

Exploring the effect of Airbnb hosts' attachment and psychological ownership in the sharing economy

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ABSTRACT

Previous research on the sharing economy has not typically focused on organizational structure and its management in spite of the fact that the essence of recent peer-to-peer business practices is the collaboration of online platforms and sharable assets owned by market peers. This paper critically examines a theoretical model to explore how these market partners engage in this platform organization and how their perceptions of attachment and ownership are established within the new organizational structure. The results of structural equation modeling applied to 224 Airbnb hosts indicate that attachment to a platform firm plays a vital role in achieving a sense of psychological ownership that ultimately influences citizenship behaviors toward the organization as well as toward peer hosts. The results suggest that the newly formed structure should acknowledge an establishing mechanism of attachment and psychological ownership in partnering with individual service providers in its operational management.

1. Introduction

Online platform networks have transformed traditional consumption models (i.e., business-to-consumer transactions) into innovative consumption models based on emerging auxiliary goods and services by connecting supply and demand through peer-to-peer (P2P) transactions (Perry, 2015). In this transition, online platform organizations have recognized the inevitability of incorporating individual market partners (i.e., peers). These firm-market hybrid models of the sharing economy have resulted in a new organizational structure that does not necessarily focus on owning main products or hiring service providers (i.e., employees) (Sundararajan, 2014). To facilitate new organizational arrangements that include market peers who perform services with their owned assets, P2P firms require an extended investigation of how this new arrangement can be formed and what factors drive market partners (i.e., peer service providers) to participate in this new organizational structure.

Earlier organizational management studies have examined factors that influence the organizational behaviors of employees (e.g., Luthans, 2002; Pan & Qin, 2009; Pierce, Gardner, & Dunham, 2001a). Luthans (2002) emphasized that positive psychology emotionally connects employees with the organization and suggested that a sense of psychological ownership (henceforth PO) provides an important human resource advantage for the organization. In a subsequent empirical

study, Pan and Qin (2009) found that employees with a sense of PO show six behavioral outcomes: dedication, accountability, enthusiasm, innovation, helping others, and interpersonal congruence with the target organization. Further studies indicated a positive correlation between PO and organizational citizenship behavior (henceforth OCB), with PO as an important trigger (Lv & Gu, 2007; Van Dyne & Pierce, 2004). With an emphasis on the importance of PO, a feeling of attachment is an essential element that can develop emotional possession (Pierce, Kostova, & Dirks, 2003). In a study by Ren et al. (2012), individual attachment was measured with two dimensions: being attached to a group and being attached to individuals. The group and its members may have a different level of attachment that eventually determines the presence of PO.

Although current research on the sharing economy provides insights into users' perspectives and their sources of motivation as well as their trust behaviors (e.g., Belk, 2013; Guttentag, 2013; Slee, 2013), little attention has been given to the comprehensive investigation of individual service providers (i.e., peer providers or sharing service partners). Differing from prior studies on the sharing economy, the present study interests in the managerial relationship between the firm and these service providers in response to the organizational structure changes in the sharing economy environment. To address the viewpoint of individual service providers and organization-partner relationships, this study regards Airbnb hosts as delegates of a sharing service partner

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and considers the Airbnb platform firm as a newly invented P2P organization.

The purpose of this study is therefore to provide an understanding of Airbnb hosts' perspectives on how they attach to both the Airbnb platform firm and peer hosts and how these different levels of attachment influence hosts' consequent behaviors by suggesting and testing a model of attachment antecedents, PO, and OCB of Airbnb hosts within the new P2P organizational structure. This paper extends the current sharing economy literature by proposing an integrated model that explains the importance of hosts' attachment in engendering citizenship behaviors toward the firm and peer hosts. In addition, it examines the effect of PO on hosts' citizenship behavior as they are attached to the organization and the peer host of Airbnb.

Finally, this paper suggests that the newly formed structure provides an important understanding of the mechanism of attachment and PO in its partnering with individual service providers in its operational management. Because the sharing economy businesses are based on the concept of the collaborative consumption of individuals, P2P firms should realize that the innovative formation of the organization requires a strategically customized way of management to work well with individual product and service owners.

The rest of the paper is structured as follows. The second section presents the theoretical background and the third section suggests the research model and hypotheses derived from prior literature and discussion. The fourth section elaborates the method, and the results of the study follow in the next section. The last section concludes with discussions, implications, limitations, and future research recommendations.

2. Theoretical background

2.1. Attachment

According to Bowlby (1969), individuals naturally engage in the attachment process when they are born. The relationship between infant and mother is the foremost instance of attachment (Bowlby, 1969). These primary interactions permit an individual to create a growing set of expectations regarding other individuals, specifically regarding how individuals behave and respond in relationships (Weimer, Kerns, & Oldenburg, 2004). Bowlby (1969) also argued that time and proximity are required for an individual to develop feelings of attachment to other objects. Following Bowlby (1969), recent literature in social psychology has extended the scope of attachment from the individual to the organizational level and has suggested new measures for assessing a sense of attachment toward an organization (Ren et al., 2012). Attachment thus explains how psychological proximity determines the differences in behavior among individual members of a certain group. As behavioral outcomes resulting from attachment, individuals with a stronger sense of attachment to an organization generally stay longer, engage more actively, and take additional responsibilities within the organization, which in turn leads to better job performance (Hogg, 1992). The work of Meyer, Stanley, Herscovitch, and Topolnytsky (2002) showed that lower job turnover rates and fewer intentions to leave are seen in groups of people who are more committed to their organization.

Other scholars have developed similar accounts. For example, O'Reilly and Chatman (1986) argued that an individual's psychological attachment to an organization is directed toward both the organization itself and other members of the organization. It was also argued that one critical mechanism of becoming attached is an individual's acceptance of a specific set of visions, goals, or values (Kagan, 1958). In the process of becoming attached to a group (e.g., an organization), attachment is built when people feel a sense of connection to the characteristics or purpose of a group (Hogg & Turner, 1985). At the same time, this sense is rooted when individuals develop interpersonal relationships with other members of the group (Festinger, Back, & Schachter, 1950). Furthermore, Ren et al. (2012) proposed various

possible antecedents that can strengthen an individual's sense of attachment to an organization, such as group categorization, information, homogeneity, and familiarity, along with a sense of attachment to other members of the group, which includes personal information, transparency, similarity, and interpersonal communication. Following these arguments, the present study considers two different types of attachment—attachment to the organization (the Airbnb company) and attachment to other members of the organization (peer hosts of Airbnb)—as key factors that promote both PO and OCB, with a focus on individual service providers (Airbnb hosts) in the context of P2P platforms of the sharing economy. In addition to consequences (PO and two types of OCB), the antecedents of each type of attachment are identified and investigated in this study to understand the comprehensive mechanism of the two different types of attachment from the perspective of individual service providers.

2.2. Psychological ownership

The concept of possessive feelings or psychological ownership (PO) has been defined as the identification of a particular object as “mine” or “ours” (Van Dyne & Pierce, 2004). A wide range of research concludes that PO has a significant relationship with an individual's attitude, motivation, and behavior. In particular, a great deal of earlier management literature has shown that PO plays a vital role within employee-organization relationships (Dirks, Cummings, & Pierce, 1996; Pendleton, Wilson, & Wright, 1998; Pierce, Kostova, & Dirks, 2001b). Pierce et al. (2003) argued that a sense of ownership is an attitudinal consequence induced by affective judgments based on both cognitive and affective information. A number of scholars have supported their ideas with affective events theory (AET), explaining that an individual's evaluation of his/her organization is based upon emotional experiences in the workplace (Breckler & Wiggins, 1989; Weiss & Cropanzano, 1996). The present study extends these arguments to propose that PO can be derived from a sense of emotional attachment to other individuals in the firm as well as to the firm, applying the arguments to an examination of the sharing economy firm. In addition, it investigates whether these possessive feelings of individual service providers in the sharing economy context contribute to enhancing two different types of OCB, OCB toward the organization (i.e., Airbnb company) and OCB toward other members of the organization (i.e., peer hosts of Airbnb), as they do in traditional employee-firm relationships. According to Pierce et al. (2003), behavioral consequences of an employee's PO, such as extensive motivation, sense of responsibility, and self-generated OCB, are suggested.

2.3. Organizational citizenship behavior in collaborative relations

Organizational citizenship behavior (OCB) encompasses all actions that positively influence work-related parties (i.e., co-workers and the organization) for the sake of long-term business accomplishment (Organ, 1988; Smith, Organ, & Near, 1983). Research on this topic has distinguished three traits of an employee's OCB—discretionary, self-generated, and contributing positively to the target organization (Kim, Shin, Chang, & Kong, 2009; Organ, Podsakoff, & MacKenzie, 2005). OCB has been defined as employee behavior that is not essential in completing job tasks but supports organizational operation, such as helping coworkers and participating in roles that are not formally required (Lee & Allen, 2002). Earlier research has measured OCB toward other individuals (coworkers) and the organization (Organ, 1988; Smith et al., 1983). Organizational citizenship behavior toward individuals (OCBI) refers to surpassing engagement actions that help coworkers, such as switching work schedules and staying extra hours, whereas organizational citizenship behavior toward the organization (OCBO) refers to actions that support the target organization, such as defending the firm from criticism and expressing loyalty (Lee & Allen, 2002). On the other hand, there has been relatively little OCB research

conducted in the online context, and previous research has only examined voluntary knowledge sharing among members of online communities (e.g., Kang & Kim, 2012; Kim et al., 2009; Yu & Chu, 2007). Lee and Allen (2002) extended the OCB literature to the social networking site (SNS) context and made comparisons between traditional OCB and SNS citizenship behavior. It thus seems reasonable to suggest that OCB is applicable to both individual service providers (e.g., Airbnb hosts) and platform providers (e.g., the Airbnb company) in the sharing economy. The present study starts from this assumption and aims to explore how OCB is formed among collaborative relations.

3. Research model and hypotheses development

Fig. 1 demonstrates the research model, which consists of twelve hypotheses derived from literature discussed in the previous section. By empirically investigating this research model, this study attempts to explore both the antecedents and the consequences of individual service providers' attachment in the context of the sharing economy firm (i.e., Airbnb) in a comprehensive manner.

3.1. Antecedents of hosts' attachment to Airbnb

Based on Ren et al.'s (2012) work on group identity-based attachment, the research settings of this study arrive at three antecedents of host attachment. This theoretical evidence of attachment from the literature provides a comprehensive assessment of factors that positively enhance the host's attachment toward the Airbnb company. First, Airbnb's sharing of information with its hosting partners is a critical factor associated with high levels of transparency, honesty, and frequency (Ridings, Gefen, & Arinze, 2002). Sharing the organization's vision, goals, values, updates, and information performs the function of narrowing the psychological distance and possibly strengthening the host's engagement with Airbnb. Second, employee empowerment plays a critical role in the service industry by producing superior customer management and overall business success (Hancer & George, 2003). This paper suggests that empowerment plays a similar role in the sharing organizational structure. Hosts who are more empowered in the decision-making process positively impact the organization's yield by ensuring service quality, hosting performance, and guest satisfaction. Third, individual actions are usually performed with the expectation of positive results that benefit the individual's self-interest (Bock & Kim, 2001). Such expectations indicate the possibility of advantageous

returns that reflect economic, social, and individual values. As stated above, improved outcomes may improve the host's attachment toward the Airbnb company. Therefore, on the basis of the literature, the following hypotheses on the antecedents of host attachment toward Airbnb are proposed:

- H1a:** Information sharing positively influences hosts' attachment to Airbnb.
- H1b:** Empowerment positively influences hosts' attachment to Airbnb.
- H1c:** Outcome expectations positively influence hosts' attachment to Airbnb.

3.2. Antecedents of hosts' attachment to peer hosts

Airbnb host attachment among peer hosts is measured by three theoretical antecedents, reflecting Ren et al.'s (2012) work on individual bond-based attachment: self-disclosure, similarity, and communication openness. In human relationships, self-disclosure, which concerns the communication of personal information, values, and emotions with other individuals (Lee, Lee, & Kwon, 2011; Park & Chung, 2011), is a major factor in deepening not only face-to-face relationships but also relationships in an online setting (Dindia, 2000). Cho (2007) argued that disclosing one's opinions, attitudes, moods, preferences, or feelings leads to optimal relationship outcomes, especially on the Internet. This paper, thus, explores how well Airbnb hosts reveal their personal information or status to other peer hosts on the Airbnb website. For the antecedent of similarity, because people are likely to feel a connection or agree with those with similar traits for the purpose of preserving their own self-esteem (Tajfel, 2010; Turner, 1982), similarities in life experience, tastes, personality, or attitudes about work can bring peer hosts closer together. With regard to open communication, previous research has emphasized the importance of communication that is sincere, transparent, and accurate (Anderson & Weitz, 1989; Crosby & Stephens, 1987). Consistent with this reasoning, communication openness in this study refers to the frank, trustworthy, and relevant conversations among hosts on the Airbnb website. Drawing on these theoretical foundations, the following hypotheses on the antecedents of host attachment toward peer hosts are posited:

- H2a:** Self-disclosure positively influences hosts' attachment to peer hosts.

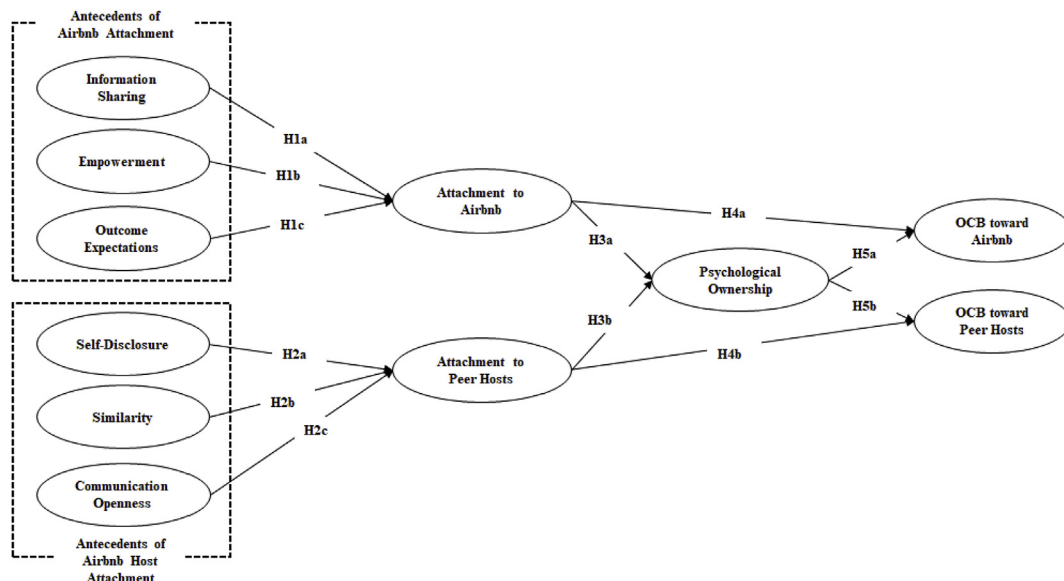


Fig. 1. Research model.

H2b: Similarity positively influences hosts' attachment to peer hosts.
H2c: Communication openness positively influences hosts' attachment to peer hosts.

3.3. Psychological ownership as a consequence of attachment

The literature review on the feeling of attachment and PO concludes that robust feelings of attachment can easily develop into feelings of ownership or possession (Pierce et al., 2003; Ren et al., 2012). Individual hosts who are vigorously attached or committed to either a tangible (i.e., the Airbnb firm) or an intangible object (i.e., peer hosts) may perform various ownership-related behaviors. Hence, this paper hypothesizes the positive influences of two different types of attachment on the PO of Airbnb hosts, as follows:

H3a: Hosts' attachment to Airbnb positively influences psychological ownership.
H3b: Hosts' attachment to peer hosts positively influences psychological ownership.

3.4. Organizational citizenship behavior as a consequence of attachment

According to the OCB literature, the feeling of attachment becomes apparent when behavioral outcomes are performed (Organ, 1988; Smith et al., 1983). OCB refers to the behaviors of individuals when they engage in discretionary activities (Organ, 1988). Applying this argument in our study, attached Airbnb hosts are more likely to engage in citizenship attitudes and behaviors toward the company or their peer hosts. Thus, the following two hypotheses are posited:

H4a: Hosts' attachment to Airbnb positively influences organizational citizenship behavior toward Airbnb.
H4b: Hosts' attachment to peer hosts positively influences organizational citizenship behavior toward peer hosts.

3.5. The relationship between psychological ownership and organizational citizenship behavior

Pierce et al. (2001b) claimed that PO fulfills the psychological

human needs of “having a sense of place, efficacy and effectance, and self-identity” (p. 445). Ren et al. (2012) also stated that identification of oneself through a group causes a significant psychological closeness or connection (i.e., attachment) with the group. Finally, Van Dyne and Pierce (2004) hypothesized that the feeling of ownership may result in employees feeling a pleasant sense of responsibility that culminates in extensive efforts and investments to benefit the target organization. Based on this reasoning, this study proposes two hypotheses regarding the mediating influence of PO on the relationship between host attachment and host citizenship behavior.

H5a: Psychological ownership positively influences organizational citizenship behavior toward Airbnb.
H5b: Psychological ownership positively influences organizational citizenship behavior toward peer hosts.

4. Research methods

4.1. Data collection

Data were collected from members of the largest Airbnb host community in South Korea (Airbnb Hosts Café, 2017), managed by NHN company, which owns South Korea's most popular portal website, Naver.com. A web-based online survey was conducted from November 26, 2016 through December 5, 2016. The active Airbnb hosts (community members) were asked to complete an online questionnaire regarding Airbnb and other peer hosts based on their hosting experience. 336 responses were originally collected and a total of 224 responses were used for final analysis after the data cleansing process. Because the target population was to be active Airbnb hosts in South Korea, the screening question was asked; have you had an Airbnb hosting experience in the past 6-month period? The survey stopped automatically if the answer was “No” to this question.

Table 1 demonstrates the detailed sample profiles. Of the 224 respondents, 55.8% were female and 44.3% were male. Our host gender ratio reflects the whole population of Airbnb hosts according to the Airbnb annual report in 2017 that announced more than 1 million female hosts, constituting 55% of the global Airbnb host community (Airbnb, 2017). Therefore, the sample may represent the target

Table 1
 Demographics of respondents (n = 224).

Demographics	Frequency	Percentage (%)	Demographics	Frequency	Percentage (%)
Gender			Super host		
Male	99	44.2	Yes	56	25.0
Female	125	55.8	No	168	75.0
Age			Number of residences		
20 and below	1	.4	1 house	169	75.4
20-29	56	25.0	2–3 houses	36	16.1
30-39	121	54.0	4–9 houses	12	5.4
40-49	38	17.0	10 houses and more	7	3.1
50-59	7	3.1			
60 and above	1	.4	Reason to host		
Education			Economic benefits	126	56.3
High school	8	3.6	Social benefits	55	24.6
Currently enrolled in college/university	20	8.9	Helping others	3	1.3
Graduated from college/university	163	72.8	Enjoyment	34	15.2
Currently enrolled in graduate school	10	4.5	Other	6	2.7
Graduate and above	23	10.3	Job status		
Monthly income from Airbnb hosting (in USD)			Primary job	19	8.5
\$450 and below	51	22.8	Secondary job	185	82.6
\$451 - \$880	101	45.1	Became primary job	16	7.1
\$881 - \$1770	47	21.0	Other	4	1.8
\$1771 - \$2650	16	7.1			
\$2651 - \$3500	5	2.2			
\$3501 and above	3	1.3			
Missing	1	.4			

population in this study. The majority of the respondents' ages fell within a range of 30–39 (54%) and 20–29 years old (25%). More than two-thirds (72.8%) of the respondents held a college or university degree. A total of 45.1% of the respondents earned a monthly income between 451 and 880 USD (US dollars) through their Airbnb hosting. Only 25% of the respondents were qualified as super hosts. A large percentage of respondents (75.4%) utilized one residence for the Airbnb hosting. With regard to reasons motivating them to host, more than half of the respondents (56.3%) were attracted to the economic benefits, and approximately a quarter of the respondents (24.6%) were attracted to the social benefits (i.e., expanding their network, making friends, or gaining social recognition). A large majority of the respondents (82.6%) were dedicated to Airbnb hosting as a secondary source of income, whereas 8.5% of the respondents were fully engaged in Airbnb hosting as their only source of income.

4.2. Measurements

All 52 measurement items were adapted from previous literature. The six antecedents of a host's attachment to the Airbnb company and to peer hosts were developed based on Ren et al.'s (2012) proposed features of group identity attachment and individual bond attachment. A seven-point Likert scale was used for all items, with a range from (1) "strongly disagree" to (7) "strongly agree". Three antecedent variables for attachment to Airbnb (i.e., information sharing, empowerment, and outcome expectations) were measured using fifteen items adapted from Hsu, Chuang, and Hsu (2014) and Qu and Lee (2011), Hancer and George (2003) and Maruping and Magni (2015), and Hsu, Ju, Yen, and Chang (2007). Similarly, three antecedent variables for attachment to peer hosts (i.e., self-disclosure, similarity, and communication openness) were measured using twelve items adapted from Kim, Chung, and Ahn (2014) and Smith (1998). In addition, hosts' attachment toward Airbnb and peer hosts were assessed with six items adapted from Ren et al. (2012). The respondents were asked to indicate the level of PO using seven items from Anderson and Agarwal (2010). The consequent OCB toward Airbnb was measured with seven items developed by Lee and Allen (2002). Finally, the assessment of OCB toward peer hosts was accomplished using five items derived from Chiang and Hsieh (2012). The questionnaire was initially developed in English and translated into Korean. To determine the validity of the instrument, a pilot test was conducted among academicians and ten pre-selected Airbnb hosts. As a result of a pilot test, some items were modified to accommodate

appropriateness. Table 2 presents operational definitions of all the constructs, and Table 3 shows survey items adequately modified according to the present research context and used in the final instrument.

5. Results

5.1. Measurement model

In our analysis, a structural equation modeling (SEM) technique was employed using SmartPLS 3.0. Partial least squares (PLS) is an appropriate tool that enables to validate a model of latent constructs with a minimal sample size (Chin, 1998). Using a two-step analytic approach, the model was assessed for the validity and reliability of the constructs. Upon acceptance, the structural model was evaluated among variables (Anderson & Gerbing, 1988).

A confirmatory factor analysis (CFA) was used to determine the validity of a measurement model (see Table 3). The constructs were confirmed by assessing reliability using Cronbach's alpha (Cronbach, 1951). As Nunnally (1978) recommended that a value greater than 0.70 indicates acceptable reliability, all constructs satisfied the reliability assessment. With regard to convergent validity, all items were verified using factor loadings, composite reliability, and the average variance extracted (AVE). As shown in Table 3, the loading values of all items were greater than 0.707, which is considered excellent (Comrey, 1973). The composite reliability for all constructs had a range from 0.886 to 0.947, which is higher than 0.70, satisfying the recommendation (Bagozzi, Yi, & Phillips, 1991). The values of AVE for all constructs were greater than the required value of 0.50 (Hair, Ringle, & Sarstedt, 2011), confirming the strong convergent validity of the measurement model.

Table 4 displays the results of the discriminant validity investigation. Because the square root values of AVE of all constructs were the highest among those related construct correlations, it is considered that the discriminant validity for each construct is supported (Fornell & Larcker, 1981).

Note: Diagonal elements display the square root of AVE. IS = information sharing; EMP = empowerment; OE = outcome expectations; SD = self-disclosure; SIM = similarity; CO = communication openness; ATA = attachment to Airbnb; ATH = attachment to peer hosts; PO = psychological ownership; OCBA = organizational citizenship behavior toward Airbnb; and OCBH = organizational citizenship behavior toward peer hosts.

Table 2
Operational definitions of constructs.

Construct (Abbreviation)	Operational definition	References
Information Sharing (IS)	The degree to which Airbnb is likely to share the organization's vision, goal, value, information, and knowledge with Airbnb hosts	Hsu et al. (2014); Qu and Lee (2011)
Empowerment (EMP)	The degree to which an individual host believes that the Airbnb organization enhances his/her capabilities (e.g., autonomy, self-determination)	Hancer and George (2003); Maruping and Magni (2015)
Outcome Expectations (OE)	The degree to which an individual host anticipates that he/she can realize value by participating in the Airbnb business as a host	Hsu et al. (2007)
Self-Disclosure (SD)	The degree to which Airbnb hosts are willing to provide their personal information to other users in Airbnb	Kim et al. (2014)
Similarity (SIM)	The degree to which an individual host believes that Airbnb hosts are similar to him/her in personal attributes and preferences	Smith (1998)
Communication Openness (CO)	The degree to which Airbnb hosts regularly connect with peer hosts in a frank, trustworthy, and relevant manner	Smith (1998)
Attachment to Airbnb (ATA)	The degree to which an individual host believes that he/she has a strong affective tie with the Airbnb organization	Ren et al. (2012)
Attachment to Peer Hosts (ATH)	The degree to which an individual host believes that he/she has a strong affective tie with another peer Airbnb host	Ren et al. (2012)
Psychological Ownership (PO)	The degree to which an individual host develops possessive feelings for the Airbnb organization that "it is mine or ours"	Anderson and Agarwal (2010)
OCB toward Airbnb (OCBA)	The degree to which an individual host voluntarily commits himself/herself directly to the Airbnb organization, which is not part of his/her contractual tasks	Lee and Allen (2002)
OCB toward Peer Hosts (OCBH)	The degree to which an individual host voluntarily commits himself/herself directly to peer Airbnb hosts, which is not part of his/her contractual tasks	Chiang and Hsieh (2012)

Table 3
The measurement model statistics.

Items	Standardized factor loading	Cronbach's alpha	Composite reliability	Average variance extracted
Information Sharing (IS)		0.923	0.940	0.722
Airbnb shares the organization's vision with Airbnb hosts.	0.826			
Airbnb shares the same goal of the business with Airbnb hosts.	0.851			
Airbnb shares the organization's value and potential with Airbnb hosts.	0.891			
Airbnb often provides useful information/updates to Airbnb hosts.	0.869			
Airbnb eagerly replies to postings by Airbnb hosts.	0.770			
In general, Airbnb shares the organization's knowledge with Airbnb hosts.	0.887			
Empowerment (EMP)		0.891	0.923	0.750
Airbnb authorizes freedom in determining how to do my hosting job.	0.828			
Airbnb allows me to have a great deal of control over my hosting job.	0.832			
Airbnb allows me to decide on how to go about doing my hosting job.	0.909			
Airbnb allows me to select different ways to do my hosting job.	0.893			
Outcome Expectation (OE)		0.841	0.886	0.609
I will gain more recognition and respect through hosting.	0.786			
I will make more friends through hosting.	0.810			
I will be seen as trustworthy through hosting.	0.751			
The ties with Airbnb peer hosts will be strengthened through hosting.	0.766			
I will get better cooperation and benefits in return through hosting.	0.789			
Self-Disclosure (SD)		0.891	0.931	0.818
Airbnb hosts like to let their life be known via the Airbnb web profile.	0.879			
Airbnb hosts like to boast of their hosting experience via the Airbnb blog.	0.921			
Airbnb hosts like to express their personality via the Airbnb web profile.	0.913			
Similarity (SIM)		0.855	0.895	0.631
Most Airbnb hosts are similar to me in life stage.	0.841			
Most Airbnb hosts are similar to me in taste.	0.797			
Most Airbnb hosts are similar to me in personality.	0.840			
Most Airbnb hosts are similar to me in hosting experience.	0.779			
Most Airbnb hosts are similar to me in work attitudes.	0.707			
Communication Openness (CO)		0.915	0.940	0.795
I think Airbnb hosts talk candidly with peer hosts.	0.882			
I think Airbnb hosts share everything that Airbnb hosts need to know.	0.910			
I think Airbnb hosts are responsive to peer hosts' need for information.	0.892			
I think Airbnb hosts' communication is open and honest.	0.883			
Attachment to Airbnb (ATA)		0.917	0.947	0.857
I identify with the Airbnb company.	0.924			
I feel connected to the Airbnb company.	0.917			
I feel I am a typical member of the Airbnb company.	0.936			
Attachment to Airbnb Peer Hosts (ATH)		0.900	0.937	0.833
I would like to be friends with Airbnb peer hosts.	0.917			
I am interested in learning more about Airbnb peer hosts.	0.906			
I would like to interact with Airbnb peer hosts in the future.	0.914			
Psychological Ownership (PO)		0.827	0.944	0.809
Airbnb is MY organization.	0.864			
I sense that Airbnb is OUR company.	0.956			
I feel a very high degree of personal ownership toward Airbnb.	0.908			
I sense that Airbnb is MY company.	0.955			
Airbnb is OUR company.	0.946			
Most hosts that work for Airbnb feel as though they own the company.	0.895			
It is hard for me to think about Airbnb as MINE. (R)	−0.754			
Organizational Citizenship Behavior toward Airbnb (OCBA)		0.920	0.934	0.672
I am willing to attend functions that help the organization's image.	0.848			
I am willing to keep up with developments in the Airbnb company.	0.833			
I am willing to defend the Airbnb company when others criticize it.	0.785			
I am willing to show pride when representing Airbnb in public.	0.812			
I am willing to offer ideas to improve the functioning of Airbnb.	0.722			
I am willing to express loyalty toward the Airbnb company.	0.858			
I am willing to act to protect Airbnb from potential problems.	0.868			
Organizational Citizenship Behavior toward Peer hosts (OCBH)		0.880	0.913	0.677
I am willing to help Airbnb peer hosts in general.	0.864			
I am willing to help Airbnb peer hosts with work problems.	0.885			
I am willing to help new Airbnb hosts even though it is not required.	0.810			
I am mindful of how my behavior affects Airbnb peer hosts' jobs.	0.831			
I consider the impact of my actions on Airbnb peer hosts.	0.716			

Note: (R) refers to a reversed question item.

Moreover, the model of goodness-of-fit indices (GoF) is a measure indicating how well a model reproduces the covariance matrix among the indicators. Generally, it is not recommended to use the model fit indices in PLS-SEM methods unlike CB-SEM results; however, Tenenhaus, Vinzi, Chatelin, and Lauro (2005) stated that the GOF indices of 0.1, 0.25, and 0.36 indicates small, medium, and large model fit, respectively. For the model depicted in Appendix A, it indicates that

the model has a better prediction power for the indicators of attachment to Airbnb, PO, and OCB toward Airbnb (Cohen, 1988).

5.2. Structural model

Hair et al. (2011) suggested that creating a repetitive bootstrap sample from the original sample would obtain standard errors in the

Table 4
Construct correlations and discriminant validity.

Constructs	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) IS	0.850										
(2) EMP	0.611	0.866									
(3) OE	0.625	0.405	0.780								
(4) SD	0.550	0.309	0.580	0.904							
(5) SIM	0.305	0.167	0.454	0.468	0.794						
(6) CO	0.381	0.156	0.509	0.565	0.499	0.892					
(7) ATA	0.556	0.265	0.553	0.584	0.439	0.534	0.926				
(8) ATH	0.230	0.103	0.358	0.351	0.337	0.316	0.283	0.913			
(9) PO	0.528	0.231	0.526	0.606	0.459	0.537	0.873	0.263	0.899		
(10) OCB A	0.584	0.356	0.563	0.492	0.357	0.447	0.629	0.323	0.650	0.820	
(11) OCBH	0.389	0.246	0.529	0.394	0.414	0.532	0.376	0.323	0.436	0.555	0.823

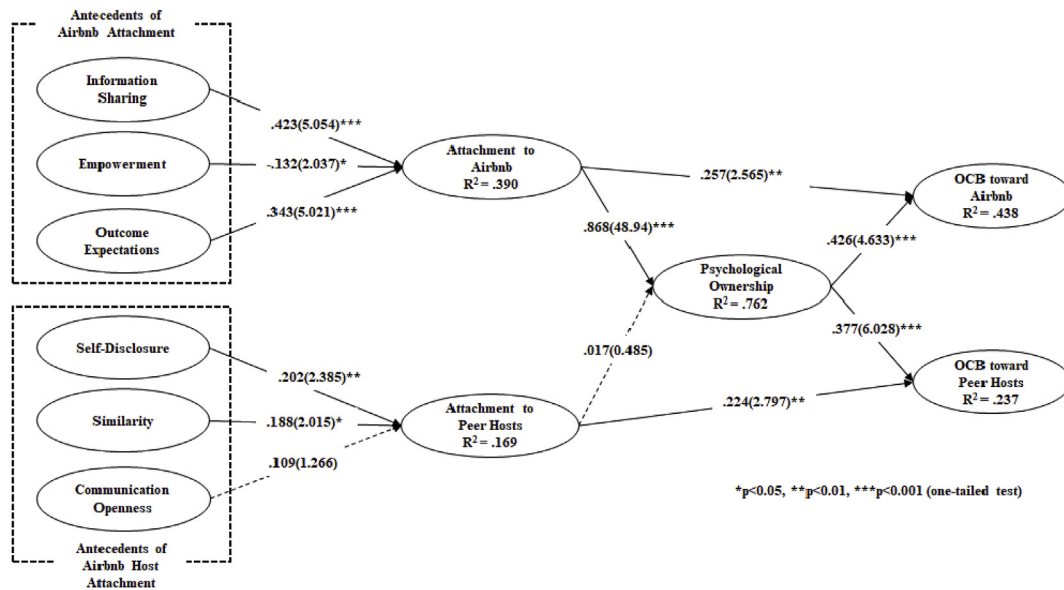


Fig. 2. Results of the structural model.

PLS-SEM hypotheses testing. The method can be interpreted that the sample distribution represents the projected population distribution, which allows testing of coefficient significance in PLS-SEM. Through the bootstrapping process with a minimum of 5000 bootstrap samples, the current data sample had a rational representation of the approximate population distribution, allowing for the estimation of the coefficient weight between variables (Hair et al., 2011). Overall, as shown in Fig. 2, the variance percentages of 39.0, 16.9, 76.2, 43.8, and 23.7 in attachment to Airbnb (ATA), attachment to peer hosts (ATH), psychological ownership (PO), OCB toward Airbnb (OCBA), and OCB toward peer hosts (OCBH) were approximately explained, respectively, by the antecedent variables.

All hypotheses were analyzed based on the one-tailed test, which is appropriate to the directional hypotheses of the study. Results of the antecedents of ATA showed that Airbnb's information sharing (IS) with its hosts has a significant impact on hosts' attachment toward the Airbnb firm, supporting H1a ($\beta = 0.423, t = 5.054, p < 0.001$). Conversely, the empowerment (EMP) given to hosts was found to have negative significance on building attachment toward the firm, not supporting H1b ($\beta = -0.132, t = 2.037, p < 0.05$). Hosts' outcome expectations (OE) showed positive significance for attachment to the organization, supporting H1c ($\beta = 0.343, t = 5.021, p < 0.001$). For ATH, self-disclosure ($\beta = 0.202, t = 2.385, p < 0.01$) and similarity among hosts ($\beta = 0.188, t = 2.015, p < 0.05$) had positive effects on hosts' attachment toward peer hosts in the firm, supporting H2a and H2b, respectively. Contrary to our expectations, communication openness was not found to be significantly related to ATH ($\beta = 0.109,$

$t = 1.266$). Thus, H2c was not supported.

Further, the results indicated that the host's attachment to Airbnb (ATA) had a positive influence on PO ($\beta = 0.868, t = 48.94, p < 0.001$), supporting H3a, whereas hosts' attachment to peer hosts (ATH) had no association with PO ($\beta = 0.017, t = 0.485$), not supporting H3b. ATA was also found to be positively related to OCB toward Airbnb ($\beta = 0.257, t = 2.565, p < 0.01$), supporting H4a. In a similar manner, ATH had a significant effect on OCB toward peer hosts ($\beta = 0.224, t = 2.797, p < 0.01$), supporting H4b. Finally, the results indicated that individual hosts who attained a higher level of psychological ownership were more likely to show stronger OCB toward Airbnb ($\beta = 0.426, t = 4.633, p < 0.001$) and OCB toward peer hosts ($\beta = 0.377, t = 6.028, p < 0.001$), which supported both H5a and H5b. Table 5 summarizes the results of the hypotheses tests.

Note: *p < 0.05; **p < 0.01; ***p < 0.001 (one-tailed test).

Finally, to address the potential threat of common method variance (CMV) from the use of an online survey questionnaire, an exploratory factor analysis (EFA) using Harman's single-factor analysis was conducted (Podsakoff & Organ, 1986). This approach concludes that common method bias is present if one factor explains the majority of the covariance among all independent and dependent variables. The results revealed 10 factors with eigenvalues greater than 1.00, with the first factor explaining 35.51% of the total variance. This analysis suggested that no dominant factor explained a majority of the variance, thereby implying that the data sample seems to be unbiased against common method variance.

Table 5
Results of the hypotheses tests.

		<i>R</i> ²	Standardized path coefficients			
			<i>β</i>	<i>t</i> -value	<i>p</i> -value	Results
Attachment to Airbnb (ATA)		0.390				
H1a	IS positively influences attachment to Airbnb.		0.423	5.054***	0.000	Supported
H1b	EMP positively influences attachment to Airbnb.		−0.132	2.037*	0.021	Not supported (opposite direction)
H1c	OE positively influences attachment to Airbnb.		0.343	5.021***	0.000	Supported
Attachment to peer hosts (ATH)		0.169				
H2a	SD positively influences attachment to peer host.		0.202	2.385**	0.009	Supported
H2b	SIM positively influences attachment to peer host.		0.188	2.015*	0.023	Supported
H2c	CO positively influences attachment to peer host.		0.109	1.266	0.103	Not supported
Psychological ownership (PO)		0.762				
H3a	Hosts' ATA positively influences PO.		0.868	48.94***	0.000	Supported
H3b	Hosts' ATH positively influences PO.		0.017	0.485	0.314	Not supported
OCB toward Airbnb (OCBA)		0.438				
H4a	Hosts' ATA positively influences OCB toward Airbnb.		0.257	2.565**	0.005	Supported
H5a	PO positively influences OCB toward Airbnb.		0.426	4.633***	0.000	Supported
OCB toward peer hosts (OCBH)		0.237				
H4b	Hosts' ATH positively influences OCB toward peer hosts.		0.224	2.797**	0.003	Supported
H5b	PO positively influences OCB toward peer hosts.		0.377	6.028***	0.000	Supported

6. Conclusion

The purpose of this study was to explore the role of hosts' attachment and its antecedents that generate psychological ownership and organizational citizenship behavior in the context of the sharing economy firm in a comprehensive manner. The earlier research of Ren et al. (2012) underlined that individual attachment to either a group or other group members is a vital determinant in the success or failure of communities. Similarly, in this study, it aimed to explore how market-hybrid firms form an organization with product and service owners (e.g., Airbnb hosts) and to demonstrate how individual service provider and product owners establish their group identity within the sharing economy organizations.

6.1. Discussion of research findings

The results indicated that hosts' attachment through organizational identity functions more effectively than attachment through a relationship with peer hosts to achieve psychological ownership that leads to organizational citizenship behavior within the firm. The investigation of the theoretical antecedents of attachment to the organization and host members extends the understanding of how individual hosts' attachment can be formed. The high level of transparency, honesty, and frequency in the sharing of the organization's information (e.g., vision, goals, news, updates, and knowledge) is found to increase hosts' attachment toward the Airbnb firm. It was also found that hosts' attachment to the company can be improved when hosts receive positive expected outcomes, such as enjoyment, social recognition, or monetary rewards, which can be strong persuaders of further engagement (Hsu et al., 2007). In contrast to the expectations, a possible tendency was found that the more empowered Airbnb hosts are, the less attached they are to the organization. For the traditional organizations, empowerment is an important determinant of employee's job performance or satisfaction (Hancer & George, 2003). However, as Airbnb hosts are stand-alone independent forces, not employed or hired by the firm, they possess the authority in decision making on products and services, indicating that giving empowerment to hosts may be less meaningful in the sharing economy organization.

The hosts' self-disclosure appears to be more influential than the hosts' similarity to the peer hosts as disclosing personal information potentially builds trust among them. In addition, creating a sense of fellowship through personal tastes, traits, and styles can make hosts feel much closer, friendlier, or more familiar with peer hosts. Conversely,

the openness of communication among peer hosts is not found to be an influential antecedent. One possible explanation for this insignificant relationship is that the method of communication through the platform webpage is considered restricted or controlled by the firm such that the real facts may be concealed.

This paper enables to explain the role of attachment that affects psychological ownership within the sharing economy organization. Increased attachment to peer hosts is found to be insufficient to achieve psychological ownership. In contrast, a high potential to gain psychological ownership is discovered among hosts who have established an attachment to the Airbnb company. Avey, Avolio, Crossley, and Luthans (2009) noted that possessiveness of the explicit target leads to a sense of ownership. Ownership here may imply a tangible object that can be possessed, which, in this case, is the company. In a similar sense, this human-to-human attachment could convert into a possible object of ownership as a consequence of a highly attached emotional need to contribute to the company. Bowlby's (1969) work can explain this unsupported hypothesis that attachment among people is difficult to describe with only one dimension; he instead stated that emotional connection is associated with multiple dimensions, which related to cognitive, affective, environmental, and social factors. Interestingly, this paper found the similar effects of attachment on OCB in both relationships in terms of the Airbnb firm (H4a) and peer hosts (H4b), indicating that emotional bond to the firm and among peers can be a stronger factor to promote hosts' citizenship behaviors.

In addition, the results are able to explain how hosts' attachment moves along the path of psychological ownership, which has a significant influence on citizenship behaviors. For hosts to behave favorably toward the firm and peer members, psychological ownership is a critical factor that encourages OCB. The results also reveal that highly attached hosts are more likely to feel a type of ownership of the company, and hosts who feel that they own the company are most likely to perform positive citizenship behaviors for the firm and its members. Moreover, the mediating role of psychological ownership in the relationship between hosts' attachment and their OCB is further analyzed as discussed in the next section.

Overall, the study reveals that the impact on the citizenship behaviors of individual hosts becomes more significant when their psychological mind set is shifted from “theirs” to “ours” or “mine”. In other words, regardless of the entities to which the hosts are attached, psychological ownership remains a central factor that determines hosts' participation in OCB toward the Airbnb company and peer hosts.

Table 6
The mediating effect test results of psychological ownership.

Regression equation	Dependent variable	R ²	Standardized coefficient	t-value
Step 1				
ATA	PO	0.766	0.867***	48.498
ATH			0.027	0.766
Step 2				
ATA	OCBA	0.415	0.580***	12.080
	OCBH	0.193	0.311***	4.510
ATH	OCBA	0.415	0.160**	2.376
	OCBH	0.193	0.236**	2.858
Step 3				
ATA	OCBA	0.459	0.195*	1.925
	OCBH	0.249	-0.115	0.876
ATH	OCBA	0.459	0.149**	2.253
	OCBH	0.249	0.222**	2.758
PO	OCBA	0.459	0.442***	4.923
	OCBH	0.249	0.490***	4.102

$n = 224$, * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$ (two-tailed test).

6.2. The mediating effect of psychological ownership

To achieve additional understanding of PO as a mediator, a *post-hoc* analysis was performed, following the recommendation of Baron and Kenny's (1986). As shown in Table 6, the mediating effects of PO in the relationships between hosts' attachment to Airbnb (ATA) and their OCB toward Airbnb (OCBA) and peer hosts (OCBH) were found, implying that PO has a positive role in linking attachment to OCB especially for hosts who feel more attached to the company than to peer hosts. It seems that Airbnb hosts are likely to identify the company of Airbnb as "mine" or "my company". Clearly, a feeling of ownership is a critical facilitator that encourages working members to initiate citizenship behaviors within an organization (Pierce et al., 2003). On the other hand, for hosts who were more attached to peer hosts than to the company, the mediating effect was not found, re-confirming that there is no influence of human-to-human attachment on psychological ownership. Bowlby (1969) regarded attachment as various types of human engagement to maintain physical and emotional proximity with another person. This emotional linkage with another person may be related to much more complex factors, including interpersonal, social, and self-related factors, than to the supportive behaviors of hosts toward the firm. As previously stated, participants who have a strong attachment to peers may be deficient in a sense of ownership over the tangible object (i.e., Airbnb company) because the participants' behavioral characteristics may be people-oriented.

6.3. Implications for research and practice

This study makes several contributions to research. First, it extends the literature on the sharing economy, which has intensively focused on users' perception of using the Airbnb service, by observing how these individual product owners and service providers build trust through attachment. By proposing and empirically testing a research model, it explains the strong influence of hosts' attachment on organizational citizenship behavior (OCB) and the positive role of psychological ownership within the sharing economy organization environment.

Second, this study extends the research framework of Ren et al. (2012) by exploring six theoretical antecedents of two types of attachment (i.e., group and individual) that occur in the sharing economy organization. It identifies six antecedents that induce attachment toward the Airbnb company and toward Airbnb peer hosts and finds that peer partners in the sharing economy organization do not need to be empowered as they are committed to Airbnb as a partner. Another important point is that hosts may feel inadequate in having an honest communication with peer hosts through the web and may possibly wonder if the communication is somehow restricted or controlled by

the firm.

Third, this study extends the current literature on psychological ownership, mostly discussed in organizational and management studies, by exploring how psychological ownership impacts individual hosts under the management of the sharing economy platforms. For hosts who are attached to the Airbnb company, the one-sided role of psychological ownership in forming their citizenship behaviors toward the firm and peers is found. It shows that hosts with higher attachment to the organization gain ownership of their job, which naturally produces an extended commitment in the sharing economy organization.

Fourth, this study extends the existing organizational citizenship behavior (OCB) literature by suggesting an integrated model that explains hosts' citizenship behaviors as the consequences of attachment developed among the participants of the sharing economy organization. It shows that hosts who are attached to the firm or to peer hosts are more likely to behave favorably toward the company and their peers. It also provides an understanding of the positive relationship between attachment and OCB in the sharing economy firm.

This study also provides practical contributions to two related parties: P2P platform practitioners and sharing economy participants.

First, the results suggest that the hosts' attachment toward the Airbnb company is a critical element that encourages job commitment and extended OCB. To build a robust attachment to the platform company, the firm manager should realize and acknowledge hosts (i.e., individual product owners) as business partners who deserve to be known, connected, shared with, updated, and collaborated with regarding any matters of the company. This sense of belonging leads hosts to be attached to the firm or peer hosts, finally resulting in citizenship behaviors. Additionally, it is important that hosts are most concerned about the benefits they receive resulting from joining the Airbnb company, including social and economic returns. It is recommended that sharing economy firms contemplate meeting or exceeding the expected outcomes of individual partners so that the partners can be more engaged in their job tasks.

Second, one interesting finding that may provide valuable insights for management is that empowering hosts might be neither effective nor necessary in making them more attached to the company. Simply, individual partners are already empowered because individual partners are independent entities from the product and the service. Nevertheless, firms should respect the way of performing the service and include individual partners in discussing the prospective vision of the company.

Third, the study may inform P2P platform owners about paying attention to the relationships among hosts. Their self-disclosure of life and the similarities of personal traits or styles that are shared among peer hosts are important factors in the attachment of one host to another host. It is thus suggested that sharing economy business planners should increase web security related to personal information so that hosts can extensively share their life or hosting experiences with other hosts without hesitation.

Fourth, an unexpected finding suggests that hosts are more likely to consider communication among hosts through the host webpage to be monitored or controlled by the company. In other words, hosts tend to think that troublesome stories are not truly revealed and discussed via online communication provided by the platform company. To address this issue, the arrangement of face-to-face "meet-ups" or interactive activities among hosts, which would increase host-to-host attachment and, eventually, host-to-firm attachment is recommended.

Finally, this study recognizes the role of psychological ownership in this new organizational structure, which likely has a mediating effect on the relationship between attachment to the firm and OCB toward both the firm and peer hosts. Since hosts' psychological ownership is validated by the organization and is one of the key elements that results in positive citizenship behaviors, managers of the organization should invest effort in enhancing ownership of the firm by increasing hosts' level of partnership.

In conclusion, this study suggests adjusting an organizational

viewpoint in terms of the relationship with the hosts such that the organization is willing to acknowledge the hosts as partners who seek the same goals rather than as individuals who are treated as platform users. Sharing economy practitioners should include co-partnerships with hosts in their business strategic planning by sharing organization plans, asking for their input, and incorporating them into the real plan.

6.4. Limitations and future research

This study has its limitations. First, the most difficult question confronting this paper is whether adapting traditional organizational theories to the sharing economy organization structure is relevant. This study was conducted based on the identification of market partners (i.e., Airbnb hosts) as organizational members rather than simple platform users. The fact that all sharing economy business participants play two roles in owning the product and performing the service provides the foundation for the design of this study considering that individual product and service providers are somewhat included in the organizational member structure. However, it is believed that this concern opens and guides further investigation to better understand and explain this new organizational structure and the way the firm works with hired employees and individual partners. Second, the scope of the survey was geographically limited to Airbnb hosts in South Korea. Potential variables influencing the scope of the research, such as culture, social factors, or personal demographic factors, were disregarded in this study. Because this omission was based on the equivalence of organizational structures or systems provided by Airbnb in any region or country, Airbnb hosts in South Korea could represent our research goals. However, it is recommended that future researchers use improved methods to address the appropriateness of this generalization. Finally, there is potential errors in the data because date

collection was conducted using a self-registered method. Despite the layers of processes for confirming the appropriate status of active Airbnb hosts, these methods may not have been accurate to filter out the target sample. A further recommendation is to contact and cooperate directly with the Airbnb company to target Airbnb hosts only so that the findings of the study can be more applicable to the sharing economy companies and individual sharing partners.

Author contribution

Hanna Lee.

Her contribution to this article as the first author is to design the conceptual framework, to carry out the entire research process, to statistically analyze data, and to deliver results in academic writing.

Sung-Byung Yang.

His contribution to this article as the second author includes substantial participation in conception and design of the study, in analysis and interpretation of data, and in drafting and revision of the manuscript.

Chulmo Koo.

He is a managing director of Smart Tourism Research Center. His contribution to this article as the third author participates a discussion of conceptual model and suggests direction of the study, looks into a manuscript writing, and reviews the revision of the manuscript.

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Appendix A. Goodness of fit (GoF) index

Indicator	GoF index	Model fit
Attachment to Airbnb (ATA)	0.390	Exceeds the cut-off value of 0.36 for the large effect size of R ²
Attachment to Airbnb Peer Hosts (ATH)	0.169	Exceeds the cut-off value of 0.10 for the small effect size of R ²
Psychological Ownership (PO)	0.762	Exceeds the cut-off value of 0.36 for the large effect size of R ²
OCB toward Airbnb	0.438	Exceeds the cut-off value of 0.36 for the large effect size of R ²
OCB toward Airbnb Peer Hosts	0.237	Exceeds the cut-off value of 0.10 for the small effect size of R ²

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