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Exploring Determinants of Performance Indicator and Customer Satisfaction of Accommodation Sharing*

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Abstract

The study aims to investigate determinants of performance indicator and perceptions of existing and potential customers in accommodation sharing. This study uses data of Airbnb in Busan and Jeju from January 1 to December 31 in 2018, provided by AirDNA. The total number of listed accommodation sharing were 5,109 accommodations in Busan and 11,502 accommodations in Jeju. More than 90 property types of registered accommodation are subcategorized and re-classified in this study. Study 1 examined current usage and effects of factors on performance indicator in tourism destinations by applying Airbnb data. Study 2 investigated effects of perceived factors on satisfaction, intention to use, loyalty, and tourism competitiveness by applying online survey data. This study applies statistical analyses such as factor and regression analyses, ANOVA, *t*-test, and MANOVA. Results of Study 1 showed that usage and effects of accommodation sharing differ from regulation that is related to sharing types. Effects also differ based on travel destinations. Results of Study 2 showed how customers perceive accommodation sharing differ from pure meaning of sharing. The results of Study 1 and 2 found significant effects of price and service factors on performance indicator and customer satisfaction. The findings of Study 2 showed significant effects on loyalty and tourism competitiveness.

Keywords: Accommodation Sharing, Performance, Satisfaction, Policy

JEL Classifications: M31, M38, Z32.

1. Introduction

The fourth industrial revolution and network digitization have connected global customers by providing better services with the goal of maximized consumption efficiency. The sharing economy has grown rapidly and expanded to meet diverse needs beyond expectation. The sharing economy, known as access-based consumption (Bardhi & Eckhardt, 2012) and the hybrid economies of collaborative networks (Scaraboto, 2015) has been widely applied with the development of technology by connecting demand and supply.

Previous studies have addressed the positive and negative issues of the sharing economy. Previous studies

investigated the sharing economy with sustainability (Martin, 2015) and environmental issues. Positivists argue for the sharing economy as the reintegration of production and consumption (Toffler, 1980; Ritzer & Jurgenson, 2010) and value change through collaboration (Humphreys & Grayson, 2008). Critics have highlighted that the sharing economy has generated controversy for its effects on labor conditions, wages, and the distributions of income and wealth (Schor, 2017). Lack of global citizenship and unprepared regulations are also obstacles to the sharing economy.

This study focused on accommodation sharing that plays a key role to build community by connecting global tourists and locals. With the presence and popularity of accommodation sharing, customers' expectations, perceptions, and behavior have been changed when they select a place to stay. While there are benefits of using accommodation sharing such as sharing culture and experience, strengthen tourism competitiveness by improving local homestay, creating job opportunities, concerns such as unprepared policies and different regulations across the countries and cities are obstacles for global tourists. Those people who raise negative aspects

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also discussed conflicts with traditional accommodation markets. Various studies (Zervas, Proserpio, & Byers, 2014) have discussed the impacts of Airbnb on the hotel industry.

This study posits that accommodation sharing positively helps strengthen tourism competitiveness by increasing overall degree of satisfaction and by examining performance indicator. This study proposed how accommodation sharing provides better benefits to customers as well as corresponding benefits to foster tourism competitiveness. While there are benefits of accommodation sharing, there are gaps between customers' actual usage and existing regulations on accommodation sharing. Previous studies rarely examined such gaps particularly based on the regions (i.e., countries/cities/states) where regulations are relatively stronger than other regions.

This study first, investigated effects of key factors on performance indicator by applying secondary data (Study 1). Study 1 applied objective factors such as effects of sharing types, communication attributes, price, and service on performance indicator which is occupancy rates, while Study 2 applied effects of perceived factors such as trust, satisfaction, loyalty, tourism competitiveness, and conative by classifying existing and potential customers. This study contributes to the establishment of accommodation sharing by revealing gaps between current usage and meanings implied in policy (Study 1) and by addressing which aspects need to foster to customers for better understanding of sharing economy (Study 2).

2. Literature Review

The sharing economy has been developed with various meanings such as sustainability. After the 2008 financial crisis and experience from the 20th century's supply-based economy, customers more concern about the environment with less of an owning philosophy that leads to the expansion of the sharing economy. Alternative definitions of the sharing economy address a number of shared meanings. Various definitions and terms of the sharing economy address different perspectives to explain the characteristics of these businesses and provide various implications. Table 1 summarized different perspectives of the sharing economy.

Belk (2007) addressed owning vs. sharing defining the latter as the act and process of distributing what is ours to others for their use/and or the act and process of receiving or taking something from another for our use. Arnould and Rose (2015) proposed the term mutualism or mutualizatin instead of sharing. Böcker and Meelen (2017) looked into social aspects of the sharing economy by addressing interactions between service users and providers. Botsman and Rogers (2011) also highlighted the sharing economy

with interactions such as getting to know a neighbor and socializing among friends, which are also important motivations to participate in the sharing economy. The sharing economy has seen the development of mesh technology that connects various devices. Galbreth, Ghosh, and Shor (2012) addressed the development of information technology (IT), focusing on social network services and the Internet's facilitation of peer-to-peer transactions, enabling the activation of the sharing economy. Current increased usage of online transactions and smart-phones have accelerated the growth of the sharing economy. The sharing economy is also classified based on the issue of monetary exchanges, with the argument that only non-monetary exchanges are pure "sharing". Table 1 summarizes literatures on accommodation sharing economy.

Table 1: Literatures on Accommodation Sharing

Publications	Major Discussion
Oskam and Boswijk (2016)	Consequences for tourism and tourist destinations
Guttentag and Smith (2017)	Assessed Airbnb relative to hotels by considering hotel attributes
Varma, et al. (2016)	Type and motivation of customers of Airbnb compared to traditional hotels.
Wang and Nicolau (2017)	Comparison of price with sharing accommodation and hotel.
Guttentag, Smith, Potwarka, and Havitz (2017)	Motivating factors of using Airbnb and customers' characteristics
So, Oh, and Min (2018)	Motivations and constraints of Airbnb consumers
Tussadiah and Pesonen (2016)	Social and economic appeals with destination selection.

3. Study 1: Use of Secondary Data

This study is divided into two studies based on the use of secondary and primary data. Study 1 examined the current usage of accommodation sharing in travel destinations and developed hypotheses based on the effects of determinants on performance indicator. For business indicator, Study 1 applied occupancy rates. Two major areas (Busan and Jeju) known as destination brands for tourists in Korea were examined in Study 1.

3.1. Current Usage of Airbnb in Travel Destinations

Starting in 2014, customers' usage of Airbnb has rapidly increased in Korea. Registered, active, and reserved Airbnb listings and number of tourists of Airbnb from 2016 to 2018

in Busan and Jeju are increased rapidly based on analysis of data via airDNA, which is an organization that officially collects Airbnb data officially. Two cities designated as “regulation-free zones” by the Korean Government in 2016 are selected for Study 1. Under the title of regulation-free zones, both domestic and international travelers are allowed to use accommodation sharing services legally, while other regions except Gangwon comply with the regulations. For both Busan and Jeju, the number of registered, active, and reserved lists of accommodation sharing are increasing, while there are gaps in registered and actual accommodation sharing.

3.2. Current Usage of Airbnb Based on Residential Sharing Types

Currently, accommodation sharing in Korea is allowed by the Tourism Promotion Act which is rooted in “Experience of Korea Traditional House” (‘Hanok’), “Homestays for foreign travelers in urban areas,” and “Homestays in farming and fishing villages” (Ministry of Culture, Sports, and Tourism, 2016). According to regulation policy, for cases of “Homestays for foreign travelers in urban areas,” and “Homestays in farming and fishing villages,” entire house sharing is banned, while hosts must stay with customers. This study examined sharing types as policy on P2P accommodation sharing regulate sharing without hosts, while proportion of registered sharing types is much higher with entire house.

3.3. Current Usage of Airbnb Based on Overall Rating

This study examined how overall rating is affected by factors such as accuracy of the description of accommodations, ease of check-in, communications between hosts and guests, locations of accommodations, and other values by using online survey conducted by Airbnb. Different types of reviews help build trust and interactivity between providers and customers. In the case of Busan, the cleanliness value showed the most strongly effect on overall after price value, while in the case of Jeju, price value of accommodation sharing was the most strongly influenced in overall rating after cleanliness for the analysis of all sharing types and entire house.

3.4. Hypothesis Development

Airbnb provides three types of accommodation sharing entire house/apartment, private room and shared room (Perez-Sanchez, Serrano-Estrada, Marti, & Mora-Garcia, 2018). The sharing types are classified based on different levels of administrative procedures such as registrations or

qualifications and service level. Regulations on the sharing types are specified based on the number of days of operation and existence of hosts. Gunter (2018) examined the probability of bookings in terms of characteristics of accommodation sharing. This study hypothesized the how occupancy rates are affected by the sharing type.

H1: The sharing type of accommodation affects occupancy rates.

Xie and Mao (2017) found that the effects of host attributes have a significant impact on the performance of registered Airbnb based on hosts’ credibility and their properties. According to the interaction between hosts and guests, the platform provides information such as reviews, response time and rate, and other information such as photos. The number of reviews and their contents encourage guests to use accommodation sharing and positively influence performance (Poon & Huang, 2017). The number of photos and the good quality of photos also motivate guests to choose the accommodations (Ert, Fleischer, & Magen, 2016). Xie and Mao (2017) found that a higher response rate has more reservations (Xie & Mao, 2017). Instant booking allows immediate reservations without host approval (Guttentag & Smith, 2017) and the feature of instant booking improves business performance (Cheng & Foley, 2019). Therefore, this study hypothesized the effects of hosts’ communication attributes (e.g., number of reviews and photos, response rate and time, and instant booking) on occupancy rates to measure how these attributes affect performance.

H2: Hosts’ communication attributes affect occupancy rates.

Price has played a key role in decision making. Yao, Qiu, Fan, Liu, and Buhalis, (2019) examined signal attributes of Airbnb listings such as price per night, security deposit, cleaning fee and stated that cleaning fees tend to increase the probability of being booked. This study hypothesized the effects of price value attributes (e.g., published nightly rate) on occupancy rates to measure how the changes in costs for accommodation sharing influence occupancy rates.

H3: Price attributes affect occupancy rates.

Airbnb has awarded the superhosts designation to hosts who have more than 10 days’ booking without cancellation with higher ratings and prompt response to guests’ inquiries. Accommodations with superhost status would have large numbers of positive reviews and ratings, so guests are willing to pay more for the accommodations with superhosts (Liang, Schuckert, Law, & Chen, 2017). Therefore, this study hypothesized effects of service quality

attributes (e.g., the status of superhost and rating for accommodations by already experienced guests) on occupancy rates to measure the impact on performance.

H4: Service quality attributes affect occupancy rates.

3.5. Methodology

Study 1 investigated how accommodation attributes affect occupancy rates as performance indicator. This study conducted multivariate regression analyses. Categorical data are transformed into dummy variables. This study applied data of Airbnb in Busan and Jeju from January 1 to December 31 in 2018, provided by AirDNA. The total number of listed accommodation sharing were 5,109 accommodations in Busan and 11,502 accommodations in Jeju. This study applied accommodation sharing with residential properties by excluding commercial accommodations such as hotels and hostels, as this study focuses on the effects of P2P accommodation sharing that are residential types. More than 90 property types of registered accommodation are subcategorized and reclassified in this study such as apartments, houses, lofts, and villas. This study used 2,826 observations and 3,522 observations of registered residential property types in the cases of Busan and Jeju.

3.6. Test of Hypotheses

Table 2: Effects on Occupancy Rates in Busan

	Standard Coefficient (Sig)			
	All type	Entire Houses	Private Rooms	Shared Rooms
Private Room	-0.197 (***)			
Shared Room	-0.071 (***)			
# of Reviews	0.264 (***)	0.292 (***)	0.225 (***)	0.136
# of Photos	0.077 (***)	0.071 (***)	0.075	0.205
Response Rate	0.004	-0.025	0.07	-0.139
Response time	-0.068 (***)	-0.129 (***)	0.014	0.296
Instant Booking	0.133 (***)	0.125 (***)	0.163 (***)	0.251*
Nightly Rate	-0.164 (***)	-0.193 (***)	-0.162 (***)	-0.108
Deposit fee	-0.01	-0.022	0.048	0.051
Cleaning fee	0.024	0.007	0.052	0.112
Extra guest fee	-0.035 (**)	-0.032 (*)	-0.052	-0.136
Super host	0.101 (***)	0.133 (***)	0.028	0.46 (***)
Overall rating	0.089 (***)	0.091 (***)	0.077	0.142

*** Significance at 0.01 level (2-tailed);

** Significance at 0.05 level (2-tailed);

* Significance at 0.1 level (2-tailed)

This study developed hypotheses for sharing type (H1), host's communication (H2) including number of reviews and photos, response rate and time, and instant booking, price attributes (H3) including published nightly rate and status of additional fees such as cleaning fees, security deposits, extra guest fees, and service quality (H4) including superhost status and overall rating. The following tables summarized the results of regression analyses in Busan (Table 2) and Jeju (Table 3) by considering four cases including all sharing types, entire houses, private rooms, and shared rooms.

3.6.1. Sharing Types

Table 3: Effects on Occupancy Rates in Jeju

	Standard Coefficient (t-value-Sig)			
	All types	Entire Houses	Private Rooms	Shared Rooms
Private Room	-0.079 (***)			
Shared Room	-0.133 (***)			
# of Reviews	0.366 (***)	0.374 (***)	0.418 (***)	0.082
# of Photos	0.05 (***)	0.059	0.043	0.079
Response Rate	-0.005	0.007	-0.02	-0.001
Response time	-0.123 (***)	-0.148 (***)	-0.053	-0.215 (*)
Instant Booking	0.072 (***)	0.031	0.175 (***)	-0.017
Nightly Rate	-0.007	-0.015	-0.051	0.302 (***)
Deposit fee	-0.056 (***)	-0.074 (***)	0.019	-0.273 (***)
Cleaning fee	0.104 (***)	0.121 (***)	0.036	0.3 (**)
Extra guest fee	-0.05 (***)	-0.058 (***)	-0.021	-0.069
Super host	0.049 (***)	0.067 (***)	0.011	0.009
Overall rating	0.064 (***)	0.076 (***)	0.059	-0.115

*** Significance at 0.01 level (2-tailed);

** Significance at 0.05 level (2-tailed);

* Significance at 0.1 level (2-tailed)

The effects of sharing types (H1) on occupancy rate showed significance at $\alpha = 0.01$ level in both Busan and Jeju for analysis of all sharing types, while analyses of private room sharing and shared room showed negatively significant. The results of ANOVA showed a significant difference in sharing types at the 0.01 level with $F = 168.53$ (R -Square = 0.1067) in Busan and $F = 104.83$ (R -Square = 0.0562).

3.6.2. Hosts' Communication Attributes

This study examined the number of reviews (H2a), number of photos (H2b), response rate (H2c), response time (H2d) and instant booking which is booking with benefits to hosts and guests (H2e) for hosts' communication attributes (H2). For analyses of entire house and private room sharing both in Busan and Jeju, the number of reviews (H2a) and photos (H2b) positively affected occupancy rates at $\alpha = 0.01$. Effects of response rates (H2c) found insignificant for four cases of analyses in both Busan and Jeju, while the response time (H2d) negatively affected occupancy rates for analyses of all sharing types and entire house at $\alpha = 0.01$ both in Busan and Jeju. The results implied that guests have higher expectations on prompt response. The instant booking positively affected the occupancy rate at $\alpha = 0.01$ all four cases of analyses in Busan and cases of all sharing types and private room sharing in Jeju. For analyses of shared room, effects of hosts' communication do not show significant both in Busan and Jeju except response time in Jeju.

3.6.3. Price Attributes

According to price attributes (H3), this study investigated the published nightly rate (H3a) and the status of additional fees such as security deposits (H3b), cleaning fees (H3c) and extra guest fees (H3d) as dummy variables. In the cases of Busan, effects of published nightly rate (H3a) and extra guests fees (H3d) negatively affected on occupancy rates for cases of all sharing types and entire house sharing. In the case of Jeju, the published nightly rates (H3a) showed insignificant for analyses of all sharing types and entire house and private rooms sharing, while significant for analysis of shared rooms.

3.6.4. Service Quality Attributes

According to service quality attributes (H4), this study examined the status of superhost (H4a) and overall rating (H4b). Effects of attributes of superhost (H4a) and overall rating (H4b) significantly affected occupancy rates at $\alpha = 0.01$ for analyses of all sharing types and entire house sharing in both Busan and Jeju, while insignificantly affected occupancy rates for analyses of private room sharing and shared room except effects of superhost for shared room.

4. Study 2: Use of Primary Data

Study 2 developed hypotheses based on how customers and potential customers perceive proposed variables on accommodation sharing and applied primary data.

4.1. Hypotheses Development

Study 2 hypothesized the effects of satisfaction, loyalty, intention to use, and perceived tourism competitiveness on accommodation sharing. This study proposed the effects of factors including perceived price, service, trust, culture, and sustainability (Figure 1). Study 2 examined factors based on customers' experiences and potential customers' expectation on accommodation sharing.

4.1.1. Effects of Perceived Price on Satisfaction

This study looked into the effect of perceived price on accommodation sharing. While there are diverse variables that affect price, this study proposes perceived price on accommodation sharing compared with other accommodation types, such as hotels. By classifying customers who experienced accommodation sharing and potential customers, this study hypothesized the effects of price on satisfaction and intention to use.

H1a: Perceived price significantly affects satisfaction with accommodation sharing.

H1b: Perceived price significantly affects intention to use accommodation sharing.

4.1.2. Effects of Perceived Service on Satisfaction

One of the purposes of accommodation sharing is to foster relationships through interaction between service providers (hosts) and customers (guests). The presence of hosts with customers by providing services including bnb (i.e., bed and breakfast) is necessary to use accommodation sharing in Korea, while regulations differ based on regions across the world. Providing better services via face-to-face interactions is considered important to enhancing the quality of service and relationship-building experience for both hosts and customers. This study also proposes that providing bundling services for other products/services via platforms or offline will improve customer satisfaction. Therefore, this study hypothesizes the effects of perceived service on satisfaction on accommodation sharing.

H2a: Perceived service significantly affects satisfaction with accommodation sharing.

H2b: Perceived service significantly affects intention to use accommodation sharing.

4.1.3. Effects of Cultural Factors on Satisfaction

By providing bed and breakfast (bnb), both service providers and customers share culture and experience. Paulauskaite, Powell, Coca-Stefaniak, and Morrison (2017) investigate the phenomenon of authenticity-seeking tourism with local experiences such as unique accommodation, atmosphere, and interactions. Previous studies (Jung & Cho,

2017) examined determinants on accommodation sharing excluding cultural factor. This study hypothesized that how users perceive cultural factors will improve the level of satisfaction.

H3a: Perceived cultural benefits significantly affects satisfaction with accommodation sharing.

H3b: Perceived cultural benefits significantly affects intention to use accommodation sharing.

4.1.4. Effects of Perceived Trust Factor on Satisfaction

Liang, Choi, and Joppe (2018) measured satisfaction level along with trust on accommodation sharing by looking at both trust in the platform and trust in the hosts. Previous studies (Belk, 2010; Botsman & Rogers, 2010) stated that trust plays a crucial role in the sharing economy. Ukaj and Mullatahiri (2019) addressed importance of trust-based marketing in global markets. This study posits that building trust is pivotal to the development and establishment of the sharing economy. In order to enhance trust, platforms on accommodation sharing often use applied systems such as rating scores and the superhost badge system. Therefore, this study hypothesized effects of perceived trust on satisfaction with accommodation sharing.

H4a: Perceived trust significantly affects satisfaction with accommodation sharing.

H4b: Perceived trust significantly affects intention to use accommodation sharing.

4.1.5. Effects of Perceived Sustainability on Satisfaction

Sustainability utility refers to the “belief that sharing is a way to protect environment or reduce wastes” (Mintona & Roseb, 1997). Previous studies argued that the sharing economy as a path to sustainability (Martin, 2015) contributed to social gains, which result from protecting the environment, reducing water usage, and increased job opportunities (La & Cho, 2019). Lopez and Bhaktikul (2018) assessed the tourism and environmental sustainability.

Therefore, this study hypothesized that how users perceive sustainability will improve the level of satisfaction.

H5a: Perceived sustainability significantly affects satisfaction with accommodation sharing.

H5b: Perceived sustainability significantly affects intention to use accommodation sharing.

4.1.6. Effects among Satisfaction, Loyalty, Intention to Use, and Tourism Competitiveness

A study by Liang, Choi, and Joppe (2018) proposed that Airbnb is a service that consumers evaluate in terms of their

level of satisfaction with each aspect of the transaction process using different criteria from those used to evaluate the actual lived experience. From a motivation-based segmentation study, Guttentag, Smith, Potwawrka, and Havitz (2017) stated that hundreds of thousands of tourists choose not to stay in a traditional tourism accommodation, such as a hotel, but rather to stay at the residence of a stranger found online via Airbnb. Previous studies stated that the role of satisfaction (Cho, 2019; Kim, 2019; Nguyen & Khoa, 2019) and loyalty as final goals in service sectors (Shin, Hwang, Lee, & Cho, 2015; Yusuf, Nurhilalia, & Putra, 2019). This study hypothesized effects among satisfaction, loyalty, intention to use, and tourism competitiveness.

H6: The level of satisfaction affects loyalty in terms of accommodation sharing.

H7: The level of loyalty to accommodation sharing affects tourism competitiveness.

H8: The level of intention to use accommodation sharing affects tourism competitiveness.

4.2. Methodology

Study 2 conducted a survey to measure the effects of determinants, satisfaction, loyalty, intention to use, and the tourism industry by classifying into existing and potential customers. The survey was developed in English and translated in English. Back translation was applied to match the original version and the version translated back. This study developed multi-item scales to measure each of the variables with a 7-point Likert scale from 1 = *strongly disagree* and 7 = *strongly agree*. This study collected the data via online with the help of a well-known research company. Response rate was 38.5%. Quantitative methods, including factor analysis, regression, ANOVA (Analysis of Variance), and *t*-test were applied to measure effects and relationships to test the hypotheses. This study conducted a pilot study to check the wording and structure of the survey.

4.3. Data Analysis

Of the 310 respondents, 32.9% experienced and 67.1% were not experienced accommodation sharing as customers. 6.8% experienced accommodation sharing as hosts. 49.4% were female and 50.6% were male. 56.8% were married and 43.2% were unmarried. 8.7% were 19-24 years old, 12.9% were 25-29 years old, 10.6% were 30-34 years old, 13.9% were 35-39 years old, 10.3% were 40-44 years old, 13.2% were 45-49 years old, 12.6% were 50-54 years old, 11.0% were 55-59 years old, and 6.8% were 60 years or older. With regard to education level, 17.1% were high school graduates, 6.5% were working on an attending

associate degree or an associate degree, 63.9% were working on an undergraduate degree or hold an undergraduate degree, 9.7% were working on a master degree or hold a master degree, and 2.9% were working on a doctoral degree or hold a doctoral degree.

In terms of income, 4.8% of respondents had an annual household income of less than \$10,000, 5.2% had annual incomes between \$10,000 and \$20,000, 10.6% had annual incomes between \$20,000 and \$30,000, 16.1% had annual incomes between \$30,000 and \$40,000, 14.5% had annual incomes between \$40,000 and \$50,000, 15.8% had annual incomes between \$50,000 and \$60,000, 9.4% had annual incomes between \$60,000 and \$70,000, and 23.5% had annual incomes above \$70,000. With regard to employment, 6.5% were self-employed, 12.3% were housewives, 10.6% were blue-collar workers, 55.5% were white-collar workers, and 8.1% were students.

This study applied factor analysis to check the validity of the major constructs, using principal component analyses as the extraction method and Varimax rotation methods with Kaiser Normalization. The results of the factor analyses show that items represent major variables, with Eigen values greater than 1.00. Factor scores were used for regression analyses. For the effects of factors on satisfaction, the overall, the results of the ANOVA find the models significant at the 0.01 level with $F = 2.881$ (r -square = 0.200). As Table 4 shows, hypotheses 1a and 2a were accepted.

Table 4: Effects of Factors on Satisfaction

	Standardized Coefficient (Sig)
Price → Sat (H1a)	0.308 (**)
Service → Sat (H2a)	0.222 (*)
Trust → Sat (H3a)	0.000
Culture → Sat (H4a)	0.075
Sustainability → Sat (H5a)	0.068

** Significant at 0.05 level (2-tailed);

* Significant at 0.1 level (2-tailed).

Table 5: Effects of Factors on Intention to Use

	Standardized Coefficient (Sig)
Price → Intention to Use (H1b)	0.035
Service → Intention to Use (H2b)	0.307 (***)
Trust → Intention to Use (H3b)	0.102
Culture → Intention to Use (H4b)	0.166 (**)
Sustainability → Intention to Use (H5b)	0.073

*** Significant at 0.01 level (2-tailed)

** Significant at 0.05 level (2-tailed).

Table 5 summarized results of multiple regression

analysis for the effects of factors on intention to use. Overall, the results of the ANOVA find the models significant at the 0.01 level with $F = 12.683$ (r -square = 0.3388). As table 5 shows, hypotheses 2b and 4b were accepted.

This study also conducted regression analyses to find effects of satisfaction, loyalty, and tourism competitiveness. Overall, the results of the ANOVA find the models significant at the 0.01 level with $F = 40.130$ (r -square = 0.288), $F = 10.079$ (r -square = 0.092), and $F = 66.397$ (r -square = 0.244). As table 6 shows, hypotheses 6, 7, and 8 were accepted.

Table 6: Effects of Satisfaction, Loyalty, Intention to Use, and Tourism Competitiveness

	Standardized Coefficient (Sig)
Satisfaction → Loyalty (H6)	0.537 (***)
Loyalty → Tourism Competitiveness (H7)	0.304 (***)
Intention to Use → Tourism Competitiveness (H8)	0.494 (***)

*** Significant at 0.01 level (2-tailed);

Additionally, the independent sample's t-tests found that the means of satisfaction differed based on gender and marital status. Two-way ANOVA results also showed that means of satisfaction differ based on age group and gender. Another two-way ANOVA results showed that means of intention to use differ based on gender, and there were interaction effects with gender and age groups (Figure 2).

5. Conclusion

This study examined what are key factors that affect occupancy rates as performance indicator, customer satisfaction, loyalty, intention to use, and perceived tourism competitiveness. For the effects of factors on occupancy rates, Study 1 applied secondary data of Airbnb, while for the effects on satisfaction, loyalty, intention to use, and perceived tourism competitiveness, Study 2 applied primary data collected via online survey. Study 1 selected two regulation-free zones in Korea that are also known as travel destinations. This study examined effects of sharing types, communication, price, and service attributes on occupancy rates for Study 1, while Study 2 investigated effects of perceived price, service, trust, culture, and sustainability on satisfaction and intention to use for both existing and potential customers. Perceived trust, culture, and sustainability were applied for Study 2 as those subjective measurements were not available from Airbnb data. Table 7 summarized Study 1 and 2.

Table 7: Summary of Study 1 & 2

	Study 1	Study 2
Applied Data	Secondary Data (Airbnb via AirDNA)	Primary Data (Online Survey)
Types of Analysis	Objective	Subjective
Independent Variables	Sharing types, communication, price, and service	Perceived price, service, trust, culture, and sustainability
Dependent Variables	Occupancy rate as business Indicator	Satisfaction, intention to use, loyalty, and perceived tourism competitiveness
Data Analysis	Multiple regression analyses, MANOVA.	Factor, multiple regression analyses, <i>t</i> - test, two-way ANOVA.

Study 1 examined effects based on sharing types related to the issues of current regulations on entire house sharing without hosts in Korea. While entire house is regulated, customers' usage on entire house was higher than other sharing types as occupancy rates showed. This issue raised concerns about information asymmetry about regulations and customers' awareness on accommodation sharing economy. Results of Study 1 also showed that means of occupancy rates differ based on sharing types in both Busan and Jeju. Effects of majority of communication attributes except response rate showed significant for the analysis based on all sharing types in both Busan and Jeju. Compared to Busan, effects of published nightly rates on occupancy rate showed insignificant for analyses of entire house and private rooms in Jeju. This study found that customers in some tourism destinations, consider other accommodation attributes on their purchasing decisions based on their needs and preference, rather than mere nightly rates during their stays. In both Busan and Jeju, effects of ratings of price value and cleanliness on overall rating showed stronger than other effects. Additional results of MANOVA showed that the occupancy rate and published nightly rates have a significant difference in terms of property types and the number of rooms in the case of Jeju.

The results of Study 2 found that the effects of perceived price and service on satisfaction were showed significant based on existing customers, while the effects of perceived service and culture on intention to use showed significant based on potential customers. However, effects of trust and sustainability on satisfaction and intention to use do not show significant. The results provide implications as to which aspects of accommodation sharing need to be addressed to meet the meaning of sharing. Effects of loyalty and intention to use on tourism competitiveness showed

significant. Since Study 1 had limitation for the analyses based on demographics due to the characteristics of the data, additional analyses based on demographics were conducted with Study 2. Study 2 found different effects based on gender and age groups. Perceptions on security, price, helpfulness to local communities, gentrification, eco-friendliness, privacy, and sanitation showed different effects based on demographics.

This study provides policy and managerial implications. First, results of Study 1 revealed that sharing types matter for customers' choices and performance, while there are regulatory policy issues on sharing types in Korea. Accommodation sharing with hosts has been addressed as an important issue due to sharing culture and experience, while Study 2 revealed that perceived culture does not significantly affect satisfaction. However, effects of perceived culture on intention to use show significant among potential customers of accommodation sharing. Sharing culture is related to the meaning of "bnb (bed and breakfast)." By providing breakfast, customers have opportunity to experience, share culture, and interact with hosts. Policy implications on laws and regulations on homestay for travelers banned entire house without hosts and encourage cultural experience. However, this study found how customers actually satisfied with accommodation sharing is in different direction from meanings implied in policy. Social appeal including interaction with the hosts and getting to know people from the local neighborhoods showed significant in travel destination selection based on U.S. and Finland respondents (Tussaydiah & Pesonen, 2016), while results of this study based on Korean respondents showed differently. The results implied which determinants affect accommodation sharing might differ based on culture.

Second, results of both Study 1 and 2 based on existing customers found that price and service factors were significant. Results of Study 2 based on potential customers showed service factor were significant on intention to use, while price factor was not significant. At individual level, results showed that customers' expectations on price and integrated services are higher than other attributes. Sharing economy platforms should consider to build better relationships with customers by increasing satisfaction and loyalty. Fostering experiences via promotion will help enhance relationships among hosts, customers, and local communities.

Further, results of Study 2 provide implications on how customers use and perceive accommodation sharing meets pure meanings of sharing such as sustainability and trust. Previous studies (Martin, 2015) addressed the sharing economy's promises of sustainability. Results of this study implied how customers perceive the sharing economy needs to be addressed via promotion. Well suited policies should

be prepared for better usage of accommodation sharing at societal level and to strengthen tourism competitiveness through unlocked fields.

This study has some limitations. This study examined the effects of accommodation sharing on the tourism industry, while conflicts with the existing industry such as hotels have not investigated. Future research should also measure the down sides of accommodation sharing in terms of factors affect that dissatisfaction. Future studies should also consider other types of sharing economy and cross-cultural analyses. Future studies might apply the role of government for technology driven economy (Agustina & Pramana, 2019) and effects of accommodation sharing in omni-channel environment (Ryu, 2019).

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