

## **Sleeping in a stranger's home: A trust formation model for Airbnb**

**Abstract:** Given the growing momentum of the sharing economy and the importance of trust in its peer-to-peer sector, this study theoretically develops and empirically investigates trust constructs, their antecedents, and perceived risk related to repurchase intention in the home-sharing economy. Our results reveal that antecedents of trust-in-hosts encompass experience-, calculative-, cognition-, and personality-based trust, whereas perceived security, perceived privacy, perceived website quality, and social presence are antecedents of trust-in-platform. Trust-in-hosts and trust-in-platform are distinct trust constructs that independently and positively affect travelers' repurchase intentions. In addition, perceived risk positively moderates the effects of these two trust constructs on repurchase intention. The platform and vendor must foster consumer trust to promote a trustworthy home-sharing business.

**Keywords:** Trust; Perceived risk; Platform; Host; Airbnb; Sharing economy

## 1 Introduction

Although the hospitality sharing economy has witnessed rapid growth, trust has been cited as one of the most critical barriers to sharing economy participation (Tussyadian & Park, 2018). Besides barriers common to the traditional hospitality industry, such as the intangible nature of accommodation services and inherent information asymmetry in online transactions (Ye, Ying, Zhou, & Wang, 2019), the hospitality sharing economy poses additional trust obstacles for travelers. Such roadblocks include making reservations through third-party platforms such as Airbnb, evaluating a property's features and the host's profile, being wary of sleeping in a stranger's place, and a lack of regulations, all of which may result in additional concerns associated with service quality, privacy, and personal safety. The home-sharing business cannot fully rely on conventional risk reduction strategies such as reputation and brand; thus, this area of research requires a deeper understanding of trust in the hospitality sharing economy context to induce future purchase intention (Ye et al., 2019).

Although a large body of literature has addressed trust (e.g., Mayer, Davis, & Schoorman, 1995; Wang, Law, Huang, & Guillet, 2014), research on trust in the sharing economy remains scattered (Tussyadian & Park, 2018; Ye et al., 2019). Ert, Fleischer, and Magen (2016) found that the level of hosts' trustworthiness, mainly inferred from their personal photos, influences listings' prices and likelihood of being chosen. Host photos not only increase the sense of personal contact, but serve as visual cue of his/her attributes for the guest. Teubner, Hawlitschek, and Dann (2017) demonstrated that trust-building artefacts of reputation systems such as hosts' rating scores, duration of membership, and listings' photos are prominent signals to establish consumer's trust and to drive listing price on Airbnb. Möhlmann (2015)'s study confirmed that trust, along with cost savings, familiarity and so on, acts as a principle

determinant of satisfaction and the likelihood of reusing a sharing economy such as Car2go and Airbnb. Liang, Choi, & Joppe (2018) showed that trust mediates the relationship between satisfaction and repurchase intention. Meanwhile, when trust was divided into trust-in-Airbnb and trust-in-hosts, the former did not statistically affect the latter.

Previous literature emphasizes the importance and role of trust as an antecedent to behavioral intentions. However, a systematic view of trust and its components, trust's relationship with risk and impact on repurchase is nonexistent in the sharing economy literature, despite that trust and risk perception are considered the most important psychological factors to influence online behavior (Mou, Shin, & Cohen, 2017). Sharing economy services are mediated by internet platforms. Therefore, the trust objects comprise two separate entities: trust-in-hosts (i.e., personal trust) and trust-in-platform (i.e., institutional trust). Few studies have considered these two trust objects and their formation processes in an integrated approach on consumers repurchase intention of the sharing economy services. Therefore, our current research is motivated by the void of a comprehensive trust formation framework and its effect on behavior with additional risk perception in the sharing economy. The goals of our study are twofold: (1) to develop and test an integrated trust formation model that drives consumers repurchase intention in the hospitality sharing economy, (2) to explore the effects of perceived risk in the aforementioned trust formation model. This model attempts to answer the following research questions: RQ1: What are the antecedents and outcome of trust-in-hosts? RQ2: What are the antecedents and outcomes of trust-in-platform? RQ3: What is the role of perceived risk in this model? Our study contributes to the sharing economy literature by developing a trust typology and demonstrating the influence of different trust constructs and risk perception on the user's repurchase behavior.

Airbnb is chosen for this study as it is the largest platform of its kind, with over five million hosts in 191 countries providing temporary housing to 300 million travelers (Airbnb, 2019). Airbnb has recently provoked sharp media criticism and suffered adverse effects due to concerns regarding trust violation (Mody, Suess, & Dogru, 2019). Documented issues include safety (Kennedy, Jones, & Gielen, 2018), security (Phua, 2018), discrimination (Cheng & Foley, 2018), licensing and tax payments (Lines, 2015), and customer service (Phua, 2018), collectively resulting in customer dissatisfaction, disloyalty, and distrust towards Airbnb. With its leading role and ambitious development in the sharing economy, a negative reputation and general distrust towards Airbnb may hinder sustainable development of the entire hospitality sharing business. As such, trust is a serious issue for Airbnb and deserves further investigation.

Consumer trust is a primary driver behind customers' re-patronization, particularly in the sharing economy, as existing consumers may choose to switch back to conventional hotels (Mao & Lyu, 2017). Therefore, in this study, we address ongoing trust among repeat customers rather than potential customers.

## 2 Theoretical Background and Hypotheses

### 2.1 Trust and Trust-in-Hosts

Personal trust is a highly subjective and complex concept that is measured at an individual level and includes affective, cognitive, conative, and behavioral dimensions (Wang et al., 2014). It typically involves favorable expectations of others' actions and a willingness to be vulnerable with others (Mayer et al., 1995). The trustee must possess several inherent attributes to engender trust from the trustor: ability, integrity, and benevolence (Schoorman, Mayer, & Davis, 2007). Trust is a driving mechanism behind behavior and social life that forms the basis of economic exchanges and social interaction (Gefen, 2000). Personal trust facilitates risk-taking

behavior in circumstances of opportunism and uncertainty because it can lower the transaction and searching costs associated with interacting with others and monitoring their behavior (Baloglu, Zhong, & Tanford, 2017). For our purposes, *personal trust* is defined as a traveler's willingness to be vulnerable and the subjective belief that a host will fulfill transactional obligations as the traveler understands them (Riquelme & Román, 2014), which is also called trust-in-hosts.

## 2.2 Antecedents of Trust-in-Hosts

Building upon the social psychology paradigm, trust has been theorized in the literature as encompassing specific and general beliefs under the framework of “antecedents-trust-outcomes” (Mayer et al., 1995). Specific trust beliefs, dealing primarily with trustees’ integrity, benevolence, and abilities, are conceptualized as antecedents to the general trust belief that trustees can be trusted (McKnight, Cummings, & Chervany, 1998). The distinction between specific and general beliefs in trust helps reduce conceptual confusion, paving the way for trust-related research.

Assuming a cognitive approach, McKnight, Cummings, and Chervany (1998) framed factors and processes that enable personal trust as experience-, calculative-, cognition-, personality-, and institution-based trust. In a following paper, McKnight and Chervany (2001) applied the identical framework to establish the e-commerce trust typology model with the same five trust bases in E-commerce. Gefen, Karahanna, and Straub (2003) extended McKnight and Chervany (2001)’s e-commerce trust model by combining it with the technology acceptance model in online shopping. Their findings revealed calculative- and institution-based factors, along with perceived ease of use, are significant antecedents to trust for repeat customers. On the other hand, experience-based factor is not a significant determinant whereas personality- and

cognition-based factors are not tested in their model. Li, Hess, and Valacich (2008) empirically tested a revised e-commerce trust formation model (McKnight & Chervany, 2001) by adding a new construct of subjective norm in the context of national identify system. Their results indicated that subjective norms and cognitive, calculative, and organizational situational normality factors significantly influenced initial trusting beliefs whereas personality and experience factors did not. To our best knowledge, no study has been found to test the applicability of the entire McKnight and Chervany's e-commerce trust model in the sharing economy yet.

We adopt the McKnight and Chervany (2001) e-commerce trust formation model to analyze antecedents for trust-in-hosts owing to the model's theoretically sound approach and applicability to the sharing economy. This model, derived from personal psychology and transactional perspectives, considers trust sources the foundation of trust formation and underpins general trust in online transaction environments (Gefen et al., 2003). The five trust bases (i.e., experience-, calculative-, cognition-, personality-, and institution-based trust) discussed below inform our hypotheses.

*Experience-based trust* refers to experience and social-exchange knowledge with another party (McKnight, Choudhury, & Kacmar, 2002). If a trustor possesses firsthand data about trustees through prior interactions, then he/she can determine appropriate trust levels, predict trustees' competences, and reduce the possibility of being taken advantage of by those trustees (Gefen, 2000). Trust is a dynamic process that can either increase or decline based on experience. Studies have shown that experience with e-commerce positively influences consumers' willingness to make online purchases (Metzger, 2007), as is the case for travelers

using Airbnb. Moreover, travelers who have used Airbnb and had good experiences with it are more likely to infer perceived similar experiences and high trust.

*Hypothesis 1: Experience-based trust has a positive effect on trust-in-hosts.*

*Calculative-based trust* is derived from an economic value through rationality (Gefen et al., 2003). This trust requires calculations of benefits and costs of the trustee and hinges on the relative values of cheating and cooperation (Lewicki, Tomlinson, & Gillespie, 2006). If the costs of being caught outweigh the benefits of cheating, then calculative-based trust is warranted (Gefen et al., 2003). For Airbnb, it is unwise for hosts to falsify their product/service descriptions and fall short of travelers' expectations, as doing so would risk negative word-of-mouth throughout the Airbnb community along with potentially severe financial losses.

*Hypothesis 2: Calculative-based trust has a positive effect on trust-in-hosts.*

*Cognition-based trust* emerges from cognitive cues/feelings regarding a trustee's reliability and dependability as opposed to prior firsthand experience (McKnight et al., 1998). As it is difficult for consumers to evaluate credibility in e-commerce, online reviews are effective consumer empowerment tools to improve consumer trust using second-hand yet credible information. Online reviews are also a key trust mechanism that helps consumers judge likely causes of events. Positive online reviews for Airbnb hosts will positively influence other travelers' trust, as complimentary reviews speak to hosts' abilities and trustworthiness.

*Hypothesis 3: Cognition-based trust has a positive effect on trust-in-hosts.*

*Personality-based trust* refers to general expectations and tendencies about the trustworthiness of others based on personality psychology (McKnight & Chervany, 2001). This trust comes from ongoing lifelong experiences and socialization (Kim, Ferrin, & Rao, 2008).

Although critical in the initial stages of a relationship, personality-based trust becomes progressively less important over time as people are influenced by the nature of the relationship (McKnight et al., 1998). This trust is especially important in e-commerce, where the buyer and seller are physically separated, contingencies are hard to predict, and relationships are difficult to monitor (McKnight et al., 2002). Studies have noted that personality-based trust positively affects trust in e-commerce (Gefen, 2000).

*Hypothesis 4: Personality-based trust has a positive effect on trust-in-hosts.*

*Institution-based trust* is the belief that appropriate impersonal structures and common standards are in place with which to anticipate a successful transaction (Pennington, Wilcox, & Grover, 2004). Consumers adopt institutional structures as trustful signals to mitigate the negative effects of low seller visibility and high product uncertainty in e-commerce (Luo, Ba, & Zhang, 2012). As a context-specific measure, institution-based trust in e-commerce marketplaces is the same as trust-in-platform (McKnight et al., 2002). Institution-based trust serves to ensure the quality of a website and information, offer consumers privacy protection and security, and maintain normal operations on a typical e-commerce website (Jia, Cegielski, & Zhang, 2014). This trust encompasses buyers' general perceptions of whether appropriate conditions are in place for a given website (Liang, Choi, & Joppe, 2018). Hence, institution-based trust is called trust-in-platform in our study, similar to Liang et al. (2018). Trust-in-platform acts as a source of consumer trust towards a vendor and represents an entity in which consumer trust is placed (Chen et al., 2016).

*Hypothesis 5: Trust-in-platform has a positive effect on trust-in-hosts.*

### 2.3 Antecedents of Trust-in-Platform



Research has suggested that situational normality and structural assurance are components of trust-in-platform (i.e., institution-based trust) that influence trust in e-commerce (Li et al., 2008). *Situational normality* refers to the perception that things are normal, proper, or suited to a successful venture, which is interpreted as social presence in the information systems literature (McKnight & Chervany, 2001). *Website social presence* is relevant due to the reduced presence of human and social elements in online environments (Lu, Fan, & Zhou, 2016); this component includes perceptions of a website's personal, sociable, and sensitive human elements (Gefen & Straub, 2004), creating a feeling of human touch and thus enhancing trust. Scholars have pointed out that users may develop more trust-in-platform if the platform can exude greater social presence, such as by providing profiles and photos of hosts and users (Ert et al., 2016).

*Hypothesis 6: Website social presence has a positive effect on trust-in-platform.*

*Structural assurance* denotes the belief that institutional protective mechanisms and structures such as guarantees, contracts, regulations, and legal recourse are in place for situational success (McKnight & Chervany, 2001). Online consumers believe that structural assurance, in the forms of legal and technical internet safeguards, can protect them from privacy, identity, or financial loss in e-commerce (McKnight, Kacmar, & Choudhury, 2004). Structural assurance is typically composed of the perceived privacy, perceived security, information quality, and website quality of an e-commerce business (McKnight & Chervan, 2001). *Perceived privacy* refers to uncertainty associated with providing personal information on a website and the risk of such information being exposed in online marketplaces (Bart, Shankar, Sultan, & Urban, 2005). Perceived privacy protection on a website helps to decrease consumers' perceptions of risk and encourage online transactions by increasing perceived trustworthiness (Kim et al., 2008).

*Hypothesis 7: Perceived privacy has a positive effect on trust-in-platform.*

*Perceived security* captures consumers' perceptions of payment method security along with the protection of financial information from unauthorized access (Riquelme & Román, 2014). Because online purchases typically involve disclosing one's personal and financial information, online shoppers are extremely concerned about security to decrease transaction-related risks (Janda, 2008). Consumers' perceived security positively contributes to trust formation around online transactions (Kim, Lee, & Chung, 2013).

*Hypothesis 8: Perceived security has a positive effect on trust-in-platform.*

*Information quality* includes a content description of products, services, and sellers with corresponding evaluations of accuracy, ease of understanding, usefulness, completeness, relevance, and currency (Kim et al., 2008). High-quality information helps alleviate the degree of perceived uncertainty related to e-commerce transactions in a controlled manner (Kim et al., 2008). The greater consumers' belief that an online seller's website contains high-quality information, the more likely they are to deem the platform trustworthy.

*Hypothesis 9: Perceived information quality has a positive effect on trust-in-platform.*

*Website quality* indicates the extent to which the features of a seller's website meet a buyer's needs and reflect the website's overall excellence (Chen et al., 2016). Website quality is important because it helps establish and maintain consumer trust by mitigating social uncertainty and reducing psychological distance between online buyers and sellers (Luo et al., 2012). Website quality signals the trustworthiness of a platform and can be used to diminish the negative effects of low seller visibility and high product uncertainty (Luo et al., 2012).

*Hypothesis 10: Perceived website quality has a positive effect on trust-in-platform.*

## 2.4 Trust Consequences

In this study, we use behavioral intention to reuse Airbnb as a trust consequence to measure repeat customers' future behavior. Behavioral intention reflects a consumer's willingness to (re)purchase products or (re)patronize services (Han, Hsu, & Sheu, 2010). According to the theory of reasoned action (Ajzen & Fishbein, 1980) and trust theory (Ponte, Carvajal-Trujillo, & Escobar-Rodríguez, 2015), behavioral intention is a key predictor of and ideal proxy for actual transaction behavior. Studies have found trust to positively affect consumers' behavioral intentions in the online marketplace (Wen, Prybutok, & Xu, 2011). Consumers are more willing to do business when they trust a platform and vendor (Lu et al., 2016), concepts that we have respectively labeled *trust-in-platform* and *trust-in-hosts*.

*Hypothesis 11: Trust-in-platform has a positive effect on behavioral intention.*

*Hypothesis 12: Trust-in-hosts has a positive effect on behavioral intention.*

## 2.5 Perceived Risk

*Perceived risk* refers to one's subjective belief in the likelihood of suffering a loss while transacting with vendors (Gefen & Pavlou, 2012), which can impede one's ability to judge another person's trustworthiness. Because of the virtuality, anonymity, and openness of the internet, online trust building must overcome barriers from various types of perceived risks (e.g., financial, social, time, psychological, and physical) (Harridge-March, 2006). The sharing economy possesses additional risks because service providers may be diverse, less reputable, and opportunistic (Xie & Mao, 2017). Perceived risk is considered a particularly important travel impediment for sleeping in a stranger's home but it has been hardly tested in the sharing

economy studies (Hawlitschek, Teubner, & Gimple, 2016). As such it is necessary to incorporate perceived risk in our study.

Perceived risk is a deterrent to trust and purchase intention. This relationship is modeled as a positive moderating effect: when the level of perceived risk is high, buyers are hesitant to act. In this case, their repurchase intentions can be solidified only by other assurance signals such as strong trust. High risk causes buyers to rely more heavily on trust, and a high level of trust functions as a risk reduction mechanism to foster transactional intention. In other words, trust exerts a stronger effect on repurchase intention when perceived risk is high. By contrast, when the level of risk is lower, buyers perceive a reliable situation. Consumers still establish repurchase intentions whether trust is high or low, implying that trust has a weaker influence on repurchase intention when perceived risk is low. Airbnb listings have high stakes and thus pose a high level of risk to guests and hosts (Ert et al., 2016).

*Hypothesis 13: Perceived risk positively moderates the relationship between trust-in-platform and behavioral intention.*

*Hypothesis 14: Perceived risk positively moderates the relationship between trust-in-hosts and behavioral intention.*

## 2.6 Proposed Research Model

To summarize, we draw on e-commerce trust theory to develop our research model and associated hypotheses. We construct a two-order model. The first-order model includes nine independent variables, consisting of five antecedents of trust-in-platform (website social presence, perceived privacy, perceived security, perceived information quality, and perceived website quality) and four antecedents of trust-in-hosts (calculative-based trust, personality-based

trust, experience-based trust, and cognition-based trust). Dependent variables are trust-in-hosts and trust-in-platform. The second-order model includes two independent variables (trust-in-hosts and trust-in-platform) and one dependent variable (repurchase intention). The mediating role of trust-in-hosts and the moderating role of perceived risk are also tested in our model. Figure 1 depicts the proposed framework in a holistic trust formation design.

<Insert Figure 1>

### 3 Materials and Methods

#### 3.1 Data Collection

Our sample was recruited from Amazon MTurk. Mturk is an increasingly popular online consumer panel among researchers including hospitality and tourism (Liu & Mattila, 2016). Moreover, this tool can be used to obtain more ethnically and socioeconomically diverse samples compared with those gathered via social media and face-to-face (Buhrmester, Kwang, & Gosling, 2011; Casler, Bickel, & Hackett, 2013), further highlighting MTurk as a valid and reliable source for data collection. A panel of US consumers aged 18 years or older who had used Airbnb in the previous year was asked to participate in this study. Overall, 624 usable entries (of the original 750) were retained after screening for incomplete, invalid (i.e., showed contradictions in answering cross-validation items), and disingenuous (i.e., answered all questions the same) responses.

The profile of respondents is shown in Table 1. Our sample included slightly more men (56.7%) than women. Respondents' median age range was between 25 and 34. Approximately 47% of respondents had completed up to an undergraduate degree, followed by those with some postgraduate work (4%) and postgraduate degrees (17%). Nearly half (49%) of respondents

earned an annual household income greater than \$50,000. More than 60% of respondents worked full-time and had never been married.

### 3.2 Measurement

Our model contains 13 constructs anchored on a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Existing measurement tools were either used or adapted to suit this study (Please refer to Appendix 1). The constructs of perceived risk (a 3-item scale, e.g., *My decision to use Airbnb when traveling is risky*), trust-in-hosts (a 4-item scale, e.g., *I am confident most Airbnb hosts are trustworthy*), trust-in-platform (a 4-item scale, e.g., *As a platform, Airbnb has high integrity*), experience-based trust (a 3-item scale, e.g., *My past experiences with Airbnb hosts were positive*), and cognitive-based trust (a 5-item scale, e.g., *For me, Airbnb's online review systems are effective*) were taken from Pavlou and Gefen (2004); those of perceived information quality (a 4-item scale, e.g., *The Airbnb website provides accurate information about its products/services*), perceived privacy (a 4-item scale, e.g., *The Airbnb website protects my privacy*), and perceived security (a 3-item scale, e.g., *I feel secure about Airbnb's electronic payment systems*) were developed from Kim et al. (2008). Behavioral intention (e.g., *I plan to use Airbnb when traveling*) was measured using three items from Han et al. (2010). Items for perceived website quality (a 5-item scale, e.g., *The Airbnb website has customized search functions*) were taken from Filieri et al. (2015). Website social presence (e.g., *The Airbnb website shows personality*) was measured using a 5-item scale developed by Gefen and Straub (2004). Calculative-based trust (e.g., *Airbnb hosts have nothing to gain by being dishonest with me*) and personality-based trust (e.g., *I believe that people in general keep their promises*) were respectively assessed using a 3- and 4-item scale developed by Gefen et al. (2003) and McKnight et al. (2002). In addition, demographic variables such as age, gender,

education level, income, employment, and marital status were included. We asked 50 undergraduate students to review the initial questionnaire to assess its measurement reliability and content validity (topic coverage, item clarity, contextual relevance, and logical sequence), resulting in a clearer version of our final questionnaire. The reliability of the measure was evaluated based on Cronbach's alpha (values ranged from 0.86 to 0.94), indicating good reliability (Nunnally & Bernstein, 1994).

### 3.3 Data Analysis

Survey data were analyzed in SPSS and AMOS. First, several assumption tests including outlier, multivariate normality, and multicollinearity were performed to decrease systematic errors and produce more meaningful results. Descriptive statistical analyses were carried out to profile the respondents. Confirmatory factor analysis (CFA) was employed to test the fit of the measurement models. The models were also subjected to reliability and validity assessments. Finally, SEM was used to test causal relationships among latent variables.

## 4 Results

### 4.1 Measurement Model

The CFA results showed that the first-order measurement model (including calculative-based trust, personality-based trust, experience-based trust, cognition-based trust, social presence, perceived privacy, perceived security, perceived information quality, and perceived website quality) had a satisfactory fit with the data as reflected by fit indices ( $\chi^2/df = 3.11$ , RMSEA = .06, CFI = .94, NFI = .91, IFI = .94). CFA results also revealed that the second-order measurement model (trust-in-platform and trust-in-host) fit the data well ( $\chi^2/df = 5.04$ , RMSEA = .08, CFI = .98, NFI = .97, IFI = .98).

The reliability and validity of the model were further evaluated based on internal consistency and convergent and discriminant validity of the construct items. As listed in Table 2, all composite reliability results exceeded 0.70, suggesting adequate internal consistency. The average variance extracted (AVE) scores of all study constructs were higher than 0.50, indicating acceptable convergent validity. When the AVE for each construct was greater than the correlations between variables, sufficient discriminant validity was established. Table 3 reveals that the discriminant validity of all scales was acceptable except for the AVE of perceived website quality (0.68, slightly below the inter-construct correlation of 0.69).

To detect common method bias, we also conducted a single factor test. We found that the one-factor model fit the data poorly ( $\chi^2/df = 19.56$ , RMSEA = .17, CFI = .51, NFI = .50, IFI = .51), disconfirming common method bias (Podsakoff & Organ, 1986). In addition, the correlation matrix did not produce any highly correlated variables, whereas common method bias is often evidenced by extremely high correlations ( $r > 0.90$ ) (Bagozzi, Yi, & Phillips, 1991); hence, common method bias was not likely a serious concern in this study.

#### 4.2 Structural Model

The SEM analysis indicated that the proposed model had a relatively good fit ( $\chi^2/df = 2.85$ , RMSEA = .05, CFI = .93, NFI = .90, IFI = .93). Overall, these results provide support for the proposed relationships in the model. Hypotheses testing results are displayed in Figure 2; 12 hypotheses were significant except H5 and H9. Repurchase intention was found to be significantly and positively influenced by trust-in-hosts and trust-in-platform, with respective path coefficient values of 0.56 and 0.37; thus, H11 and H12 were supported. The path from trust-in-platform to trust-in-hosts was insignificant, and H5 was not supported. In support of H1–4, we found that calculative-based trust, personality-based trust, experience-based trust, and cognition-



based trust significantly contributed to trust-in-hosts; the corresponding path coefficient values were 0.17, 0.30, 0.18, and 0.26. The paths from website social presence, perceived privacy, perceived security, and perceived website quality to trust-in-platform were significant with respective path coefficients of 0.28, 0.14, 0.38, and 0.28, lending support to H6, H7, H8, and H10. The path from perceived information quality to trust-in-platform was insignificant, and H9 was not supported. The performance of the structural model was assessed based on the  $R^2$  value for each dependent variable (Figure 2). The estimated model explained 31% of the variance in repurchase intention from trust, which is considered an adequate effect size in consumer behavior and tourism research for model construction (Hair, Ringle, & Sarstedt, 2011; NunKoo, Ramkissoon, & Gursoy, 2013).

We also investigated the moderating effects of perceived risk on repurchase intention. The factor scores of repurchase intention, trust-in-hosts, trust-in-platform, and perceived risk were used for hierarchical moderated regression analyses. Studies have identified the influences of sociodemographic variables such as age, education, and marital status on consumer behavior (Yang & Mattila, 2017; Yen & Teng, 2015); therefore, we controlled for the effects of these variables in our models. As shown in Table 4, the significant  $F$  change (6.14) and coefficient (.08) in the interaction model (Model 3) implies that perceived risk played a moderating role in the relationship between trust-in-hosts and repurchase intention, supporting H13. As perceived risk increased, the influence of trust-in-hosts on repurchase intention increased and vice versa. The significant  $F$  change (25.35) and coefficient (.12) in the other interaction model (Model 5) suggests that perceived risk also moderated the path from trust-in-platform and repurchase intention; hence, H14 was supported. As perceived risk increased, the influence of trust-in-platform on repurchase intention increased and vice versa.

## 5 Discussion

### 5.1 Key Findings

Our results reveal experience-, calculative-, cognition-, and personality-based trust to be significant drivers of trust-in-hosts, partially confirming the usefulness of McKnight and Chervany's (2001) e-commerce trust formation model. Personality-based trust was identified as the strongest source, followed by cognition-based trust with nearly equal importance among experience- and calculative-based trust. A possible explanation for the high importance of personality-based trust is that consumers must have relatively high trust beliefs in others before they can place trust into unknown sellers. Airbnb's useful online review system was confirmed as an important means of fostering trust. Although significant, prior experience and perceptions of fair play appeared to contribute relatively little to trust formation. Surprisingly, trust-in-platform was not a determinant of trust-in-hosts in our study, which is contrary to the McKnight and Chervany's (2001) e-commerce trust model. This unexpected finding aligned with that of Liang et al. (2018), although the result contradicted most literature framing trust-in-platform as a significant driver of trust-in-vendors (Chen et al., 2016).

Our study also uncovers several antecedents of, and their relative importance to, trust-in-platform. Perceived privacy and security, along with IT-enabled systems that are legally binding and market-driven, were found to be major factors in facilitating trust-in-platform, echoing the findings by Bart et al. (2005) and Kim et al. (2013). With a high-security mechanism in place, consumers feel more confident that sellers and platforms are reliable and can be trusted. Website quality can mitigate social uncertainty by providing visual signals that influence behavioral intention (Chen et al., 2016). On contrary, information quality did not exert a significant effect on trust-in-platform, which contradicts the results of Kim et al. (2008). One possible explanation

is that website quality can be considered to include information quality. A website's social presence was identified as another important determinant of trust-in-platform; an Airbnb site with high social presence will convey more social cues and thus be perceived as more transparent (Lu et al., 2016).

Our results showed that trust-in-hosts and trust-in-platform positively influence behavioral intention. They appeared to be distinct constructs in the sharing economy, with trust-in-platform exerting greater influence on consumer behavioral intention. In addition, the positive role of perceived risk on relationships between trust constructs and behavioral intention underscored the importance of trust, which includes platform and host responsibilities to convey trust and decrease perceived risks.

## 5.2 Theoretical Implications

Our research delineates a theoretical typology of trust development in understanding travelers' repurchase intentions around Airbnb. The incorporation of antecedents of trust-in-platform and trust-in-vendors along with the integration of perceived risk constitute a collective trust model. Experience-, calculative-, cognition-, and personality-based trust are salient indicators of trust-in-hosts; perceived privacy, security, website quality, and website social presence are significant components of trust-in-platform. Our study also presents a bidirectional view of risk and trust and emphasizes the interaction effects among them. With the confirmed effectiveness of this framework, we extend and complement the trust literature to shed light on the salience of these two trust constructs and perceived risk on repurchase intention in the sharing economy.

Second, our research indicates that trust-in-platform remained a significant driver of repurchase intention but did not significantly affect trust-in-vendors, which seems controversial because customers must trust the Airbnb platform before they make reservations on it. This finding can presumably be attributed to repeat customers' behavior and their potential belief that platforms have little control over vendors (Liang et al., 2018). Further, repeat customers have had prior experiences with the platform, viewing trust-in-platform and trust-in-vendors as separate trust objectives with no direct linkage. Online trust-in-platform does not necessarily transfer to trust-in-vendors for repeat customers due to their prior interactions with the platform and offline experiences with previous vendors. This pattern is different for first-time users' purchase behaviors/intentions, as these users must rely on the platform to form initial trust-in-vendors (Jia et al., 2014). Thus, trust-in-platform might not necessarily enhance trust-in-vendors for repeat customers with prior experiences.

### 5.3 Practical Implications

Our findings can inform practical strategies for inducing perceived trustworthiness among repeat customers. On the platform side, websites may incorporate more social elements to promote online trust. For instance, Airbnb could integrate new social appeal features including socially rich pictures, emotionally dynamic text, video chats, and human web assistants into its design to enhance human sociability. Second, platforms may safeguard the privacy of users' profiles and the security of transaction information to enhance brand trust. Airbnb could adopt relevant cutting-edge web security technology (e.g., adaptive security architecture), select reputable payment systems (those certified according to Payment Card Industry Data Security Standards), display appropriate third-party assurance seals (e.g., operating licenses issued by local authorities), and highlight easy-to-find security cues (e.g., household smoke detectors and

security cameras). Airbnb could also institute a privacy-abiding and indemnification policy to signal trustworthiness. Furthermore, the platform can coordinate risk-management assistance programs, institute safety and security procedures (e.g., checklists for customers to follow), establish emergency processes (i.e., a 24/7 customer service line, internet chatbox, police contacts, and contingency sleeping places for customers), provide detailed host information, and enforce rules for host background checks and property safety checks. Third, website quality is a never-ending responsibility; Airbnb can continue to improve its website quality by ensuring ease of use, user-friendliness, aesthetics, smooth functionality, and better speed. Finally, platforms like Airbnb should consider including more trust-augmenting signals (e.g., hosts' credit level and a category related to listing quality) on its website to mitigate users' perceived risk and encourage future repurchase intention.

Heightened trust can also be built from the vendors' side in the hospitality sharing marketplace. To retain repeat customers, Airbnb hosts can highlight the superior value of their listings by comparing the price, service quality, and geographic location of similar local accommodations. Given the critical importance of online reviews, hosts are encouraged to take extra steps to mitigate the impacts of undesirable reviews and ratings on their webpages through service recovery systems. Furthermore, hosts can incentivize satisfied customers to post positive endorsements online for better repatriation. Hosts can also craft an image about themselves to alleviate users' relatively high perceived risk; for instance, hosts can mention their personal hobbies and point out the security and safety features of their listings using enhanced photos/videos and heartwarming stories.

## 6 Conclusion

To conclude, we drew on the trust, information systems, and e-commerce literature to theoretically develop and empirically test a trust formation model for the hospitality sharing economy (i.e., Airbnb) including 13 constructs and 14 hypotheses. Overall, our results provide answers to RQ1 and RQ2 that trust constructs in the sharing economy include two trust objects (trust-in-hosts and trust-in-platform), their antecedents (experience-, calculative-, cognition-, and personality-based trust as well as website social presence, perceived privacy, perceived security, and perceived website quality) and consequences (behavioral intention). In addition, perceived risk positively moderates the relationships between both trust objects and behavioral intention, which addresses RQ3. As such, our study contributes to emerging research on conceptualization, empirical confirmation, and practical implications regarding trust formation in the hospitality sharing economy. Platforms and vendors can both use the trust formation model and findings from this study to build a trustworthy hospitality sharing marketplace.

A few limitations may temper the generalizability of our findings. First, as this study was conducted with Airbnb repeat customers, the valence and significance of trust constructs would likely be different for non-Airbnb users. Future studies may include potential and experienced users to portray a comprehensive landscape of our trust model in the sharing economy. Second, this study employed a cross-sectional design and thus could not reveal causal relationships; therefore, longitudinal or experimental designs can be used in the future to capture cause and effect. Third, our trust model explained 31% of the variance in repurchase intention. Because the present research design focuses on Airbnb and trust, other variables (e.g., location, comparative hotel benefits, brand equity, price, satisfaction, and constructs in the technology acceptance model that play central roles in [re]purchase intention) were purposefully excluded from our model. Because our research design and scope is confined to trust constructs, the practical

significance and generalizability of our findings may be limited. Subsequent studies are encouraged to explore other constructs in addition to the variables in our model. Fourth, our results may have limited applicability and generalizability to other sharing platforms, as we have focused solely on Airbnb; therefore, our findings should be interpreted cautiously. Future research may include other hospitality sharing channels (e.g., HomeAway, VRBO, Booking.com, and Marriott) to compare and generalize findings across different platforms using multilevel modeling for hierarchical data structures. Fifth, our study used Amazon MTurk as a sampling pool; the results should be considered in light of this online sample. Finally, this study is susceptible to self-report and social desirability bias that may influence survey findings; thus, our results may be inflated. Future research can replicate this study using different samples to cross-validate the findings.

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## Appendix 1. Measurement constructs, items, and sources

Constructs	Items	Sources
Behavioral intention	BI1. I am willing to use Airbnb when traveling	Han et al., 2010
	BI2. I plan to use Airbnb when traveling	
	BI3. I will make an effort to use Airbnb when traveling	
Trust-in-hosts	TIH1. I am confident most Airbnb hosts are reliable	Pavlou and Gefen 2004
	TIH2. I am confident most Airbnb hosts are honest	
	TIH3. I am confident most Airbnb hosts are trustworthy	
	TIH4. I am confident about what to expect from Airbnb hosts	
Trust-in-platform	TIA1. As a platform, Airbnb can be trusted at all times	Pavlou and Gefen 2004
	TIA2. As a platform, Airbnb can be counted on to do what is right	
	TIA3. As a platform, Airbnb has high integrity	
	TIA4. Airbnb is a competent and knowledgeable platform	
Calculative-based trust	CBT1. Airbnb hosts have nothing to gain by being dishonest with me	Gefen et al., 2003
	CBT2. Airbnb hosts have nothing to gain by not caring about me	
	CBT3. Airbnb hosts have nothing to gain by not being knowledgeable when helping me	
Personality-based trust	PBT1. I believe that people in general care about the well-being of others	McKnight et al., 2002
	PBT2. I believe that people in general keep their promises	
	PBT3. I believe that professional people in general do a good job at their work	
	PBT4. I trust people in general until they give me a reason not to trust them	
Cognition-based trust	CBT1. For me, online review systems in general provide accurate information about Airbnb host' reputations	Pavlou and Gefen 2004
	CBT2. A considerable amount of useful information about hosts is available through Airbnb's online review systems	
	CBT3. For me, Airbnb's online review systems are effective	
	CBT4. For me, Airbnb's online review systems are reliable	
	CBT5. A considerable amount of useful information about hosts' transaction history is available through Airbnb's online review systems	
Experience-based trust	EBT1. My past experiences with Airbnb hosts were positive	Pavlou and Gefen 2004
	EBT2. I received enjoyable service when staying with Airbnb hosts	
	EBT3. Airbnb hosts have done satisfactory jobs in providing me accommodations	
Perceived risk	PR1. For me, using Airbnb when traveling involves considerable risk	Pavlou and Gefen 2004
	PR2. For me, using Airbnb when traveling involves a high potential for loss	
	PR3. My decision to use Airbnb when traveling is risky	
Website social presence	SP1. The Airbnb website shows human contact	Gefen and Straub, 2004
	SP2. The Airbnb website shows personalness	
	SP3. The Airbnb website shows human warmth	
	SP4. The Airbnb website shows sociability	
	SP5. The Airbnb website shows sufficient human sensitivity	
Perceived website quality	PWQ1. It is easy to find appropriate lodging through the Airbnb website	Fileri et al., 2015
	PWQ2. The Airbnb website has well-organized hyperlinks	
	PWQ3. The Airbnb website has customized search functions	
	PWQ4. The Airbnb website has high speed webpage loading	
	PWQ5. The Airbnb website has an attractive look and feel	
Perceived information quality	PIQ1. The Airbnb website provides up-to-date information about its products/services	Kim et al., 2008
	PIQ2. The Airbnb website provides accurate information about its products/services	
	PIQ3. The Airbnb website provides sufficient information about its products/services	
	PIQ4. The information provided on the Airbnb website is helpful in purchasing its products/services	
Perceived privacy	PP1. The Airbnb website complies with the rules and regulations of online data protection	Kim et al., 2008
	PP2. The Airbnb website is not likely to sell my personal information	
	PP3. The Airbnb website safeguards my personal information	
	PP4. The Airbnb website protects my privacy	
Perceived security	PS1. I feel secure about Airbnb's electronic payment systems	Kim et al., 2008
	PS2. I am willing to use my credit card on Airbnb's website to make a purchase	
	PS3. For me, making credit card payments on Airbnb's website is safe	

