbnb), while others on P2P lending (e.g., FundingCircle) and P2P ridesharing services (e.g., Uber). However, in their subsequent effort to expand their market reach, they have extended their SE platforms to businesses to provide professional services to consumers. Since then, there has been much discussion whether these original SE platforms that now offer business-to-consumer services should still be considered SE service providers [2]. It is apparent that a narrower definition is required for the notion of SE to distinguish it from business services [3] Meelen and Frenken [4] defined SE as “consumers

granting each other temporary access to their underutilized physical assets (“idle capacity”), possibly for money”.

While the U.S.-based Airbnb’s pioneering SE venture in 2008 has transformed the traditional tourism sector, the concept of SE has also inspired new players to disrupt other sectors across many countries, starting with the cities of U.S. and Europe. In less than ten years, the phenomenon has become prevalent in the Asian countries including China. According to the recent report “China’s Sharing Economy Development (2018)” released by the State Information Center of China, the transaction volume of China’s sharing economy market in 2017 was about 4920.5 billion Chinese yuan, an increase of 47.2% over the previous year, while more than 700 million people participated in SE. In addition, the Chinese government has planned to develop it to contribute 10% of national gross domestic product (GDP) by 2020 [5]. Empowered by new technologies such as mobile payment and global positioning systems, SE has continuously created value for the global market and achieved unprecedented levels of adoption in application areas such as travel, accommodation, education, medical care, and catering. While some of the affected sectors have witnessed the loss of traditional jobs with the toppling of incumbents by the new SE entrants, other sectors have seen the creation of new jobs by the latter. The sectors have also observed a re-distribution of value across the supply chain with greater empowerment of individual owners of underused goods and services as suppliers and more choices for individuals to practice sustainable consumption.

Given the scale of its social, economic and ecological impact, it is important to examine the antecedents influencing individuals’ *behavioral intentions* in participating in SE. Understanding these factors will not only enable the policy makers to support the growth of SE enterprises in a way that will contribute to the socio-economic progress of the city, but also govern their operating industries to achieve sustainable development.

In SE literature, previous studies posit that SE is an economically and ecologically sustainable model of social development [6], as it can make full use of idle resources [7], reduce the impact of waste on the environment and help consumers develop a sustainable lifestyle. Owing to the growing awareness of environmental protection and advances in social media technologies, there has been increasing interest in SE among policy makers and research scholars, as it proliferates across many sectors. While economic benefit is often posited as a critical factor in influencing individuals to participate in sharing activities [8], some researchers have raised concern about the over-simplification and argued that other factors are also at play. The factors that can encourage or hinder their SE participation include *social appeal* relating to environmental concern [1,9] and *perceived risk* [10,11]. The increasing complexity arising from the interplay of the relevant factors has been under-studied and merits further attention.

In a separate but related stream of the information studies domain, smart tourism has emerged as a concept that incorporates “smartness” in tourism support systems. Smart tourism uses technologies to address the needs of customers for authentic travel experience, while utilizing un-occupied accommodation [12,13]. With the technological infrastructure of smart tourism, the quality of tourism services has enhanced significantly [14]. Propagated by smart tourism, consumers have opportunities to search and procure accommodation options that were previously unattainable. Despite the link between SE and smart tourism, there has been a dearth of empirical research connecting the two streams.

In the consumer behavior literature, consumers’ perceived value is considered a comparison between gain and loss [15]. Studies in this thread generally assume that consumers are “value-driven” and hence regard short-term rentals as opportunities to derive good value during their travel. The *economic appeal* of short-term rentals offered by SE platforms over those provided by traditional hotels stood out in major China cities due to the lower fixed costs and price fluctuations of the former than the latter, as well as the general belt-tightening of corporate and individual travelers due to economic crisis and ensuing uncertainty. Apart from *economic appeal*, consumer behavior studies have highlighted other forms of appeal (e.g., *social appeal*) and challenges (e.g., risks) that should be examined further [16,17].

In marketing, the Theory of Planned Behavior (TPB) is widely used as a reference for understanding and predicting consumers' behavior [18]. Subsequently, to examine *behavioral intentions* in greater depth, many studies extended TPB (ETPB) by including additional factors such as past behavior [19–21]. In the field of tourism, the *past experience* of consumers has been established to have direct effect on their behavior [22,23]. Unlike other variables such as customers' innovative preference, *past experience* is a variable that managers can easily identify to help enterprises distinguish between the two distinct groups of customers—inexperienced customers and experienced customers—so as to provide more targeted services to both groups. Despite the important role that *past experience* plays in influencing consumer behavior, there has been little research exploring its effects, especially in the context of short-term rentals.

From the perspective of perceived value theory [24], this study explores the antecedents of short-term rental consumers' *behavioral intentions*. Applying ETPB [19], we further investigate the impact of contingency factors on the relationship between the antecedents and *consumers' behavioral intentions*. We develop a conceptual model to address three research questions. First, we seek to understand the gain part of perceived value by examining how *economic appeal* and *social appeal* affect consumers' *behavioral intentions* in short-term rentals. Second, extant studies have assumed linear relationship between *perceived risk* and *behavioral intentions* [25], we therefore attempt to confirm the presence of nonlinear effect between *perceived risk* and consumers' *behavioral intentions*. Third, as prior research has under-studied some important contingency factors when discussing the direct relationship between factors and *behavioral intentions* (e.g., [26]), we explore how *past experience* influences the relationships that *economic appeal* and *social appeal* have with consumers' *behavioral intentions*.

This paper begins with an overview of the development of SE literature including its antecedents and impact on various aspects contributing to its growth, followed by an examination of smart tourism research. The conceptual framework building on the perceived value theory and ETPB will be elaborated for hypothesis development. The research method and results will be discussed. We will then conclude the paper with theoretical and managerial implications, limitations, and future directions for research.

2. Background and Hypotheses

2.1. Sharing Economy in Tourism Services and Sustainability

SE can be traced back to ancient times when sharing of items was common among families and bartering of unwanted items for needed ones prevalent among villagers [9]. It refers to “the peer-to-peer-based activity of obtaining, giving, or sharing the access to goods and services, coordinated through community-based online services” [27] (p. 2049). As public awareness of the need to conserve and sustainably use limited natural resources grows on the back of social media technologies since early 2000, SE has entered almost every sector. SE is increasingly regarded as an economically and ecologically sustainable model for societal progress [6], as it can utilize excess capacity (e.g., [7]) to reduce environmental pressure and promote sustainable living.

Tourism is one of the pioneering sectors of SE that has been enabled through online platforms for short-term rental stays in a wide range of cities (e.g., Airbnb and China short-term rental firm XiaoZhu). On these SE platforms, local people can list and share their un-occupied rooms or apartments as hosts or provide travel knowledge as experts [11,28] in exchange for a fee. Through the platforms, visitors can rent the rooms or apartments for a short stay as guests for a fee and the opportunity to experience local culture and lifestyle.

Existing SE studies tend to focus on the nature of SEs, their business models and impact. However, there are limited in-depth studies on what motivates consumers' participation in sustainable SE context, particularly in short-term rentals. Some researchers have posited that consumers participating in SE are motivated by economic benefit, especially after the global economic crisis [8,29,30]. Botsman and Rogers [1], on the other hand, argued that there are other motivational factors driving consumers'

behavioral intentions, such as *social appeal*, that warrant further investigation. Other researchers suggested that the growing ecological and sustainable concerns prompt consumers to try out SE platforms [16,31,32]. It is apparent that consumers may vary in their motivation for participating in SE. However, such participation is not without its risks.

Emerging as an important theme in SE studies is the concept of risk that is associated with the hazard of participating in SE at multiple levels, ranging from individual to institutional levels. Santana and Parigi [10], for instance, found that the risk aversion of users is positively associated with the frequency of their usage of SE websites. Besides monetary and emotional risks, short-term rentals entail personal safety risks, arising from the need for face-to-face engagement with strangers while consuming the services [11]. This means that risks perceived by consumers may hinder them from participating in sharing activities, especially in tourism-sharing activities. With increasing complexity of SE exacerbated by the entry of more tourism intermediaries and participation from more consumers, a better understanding of the nature and effects of *perceived risk* in tourism is imperative [33].

2.2. Smart Tourism

In the information studies domain, there has been increasing interest in smart systems that empower businesses to engage individuals in tourism. According to Gretzel et al.'s [34] review of the literature on smart tourism, they identified three layers of “smartness” in the tourism support systems: (1) information layer that captures data, (2) exchange layer that enables connectivity among the layers and their respective subsystems, and (3) processing layer that analyzes data for intelligence purpose. Combining these layers, Gretzel et al. [34] (p. 181) defined smart tourism as “tourism supported by integrated efforts at a destination to collect and aggregate/ harness data derived from physical infrastructure, social connections, government/ organizational sources, and human bodies/ minds in combination with the use of advanced technologies to transform that data into on-site experiences and business value-propositions with a clear focus on efficiency, sustainability, and experience enrichment.”

Existing research on smart tourism pays attention to three primary themes: the concept, foundations, and developments of smart tourism. The first theme is related to the concept of smart tourism, where researchers examine how smart tourism uses technologies to provide intelligent and high-quality services to customers to meet their needs and effectively leverage idle resources [12,13]. The second concerns the foundations of smart tourism, where studies would examine underlying technologies including smart computing and big data, as a critical infrastructure in smart tourism [14]. The third entails the current developments in smart tourism, where scholars investigate related issues such as privacy [35], governance [36], and overdependence on technology [37,38].

It is evident that smart tourism has radically transformed the tourism industry with the unprecedented integration of multiple technologies ranging from communication and global positioning to social media and big data. Served by these smart real-time matching and recommendation systems, consumers are able to pursue an intelligent way to get what they want and have the opportunity to create a unique travel experience. SE, on the other hand, puts forward an intelligent economic and ecological model that combines technologies and sustainable tourism management, contributing to the development of smart tourism.

Given that smart tourism is still a relatively new concept, there are limited empirical studies that connect the research streams of smart tourism and SE. This paper focuses on SE in the context of tourism mediated by smart systems, which shed light on current SE literature and smart tourism research.

2.3. Perceived Value: Economic/Social Appeal, Perceived Risks and Behavioral Intentions

In consumer behavior studies, Zeithaml [15] suggested that perceived value refers to “consumers’ overall assessment of utility of a product (or service) based on perceptions of what is received and what is given” and considered perceived value as a comparison of “get” and “give” components of services. Levy [39] stated that consumers are “value-driven” and managers should identify what customers’ values are and where they should promote the values to enhance their company performance [40].

Existing studies have explored perceived value from different perspectives. For example, Sheth et al. [41] proposed different dimensions of perceived value, such as functional, social, emotional, epistemic, and conditional value. Sweeney and Soutar [42] divided perceived value into four dimensions: (1) quality or performance (referring to the quality of products or services), (2) price or value for money (considering monetary value), (3) social and (4) emotional value. On the other hand, some researchers consider value as the “loss” perceived by consumers. Gallarza and Saura [43], for instance, suggested that *perceived risk*, time spent, price, and efforts are the “loss” value for consumers. Drawing upon the above works, our study develops a conceptual framework by integrating social and *economic appeal* (gain) and *perceived risk* (loss) to explore the influencing factors affecting consumers’ *behavioral intentions* in the context of short-term rentals.

Economic appeal refers to the economic benefits consumers think they can obtain from short-term rentals. SE allows consumers to access a wide range of services and products, some of which are of higher standard but more affordable compared to those provided by traditional hotels [44]. Möhlmann [45] posited that cost-saving is a determining factor for consumers to be motivated to participate in SE. Corroborating Möhlmann’s work, Hamari et al.’s [27], study of other factors such as sustainability, happiness, reputation, attitudes and consumer participation, found that economic gains are a significant factor in promoting consumers’ participation in SE. Belk [46] and Lamberton and Rose [47] also established that the short-term rental model has a price advantage over traditional hotels, which can help consumers save costs. Stene [48] highlighted that short-term rentals can help consumers meet their need to save money, allowing them to live in a more cost-effective room during their journey.

In China, the economic benefits of short-term rentals offered by SE platforms over those provided by traditional hotels stood out for several reasons. First, for the same districts in China cities, short-term rentals offered by SE platforms allow guests to save on the fixed costs that are typically imputed to hotel guests, such as the cost of hotel furniture and fittings, and the cost of hiring hotel staff to provide services for their guests. This allows the short-term rental by SE platforms to be offered at lower prices than the room rates of traditional hotels located in the same neighborhood. Second, as Chinese cities continue to intensify urbanization and grow their population density to pursue economic development, demand for travel continues to increase in tandem, resulting in higher hotel room rates. Conversely, the rates of short-term rentals by SE are relatively stable due to their low fixed costs. Third, the global economic crisis and the uncertainties have caused consumers to be more cost-conscious about spending [31]. The economic advantage of short-term rentals offered by SE over traditional hotel rooms in China cities is prominent. Compared with the traditional hotel room rates, consumers are motivated to participate in short-term rentals for economic benefits. Based on the concept of perceived value [15], we posit that *economic appeal* can enhance the perceived value of consumers and increase their *behavioral intentions*. We therefore hypothesize as follows:

H1: *Economic appeal has a positive influence on consumers’ behavioral intentions.*

Social appeal refers to the need for consumers to meet new people and establish new social relationships [32]. Although economic benefit is deemed an important factor that attracts consumers to participate in SE [16,29,30], some studies pointed out that it is not only low room rates that drive consumers to participate in SE short-term rental, the desire for community may also be an important factor [1]. Direct interactions between hosts and consumers allow participants to develop a meaningful social connection with others, and this connection satisfies customer’s *social appeal* [49]. Although standardized hotel services play an important role in the tourism industry, SE short-term rentals become increasingly popular because they place more emphasis on social interaction or cultural exchanges of ideas [50]. In a similar vein, Botsman and Rogers [1] argued that the SE short-term rental model provides an opportunity for customers to make new friends and build meaningful social relationships, making it easier for participants to gain social capital and reputation. In addition, Johnson and Yang [51] pointed out that since social motivation is composed of the desire to share

(communication) and seek friends, short-term rental can meet this need of customers and help them improve their social capital. Building on the model of perceived value [15], social benefits obtained by consumers from short-term rental can improve their perceived value, thereby enhancing their *behavioral intentions*. Based on the above argument, we hypothesize the following relationship:

H2: *Social appeal has a positive influence on consumers' behavioral intentions.*

While SE brings a range of benefits to consumers, it also creates many challenges. Consumers face various risks when using short-term rentals. In the conceptual model of perceived value [15], *perceived risk* was subsequently incorporated to form the perceived value theory [24]. Some studies showed that the effect of *perceived risk* on *behavioral intentions* is closely related to consumers' ability and propensity to take risks. First, an appropriate level of risk will be attractive to consumers. Although reducing the willingness to participate is a self-protective response when consumers face risks, they will only be driven to take protective action when *perceived risk* exceeds their tolerance, especially for consumers who seek novelty [52]. Second, some researchers such as Starr [53] advocated that consumers are more willing to take risks actively than to be imposed risks passively since the initiative is based on returns. If a higher return can be obtained, customers are more willing to accept relatively high *perceived risk* [17]. Similarly, in the context of short-term rental, when perceived gain is greater than *perceived risk*, consumers believe that a certain degree of risk means a commensurate level of return and will be more willing to engage in short-term rental based on the return.

However, consumers are not always willing to take risks actively for various reasons. First, when consumers' *perceived risk* exceeds a certain level, consumers' *behavioral intentions* may be weakened. Compared with conventional hotel rooms, the discrepancy between published and actual conditions of rooms in the SE short-term rental may be greater. Consumers generally have no choice but to imagine the room conditions based on the available information and communications. Second, the imperfection of the legal system makes consumers worry that the short-term rental is not guaranteed. In this sense, the *perceived risk* of consumers for short-term rentals offered by SE is higher than that for traditional hotel rooms. Prior research has shown that *perceived risk* is an important barrier for consumers to participate in SE. For example, Trang et al. [54] pointed out that consumers' *perceived risk* hinders their willingness to subscribe to P2P car rental. Therefore, we postulate that the degree of *perceived risk* varies across consumers, which will influence their willingness to participate in SE short-term rental. By integrating the above literature through the framework of perceived value theory [24], we hypothesize the following relationship:

H3: *The relationship between perceived risk and behavioral intentions is inverted U-shaped. Compared with customers who avoid risks or take excessive risks, customers who take moderate risks are more willing to use short-term rental.*

2.4. ETPB: Past Experience as Moderator between Economic/Social Appeal and Behavioral Intentions

According to Ajzen [18], TPB argues that *behavioral intentions* are influenced by attitudes, subjective norm, and perceived behavioral control. To explain *behavioral intentions* more comprehensively, subsequent research built on TPB by introducing new factors to develop ETPB [19–21]. Using a sample of high-end restaurants' consumers from China, Cheng et al. [19] added *past experience* to TPB variables (attitude, subjective norm, and perceived behavioral control), and the results showed that ETPB has a better explanatory power for customers' intentions to engage in dissatisfaction response, such as negative word-of-mouth communication. Chien et al.'s [20] research indicated that TPB with the addition of motivation and past behavior can better predict customers' *behavioral intentions*. Hsieh et al. [21] examined TPB in the context of travel intentions and found that *past experience* has a moderating effect on the relationship between attitudes, perceived behavioral control, and *behavioral intentions*.

In the tourism literature, consumers' past visit experience has been found to play a pivotal role in consumer behavior [21]. Previous studies demonstrated that *past experience* is a strong predictor of

consumers' *behavioral intentions* [22,23]. *Past experience* reflects consumers' familiarity with a specific situation and is an important determinant of consumers' *behavioral intentions*. With the increase of experience, consumers become more familiar and confident with processes and procedures [55,56], which may lead to different *behavioral intentions*. Petty [57] believes that experience can influence the effects of motivation. Therefore, consumers' perceived feelings of short-term rentals may change with different experience.

Rodgers et al. [58] advocated that direct experience enhances adaptation to online consumption, which can effectively reduce consumers' perception uncertainty and thus enhance consumers' decision-making ability. Based on *past experience*, consumers are more willing to participate in short-term rental in response to *economic appeal* and *social appeal*. As experience increases, consumers become more familiar with short-term rental and more proficient in dealing with issues arising from the situation, thereby enhancing consumers' self-efficacy and improving consumers' expectations of meeting economic and social demands. This will promote the positive effects of *economic appeal* and *social appeal* on the tendency to use.

However, few tourism studies focus on the moderating effect of *past experience* [21] involving perceived value and *behavioral intentions*, especially in smart tourism. Applying the theoretical lens of ETPB [19] and building on the results of Rodgers et al. [58], this study examines *past experience* as a key variable that moderates the effects of *social appeal* and *economic appeal* on *behavioral intentions*. Taken together, the following hypotheses are developed:

H4: As *past experience* increases, the positive relationship between *economic appeal* and *behavioral intentions* becomes stronger.

H5: As *past experience* increases, the positive relationship between *social appeal* and *behavioral intentions* becomes stronger.

Figure 1 depicts the proposed research model.

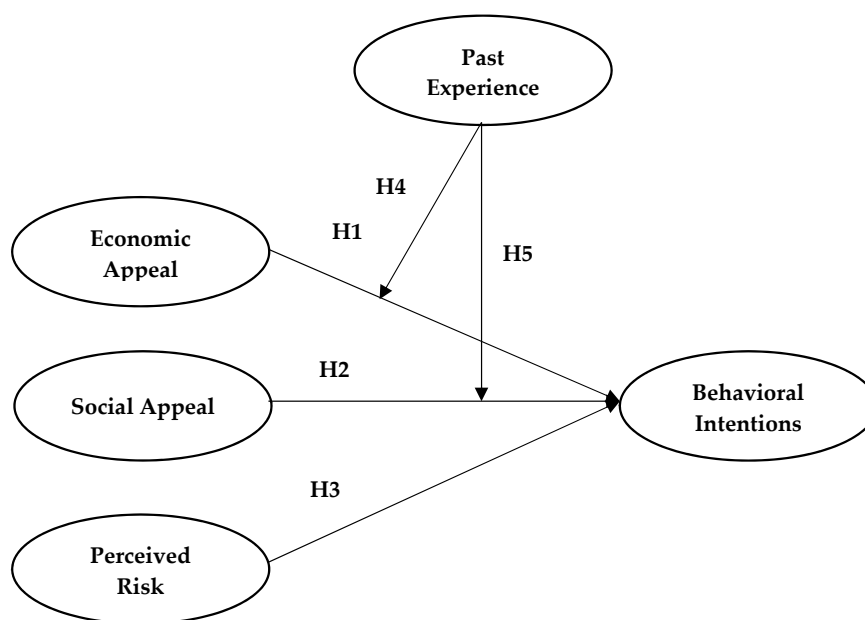


Figure 1. Conceptual Model.

3. Materials and Methods

3.1. Data Collection and Sample

As our research examines short-term rentals offered by SE platforms in the tourism industry, we focus on China, as it is the world's largest emerging tourism market. With a trading volume of

16.5 billion Chinese yuan in 2018, China has witnessed an exponential growth of SE in short-term rental services [59]. Our data was collected via survey questionnaire. We first drafted the questionnaire in English and then employed the back-translation procedures between the English and Chinese versions to ensure comparability. All scales are adapted from previous studies [32,33,49,60] for the context of short-term rentals. The constructs were measured with five-point Likert scales (from 1 = Strongly disagree to 5 = Strongly agree). To ensure content validity of the survey, the items were read and verified for clarity by a group of ten doctoral students reading Management in China. The respondents were requested to not only answer the questionnaire to validate the content, but also evaluate and provide feedback on the relevance and completeness of the questionnaire.

Participants' responses were captured via China's popular online questionnaire survey platform Wenjuanxing (<http://www.wjx.cn/>), which provides random sampling service with selection criteria [61]. To increase response rate, we implemented a lucky draw program as incentive for participation. Respondents were asked to complete the questionnaire independently based on their knowledge of short-term rental. The survey began in early June 2018 and ended in September 2018.

The characteristics of the sample are shown in Table 1. A total of 421 valid questionnaires were collected. Among the 421 respondents, 57.7% are female and 42.3% are male. The age of the respondents ranges between 21 and 30 years old, indicating that the respondents are mainly young people, which is also consistent with the age range used in China's short-term rental research report [59]. Note that 85.5% of the respondents have an average budget of 100 Chinese yuan and more for room rental per night per person. From its characteristics, the sample is deemed as representative of the population, indicating that the results of this study have practical significance. We then used Harman's single factor analysis method to test the common variance. The results show that the number of factors extracted is more than one, and the variance contribution rate of the first factor does not exceed 40%, which is less than the benchmark of 50% set by Podsakoff and Organ [62], confirming that there is no serious common method deviation in this study.

Table 1. The Characteristics of the Sample (n = 421).

Measure	Items	Frequency	Importance (%)
Gender	Male	178	42.28%
	Female	243	57.72%
Age	<20	33	7.84%
	21–30	223	52.97%
	31–40	128	30.40%
	41–50	33	7.84%
	>50	4	0.95%
Budget (Chinese yuan/per room/person/night)	<100	61	14.49%
	100–200	168	39.9%
	201–300	126	29.93%
	301–500	41	9.74%
	>500	25	5.94%
Occupation	Government staff	36	8.55%
	Students	74	17.58%
	Enterprise employees	206	48.93%
	Private business owners	71	16.86%
	Others	34	8.08%
City of residence	First-tier cities	50	11.88%
	Second-tier cities	192	45.61%
	Third/Fourth-tiers cities	140	33.25%
	Others	39	9.26%
Information acquisition channel	Recommendation by family or friends	31	7.36%
	User-generated content recommendation in social media	192	45.61%
	Marketer-generated content recommendation in social media	128	30.4%
	Offline advertising (such as subway, bus)	45	10.69%
	This is the first time I heard about short-term rentals	25	5.94%

3.2. Measures and Variables

To test the hypotheses, multi-item five-point Likert-type scales ranging from 1 = Strongly disagree to 5 = Strongly agree were used for the measurement of constructs. To ensure reliability and discriminant validity of our constructs, we derived the scales from the maturity scales of existing studies and made appropriate semantic modifications according to the content and purpose of this study.

3.2.1. Independent Variables

Building on the works of Tussyadiah and Pesonen [32], we define the first independent variable *economic appeal* as the economic benefits consumers think they can receive from short-term rentals, and the second *social appeal* as the social need for consumers to meet new people and build new relationships. We implement the scale used by Tussyadiah and Pesonen [32] in our measurement of these two variables.

The third independent variable *perceived risk* is operationally defined as “the subjective expectations of a loss” [60] (p. 81) and measured by four items building on the scales developed by Kaplan et al. [63], Wood and Scheer [24], and Sweeney et al. [60] for the context of our research.

3.2.2. Moderating Variable

In this research, the moderating variable *past experience* is defined as the prior experience of staying in a SE short-term rental accommodation [33]. If a traveler has previously shared a room or used the short-term rental, he or she is considered an experienced user in our research. We adapted Wu et al.’s [33] scale to use two items to measure *past experience*.

3.2.3. Dependent Variable

The dependent variable *behavioral intentions* is operationally defined as a person’s likelihood or probability to act in a certain manner [49]. In this study, *behavioral intentions* represents the likelihood to use short-term rentals, and is measured with two items based on appropriate modification to those used in Kim et al. [49].

3.2.4. Control Variables

To control for possible variances from other variables, we have included as control variables consumers’ *gender*, *age*, *budget* (of room rate per night for one person), *occupation*, *city of residence*, and *information acquisition channel* in the survey questionnaire.

3.3. Reliability and Validity Test

Before examining the hypotheses, we used statistics software package SPSS to calculate the reliability and validity of the scale. Principal component analysis (PCA) seeks a linear combination of items such that the maximum variance is extracted from the items. Table 2 reports the component loadings, which are the correlations between the items and the component. Table 2 also lists Cronbach’s alpha and the percentage of variance that can be interpreted. The Cronbach’s alpha values of these five variables exceed 0.5. These reliability estimates indicate a reasonable degree of internal consistency among the scale items and convergent validity.

Table 2. Reliability and Validity test.

Constructs/Items	Factor Loading	Cronbach's Alpha	Cumulative Percent
Economic Appeal		0.559	53.210%
It saved me money.	0.744		
It helped me lower my travel cost.	0.673		
I would like to have higher quality accommodation with less money.	0.768		
Social Appeal		0.625	47.329%
I would like to get to know people from the local neighborhoods.	0.748		
I would like to have a more meaningful interaction with the hosts.	0.698		
I would like to get insiders' tips on local attractions	0.567		
I would like to support the local residents.	0.725		
Perceived Risk		0.562	43.574%
I worry that the real room is not as good as what the landlord described on the platform.	0.764		
I worry about safety when I live there.	0.656		
I worry that the actual living will be different from what I expected.	0.681		
I worry that living in short-term rentals will not be recognized by my family or friends.	0.514		
Past Experience		0.615	85.446%
I have the experience of sharing a house with strangers	0.850		
I've used the short-term rental platform.	0.850		
Behavioral Intentions		0.626	72.843%
I plan to use the short-term rental in the future.	0.853		
I'd like to recommend the short-term rental to others.	0.853		

To test the discriminant validity of variables, we compared the correlation coefficient with the square root of the explained variance value of any pair of latent constructs. Table 3 lists the correlation coefficients of all variables and the square root of explained variance. In Table 3, every variable can explain that the square root of the explained variance value is greater than the remaining correlation coefficient of the row and column, suggesting that the variables have good discriminant validity. It can be seen from Table 3 that the correlation coefficients between the variables are not too high, indicating that the variables of our study have sufficient discriminant validity.

Table 3. Correlation results.

Variable	1	2	3	4	5	6	7	8	9	10	11
1 Gender	1										
2 Age	−0.147 **	1									
3 Budget	0.009	0.05	1								
4 Occupation	−0.024	0.021	−0.023	1							
5 City of Residence	0.053	0.205 **	−0.099 *	0.089	1						
6 Information Acquisition Channel	0.097 *	0.066	0.051	0.163 **	0.151 **	1					
7 Economic Appeal	−0.013	0.034	−0.043	−0.035	0.002	−0.102 *	0.879				
8 Social Appeal	−0.083	0.038	−0.021	0.014	−0.048	−0.046	0.481 **	0.884			
9 Perceived Risk	−0.021	−0.036	0.000	0.002	−0.003	−0.022	0.555 **	0.480 **	0.867		
10.Past Experience	0.302 **	−0.113 *	−0.080	0.086	0.247 **	0.238 **	−0.052	−0.161 **	−0.030	0.916	
11.Behavioral Intentions	−0.093	0.061	0.033	0.050	−0.031	−0.102 *	0.434 **	0.518 **	0.413 **	−0.247 *	0.918
Mean	1.580	2.410	2.530	2.980	2.400	2.620	3.710	3.610	3.701	1.463	3.630
Standard deviation	0.495	0.784	1.045	1.006	0.815	0.977	0.703	0.690	0.623	0.422	0.821

Note: * denotes $p < 0.05$, ** denotes $p < 0.01$, *** denotes $p < 0.001$; $n = 421$; The bold number on the diagonal is the square root of Average Variance Extracted (AVE) of the corresponding variable.

4. Results

In this paper, the hierarchical regression method is used to test the hypotheses. While H1 to H3 are related to the main effect of the factors influencing *behavioral intentions*, H4 to H5 are concerned with the moderating effect of *past experience*. To avoid potential multicollinearity issue, the independent variables and the regulatory variables were centralized before regression analysis. Of the five hypotheses we put forward, four are supported.

Table 4 reveals the results of hierarchical regression analysis examining the effects of *economic appeal*, *social appeal*, and *perceived risk* on consumers' *behavioral intentions*, as well as the moderating role of *past experience* on these effects. Model 1 is the base model comprising only the dependent variable and control variables.

Table 4. Regression Results.

Variable	Behavioral Intentions					
	Model1	Model 2	Model 3	Model 4	Model 5	Model 6
Control Variables						
Gender	−0.117	−0.118	−0.058	−0.097	−0.024	0.004
Age	0.065	0.047	0.043	0.082 †	0.015	0.018
Budget	0.030	0.043	0.039	0.024	0.031	0.030
Occupation	0.056	0.063 †	0.047	0.041	0.071 *	0.054
City of Residence	−0.027	−0.029	0.000	−0.038	0.021	0.040
Information Acquisition Channel	−0.091 *	−0.055	−0.075 *	−0.065 †	−0.021	−0.052
Direct Effects						
Economic Appeal		0.502 ***			0.493 ***	
Social Appeal			0.607 ***			0.567 ***
Perceived Risk				2.031 ***		
Perceived Risk × Perceived Risk				−0.216 ***		
Moderating Effects						
Past Experience					−0.433 ***	−0.328 ***
Economic Appeal × Past Experience					0.032	
Social Appeal × Past Experience						0.200†
R ²	0.027	0.209	0.284	0.227	0.249	0.310
Adjusted R ²	0.013	0.196	0.272	0.212	0.233	0.295
Model F-value	1.905 †	15.630 ***	23.376 ***	15.085 ***	15.154 ***	20.482 ***

Note: † denotes $p < 0.100$, * denotes $p < 0.05$, ** denotes $p < 0.01$, *** denotes $p < 0.001$, $n = 421$.

In Model 2, *economic appeal* was added to examine its linear effect on users' *behavioral intentions*. As model 2 results demonstrated, a positive and statistically significant relationship was established between them ($\beta = 0.502$, $p < 0.001$), suggesting that consumers' *behavioral intentions* will be improved as *economic appeal* increases. Hence, H1 is supported, which implies that, to effectively increase consumers' *behavioral intentions*, it is important to raise the *economic appeal* perceived by the consumers.

A similar effect is observed with *social appeal*. In Model 3, *social appeal* was added to assess its main effect on user's *behavioral intentions*, and the results show a positive and significant association between the two constructs ($\beta = 0.607$, $p < 0.001$), which implies that *social appeal* has a positive impact on *behavioral intentions*. Thus, our findings are consistent with H2.

To verify the nonlinear effect of *perceived risk* on consumers' *behavioral intentions*, both *perceived risk* and its squared term were added in Model 4. The results present a positive and significant relationship between *perceived risk* and *behavioral intentions* ($\beta = 2.031$, $p < 0.001$) and a negative and significant association between the squared term of *perceived risk* and *behavioral intentions* ($\beta = -0.216$, $p < 0.001$). These values suggest that the impact of *perceived risk* on consumers' *behavioral intentions* is inverted U-shaped. Thus, our findings are consistent with H3, which means that customers who take moderate risks are more willing to participate in short-term rentals, compared with those who avoid risks or take excessive risks.

We developed Model 5 to ascertain the impact of *past experience* on *economic appeal* and consumers' *behavioral intentions* by adding *past experience* and the interaction term of *economic appeal* and *past experience*. The coefficient value of the interaction term (*economic appeal* $\times$ *past experience*) at 0.032 is found to be positive but not statistically significant, indicating that H4 is not supported. Given the positive main effect of *economic appeal* on *behavioral intentions*, it can be concluded that the enabling effect of *economic appeal* is not dependent on *past experience*.

In Model 6, *past experience* and the interaction term between *social appeal* and *past experience* were included. The coefficient of the interaction term at 0.200 is positive and significant at 10 per cent level, suggesting that the positive relation between *social appeal* and consumers' *behavioral intentions* becomes stronger in firms with higher *past experience*. H5 is therefore supported.

To reflect the moderating effect more clearly, we use the method proposed by Aiken and West [64]. We first selected two values for the moderating variable (*past experience*): the mean plus one standard deviation (high *past experience*) and the mean minus one standard deviation (low *past experience*), and then add these two values into the regression equations of testing the moderating effects respectively. Based on the regression results of the two equations, the moderating effects are graphically presented in Figure 2.

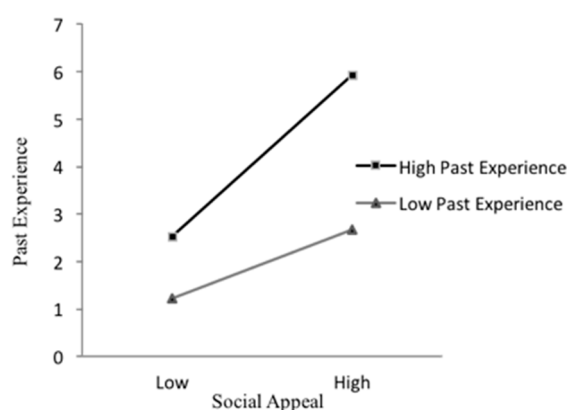


Figure 2. Moderating effect of past experience on the role of social appeal.

Regardless of the level of *past experience*, the relationship between *social appeal* and consumers' *behavioral intentions* is positive, but the slope of the high *past experience* is larger, and *social appeal* has a stronger positive effect on consumers' *behavioral intentions*.

5. Discussion and Concluding Remarks

In this study, we suggested and tested a critical theoretical insight of the perceived value framework, that consumers make decisions based on subjective evaluations of total benefits and losses for the service offerings in SE short-term rental. We further assessed the applicability of ETPB in understanding how consumers' *past experience* enhances or hinders their decision-making process. Our findings support most of the theoretical tenets we posited and contribute in several ways.

5.1. Theoretical Implications

Although SE has become a popular and important form of sustainable consumption, research is lacking as to what antecedents influence consumers' *behavioral intentions* in participating in SE. The results of our research have shed some light on the literature by investigating how "gain"–"loss" and *past experience* impact *behavioral intentions*, offering a number of important theoretical implications.

First, researchers have acknowledged the importance and antecedents of *behavioral intentions* in the context of SE [9,51], yet few have considered a comprehensive model based on perceived value. From the perspective of perceived value, the findings in this research help explain the antecedents of consumers' *behavioral intentions* in view of the balance between "gain" (*social appeal* and *economic appeal*)

and “loss” (*perceived risk*). It is worth noting that, unlike previous studies [25], this research considered the possibility of a non-linear relationship between *perceived risk* and consumers’ *behavioral intentions*. The results show that within a certain range of risk levels, consumers think that some level of risk would mean some level of return, so they are willing to take certain risks. However, this positive effect of *perceived risk* will disappear after exceeding a certain threshold. At that time, *perceived risk* will become a factor that weakens the intentions to engage in short-term rentals. This provides a new perspective for future research in SE.

Second, applying ETPB, this study depicts the moderating effect of *past experience*. Most existing studies have explored the influence of motivation factors on the willingness to participate in short-term rentals (e.g., [54]), but the attention to the contingency factors is obviously insufficient. Through exploring the contingency effect of *past experience* on the link *social appeal* and *economic appeal* have with consumers’ *behavioral intentions*, this study confirms that *past experience* can enhance the positive effect of *social appeal* on consumers’ *behavioral intentions*. Although *social appeal* of consumers who experienced sharing activities in the past may be more willing to participate in short-term rentals in the future, the effect of *economic appeal* on *behavioral intentions* is found to be equally strong under the conditions of more or less *past experience*. It is noteworthy that *social appeal* has a differential effect on *behavioral intentions* when *past experience* is different, thereby enriching the ETPB perspective in short-term rentals and improving our understanding of SE development.

Finally, current research has explored the antecedents of *behavioral intentions* to participate in SE. Notwithstanding this, most studies are concerned about western consumers of developed economies [45,47]. Our study enriches the extant literature by considering developing Asian economies characterized by rising affluence, growing middle class, and increasing demand for travel. The findings of our study on consumers in China, as the world’s largest emerging tourism market mediated by technologies, offer insight that not only is applicable across other developing Asian economies, but also deepens our understanding of their smart tourism adoption.

5.2. Managerial Implications

This study provides several suggestions for SE enterprises offering short-term rental and their participating hosts to better attract consumers. First, as the findings show that consumers are strongly influenced by *economic appeal*, the SE enterprises should strengthen the economic advantage of short-term rentals by lowering their internal operational costs and working with external partners to offer bundled or value deals. SE enterprises should also guide the hosts in listing their rooms with appropriate prices to attract guests who are cost-conscious. As prior studies have shown that price discounts can be an important factor in attracting consumers to participate, SE enterprises and hosts should provide discounts or coupon incentives during off-peak seasons to attract consumers [65].

Second, SE enterprises can enhance the attractiveness and uniqueness of short-term rentals by showing that meaningful social relationships can be developed between hosts and tenants on social media. In addition, they can establish online communities for hosts and tenants to communicate before check-in. As suggested by participative marketing research [66], the SE enterprises offering short-term rental can encourage customers to share their experience on personal social media, such as Weibo and Facebook, and adopt a recommendation and referral mechanism to make short-term rental information more accessible and visible. This will enable the enterprises to reach out to a wider user base fast in a viral way to convert online searches and visits into bookings and sales [67]. SE enterprises can also create personalized experiences for their users based on individual user profile, big data and smart tourism [68,69].

Third, SE enterprises can introduce a customer reward points system similar to that of airline mileage to increase customer loyalty. By allowing customers to earn reward points from participating directly as hosts or guests or referrals, and indirectly through partner organizations offering complementary services, customers are more likely to return to participate again so as to redeem existing rewards and earn new rewards for future redemption.

Fourth, *perceived risk* to a certain extent does not reduce the tendency of customers to participate in SE short-term rentals. However, should a safety incident happen, it can severely weaken consumers' intentions to use the short-term rentals. To alleviate the concerns about such risks as physical safety, no-show, and non-payment, a rating system should be implemented to enable the SE participants to have visibility about the profiles of the transacting parties. The credit rating of the transacting parties may also be made available by the SE enterprises by introducing a credit system in collaboration with banks.

5.3. Limitations and Future Research

This research is not without limitations. First, we considered three factors (*economic appeal*, *social appeal*, and *perceived risk*) influencing *behavioral intentions*. However, future research is needed to consider the role of consumers' inherent traits to further our understanding of their *behavioral intentions*. Such investigation would augment our knowledge on the possible boundary conditions of SE. Second, our findings suggest that further SE studies would be well served by emphasizing behavior measures that focus on not only *behavioral intentions*, but also actual online reservations and transaction confirmations, as behavioral intention may not translate into actual sales revenues for the hosts and SE enterprises. Third, the sample of this study include 57.7 per cent of female and 42.3 per cent of male, which can be more balanced in future research.

Author Contributions: Conceptualization, X.C.; Methodology, A.S.; Writing—original draft preparation, X.C.; Writing—review and editing, S.C.; Supervision, S.C.; Funding Acquisition, X.C., S.C., A.S.

Funding: This research was funded by University of International Business and Economics Joint Graduate Program, grant number JS20190102.

Conflicts of Interest: The authors declare no conflict of interest.

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